

REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: A22773A

Product name(s): **ORONDIS EVO**

Chemical active substance(s):

Azoxystrobin, 250 g/L

Oxathiapiprolin, 12 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(New authorisation)

Applicant: Syngenta

Submission date: November 2021

Evaluation date: October 2022

MS Finalisation date: March 2023

Version history

When	What
07 July 2022	zRMS request for additional information
26 August 2022	8.8.2.1: PEC _{GW} values included for azoxystrobin and its metabolites, using a Plant Uptake Factor (PUF) of 0, as a Tier 1 approach. (Existing PEC _{GW} using PUF = 0.5 retained as a Tier 2 approach, accepted by some MS). 8.9.2.1: PEC _{SW} values included for azoxystrobin and its metabolites, using a Plant Uptake Factor (PUF) of 0, as a Tier 1 approach. (Existing PEC _{GW} using PUF = 0.5 retained as a Tier 2 approach, accepted by some MS). Appendix 1: Additional modelling references included Appendix 3: Additional study summaries included
October 2022	zRMS finalized dRR evaluation
March 2023	RR updated after commenting stage.

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8 Fate and behaviour in the environment (KCP 9)

Review Comments:

This document describes the acceptable use conditions required for registration of A22773A, a suspension concentrate containing 250 g/L azoxystrobin and 12 g/L oxathiapiprolin for use as a fungicide in hop, bulbs and onion like crops, fruiting and leafy vegetables.

This Part B document only reviews data and additional information that has not previously been considered within the EU review process.

Since this document is based on the information provided by the applicant, all review comments, additions and corrections have been made using commenting boxes or highlighted in grey.

The active substance **oxathiapiprolin** is approved under Commission Implementing Regulation (EU) No 2017/239 in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market, and amending the Annex to Commission Implementing Regulation (EU) No 540/2011.

The active substance **azoxystrobin** is approved under Reg. (EC) No 1107/2009 with effective date 1 January 2012 (Commission Implementing Regulation (EU) No 703/2011 amending Commission Implementing Regulation (EU) No 540/2011 and Commission Implementing Regulation (EU) No 2019/291 amending Commission Implementing Regulation (EU) No 540/2011 as regards the extension of the approval periods of the active substance)

8.1 Critical GAP and overall conclusions

Table 8.1-1: Critical use pattern of the formulated product

1	2	3	4	5	6	7	8	9	10	11		12	13	14	15
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				L product/ha a) max. rate per appl. b) max. total rate per crop/season	Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha	Conclusion Groundwater
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)		g OXTP/ha a) max. rate per appl. b) max. total rate per crop/season	g AZT/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha Min / max			
PL- 28	Poland	Tomato, LYPES (covers bell pepper, eggplant, cucumber, melon, pumpkin, squash, watermelon, zucchini)	F	<i>Alternaria sp.</i>	foliar	BBCH 11 - 89	a) 2 b) 2	7	a) 1 b) 2	a) 12 b) 24	a) 250 b) 500	200-1200	3		
PL- 17	Poland	Hop, HUMLU	F	<i>Pseudoperonospora humuli</i>	foliar	BBCH 21-89	a) 2 b) 2	12-16	a) 1 b) 2	a) 12 b) 24	a) 250 b) 500	700-3300	28		
PL- 20	Poland	Lettuce, LACSA (covers salad plants, spinach and similar leaves, sweet basil)	F	<i>Bremia lactucae</i>	foliar	BBCH 11 - 49	a) 2 b) 2	7	a) 1 b) 2	a) 12 b) 24	a) 250 b) 500	200-800	14	maximum 2 application per year on the same field	
PL- 30	Poland	Leek, ALLPO (covers spring onion)	F	<i>Alternaria porri</i>	foliar	BBCH 11 - 49	a) 2 b) 2	12-14	a) 1 b) 2	a) 12 b) 24	a) 250 b) 500	200-800	7		

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1. The critical use patterns are reported only for zRMS Poland as they represent all the other intended uses as listed in the GAP table in Part B, Section 0.

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Explanation for column 15 “Conclusion”

A	Safe use
R	Further refinement and/or risk mitigation measures required
C	To be confirmed by CMS
N	No safe use

- Remarks table:**
- (1) Numeration necessary to allow references
 - (2) Use official codes/nomenclatures of EU
 - (3) For crops, the EU and Codex classifications (both) should be used; where relevant, the use situation should be described (e.g. fumigation of a structure)
 - (4) F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application
 - (5) Scientific names and EPPO-Codes of target pests/diseases/ weeds or when relevant the common names of the pest groups (e.g. biting and sucking insects, soil born insects, foliar fungi, weeds) and the developmental stages of the pests and pest groups at the moment of application must be named
 - (6) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants
- type of equipment used must be indicated
 - (7) Growth stage at first and last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
 - (8) The maximum number of application possible under practical conditions of use must be provided
 - (9) Minimum interval (in days) between applications of the same product.
 - (10) For specific uses other specifications might be possible, e.g.: g/m³ in case of fumigation of empty rooms. See also EPPO-Guideline PP 1/239 Dose expression for plant protection products
 - (11) The dimension (g, kg) must be clearly specified. (Maximum) dose of a.s. per treatment (usually g, kg or L product / ha).
 - (12) If water volume range depends on application equipments (e.g. ULVA or LVA) it should be mentioned under “application: method/kind”.
 - (13) PHI - minimum pre-harvest interval
 - (14) Remarks may include: Extent of use/economic importance/restrictions

Table 8.1-2: Overview of critical GAP and surrogate crops

Use No. and Crop	Surrogate Crop	Appl. method	Appl. rate (g AZT / ha)	Appl. rate (g OXTP / ha)	Number of appl.	Minimum appl. interval (d)	Appl. timing (BBCH)	Frequency
PL-20 – lettuce	PECs, PEC _{GW} : Cabbage PEC _{SW/SED} : Vegetables, leafy	Spray	250	12	2	7	11 – 49	Annual
PL-28 – tomato	PECs: Cabbage PEC _{GW} : Tomato PEC _{SW/SED} : Vegetables, fruiting	Spray	250	12	2	7	11 – 89	Annual
PL-30 – leek	PECs, PEC _{GW} : onion PEC _{SW/SED} : Vegetables, bulb	Spray	250	12	2	12	11 – 49	Annual
PL-17 – hops	PECs, PEC _{SW/SED} : hops PEC _{GW} : vines	Spray	250	12	2	12	21 – 89	Annual

Table 8.1-3: Assessed (critical) uses during approval of azoxystrobin concerning the Section Environmental Fate

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
n/a	EU	Broccoli	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	Foliar spray	BBCH35 - BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Cauliflower	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	Foliar spray	BBCH35 - BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Brussels sprouts	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	Foliar spray	BBCH35 - BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Kale	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	Foliar spray	BBCH35 - BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Barley	F	<i>Pyrenophora teres</i> , <i>Puccinia hordei</i> , <i>Rhynchosporium secalis</i> , <i>Gaeumannomyces graminis</i> , var. <i>Tritici</i> Barley spotting	Foliar spray	BBCH31 – BBCH59	a) 1 b) 2	14	a) 1 b) 2	a) 0.250 b) 0.500	100-300	35*	*Timing of applications determined primarily by growth stage; 1st no later than BBCH39, 2nd no later than BBCH59.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
n/a	EU	Wheat	F	<i>Septoria tritici</i> , <i>Septoria nodorum</i> , <i>Puccinia striiformis</i> , <i>Puccinia recondita</i> , <i>Gaeumannomyces graminis var. tritici</i>	Foliar spray	BBCH31 – BBCH69	a) 1 b) 2	14	a) 1 b) 2	a) 0.250 b) 0.500	100-300	35**	**Timing of applications determined primarily by growth stage; 1st application no later than BBCH39, 2nd application no later than BBCH69

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Table 8.1-4: Assessed (critical) uses during approval of oxathiapiprolin concerning the Section Environmental Fate

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	AU, DE (NEU)	Grape (VITVI) wine	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 89 Spring	Max 2	10 days	a) 0.06 b) 0.12	a) 60 b) 120	300-1600	28	(Max rate/ha) Do not use more than 60 g/ha. Basis Aufwand = 16 g/ha; BBCH 61 = 32 g/ha; BBCH 71 = 48 g/ha; BBCH >75 = 60 g/ha max.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	CY, EL, IT, MT (SEU)	Grape (VITVI) table	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 89 Spring	Max 2	10 days	a) 0.06 b) 0.12	a) 60 b) 120	300-1500	14 (berries) 1 (leaves)	(Max rate /ha) Includes pergola vines The use on grape vine leaves for Greece, Spain and Portugal only
	CY, EL, IT, MT (SEU)	Grape (VITVI) wine	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 83 Spring	Max 2	10 days	a) 0.06 b) 0.12	a) 60 b) 120	300-1500	28 (berries) 1 (leaves)	(Max rate/ha) Includes pergola vines The use on grape vine leaves for Greece, Spain and Portugal only
	ES, PT (SEU)	Grape (VITVI) table	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 89 Spring	Max 2	10 days	a) 0.04 b) 0.08	a) 40 b) 80	300-1000	14 (berries) 1 (leaves)	Includes pergola vines The use on grape vine leaves for Greece, Spain and Portugal only
	ES, PT (SEU)	Grape (VITVI) wine	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 83 Spring	Max 2	10 days	a) 0.04 b) 0.08	a) 40 b) 80	300-1000	28 (berries) 1 (leaves)	Includes pergola vines The use on grape vine leaves for Greece, Spain and Portugal only
	FR (NEU and SEU)	Grape (VITVI) table	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 79 Spring	Max 2	10 days	a) 0.04 b) 0.08	a) 40 b) 80	100-600	14 (berries)	(Max in use spray concentration)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	FR (NEU and SEU)	Grape (VITVI) wine	F	Plasmopara viticola	Hydraulic sprayer with or w/out air assistance/ Atomizer/ Backpack	BBCH 13- 79 Spring	Max 2	10 days	a) 0.04 b) 0.08	a) 40 b) 80	100-600	28 (berries)	(Max in use spray concentration)
	IR, UK, FR (NEU and SEU for FR only)	Potato (SOLTU)	F	Phytophthora infestans	Hydraulic sprayer	BBCH 10 to PHI May-Aug	Max 4	7 days	a) 0.015 b) 0.06	a) 15 b) 60	100-400	7	Water volume varies by country
	CY, EL, ES, IT, MT, PT (SEU)	Potato (SOLTU)	F	Phytophthora infestans	Hydraulic sprayer	BBCH 10 to PHI All year	Max 4	7 days	a) 0.015 b) 0.06	a) 15 b) 60	300-1000	7	(Min in use spray concentration)
	FI, SE, AU, BE, DE, LU, NL (NEU)	Potato (SOLTU)	F	Phytophthora infestans	Hydraulic sprayer	BBCH 10 to PHI May-Aug	Max 4	7 days	a) 0.015 b) 0.06	a) 15 b) 60	100-400	14	Water volume varies by country
	CY, EL, ES, FR, IT, MT, PT (SEU and NEU for FR only)	Tomato/ Aubergine (SOLLY/ SOLME) Vertical crops	F	Phytophthora infestans	Hydraulic sprayer / air assistance, atomizer	BBCH 15- 89	Max 3	7 days	a) 0.03 b) 0.09	a) 30 b) 90	200-1500	3	Apply a minimum of 20 g a.s./ha Above 1000 L/ha use a concentration of 2 g a.s./hL Max water volume varies between countries

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	CY, EL, ES, FR, IT, MT, PT (SEU and NEU for FR only)	Tomato/ Aubergine (SOLLY/ SOLME) Industrial use, horizontal crop	F	Phytophthora infestans	Hydraulic sprayer	BBCH 15- 89	Max 3	7 days	a) 0.02 b) 0.06	a) 20 b) 60	200-1000	3	Max water volume varies between countries

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

8.2 Metabolites considered in the assessment

Table 8.2-1: Metabolites of azoxystrobin potentially relevant for exposure assessment

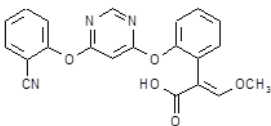
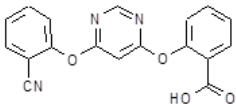
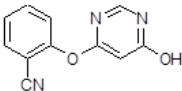
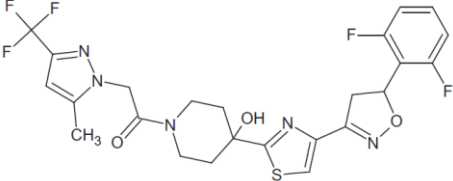
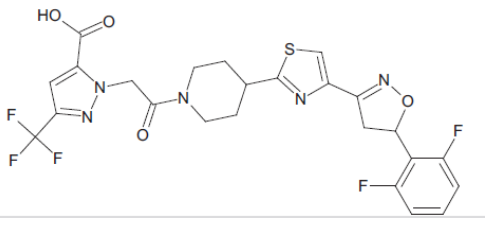
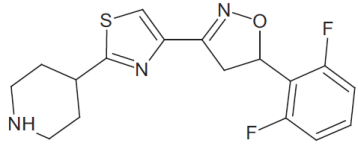
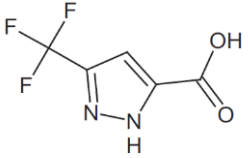
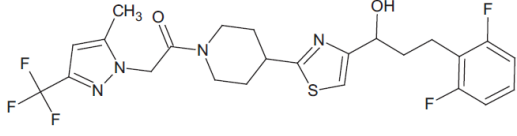
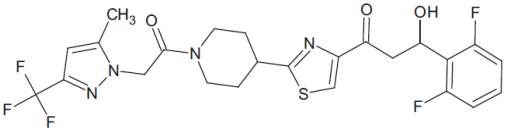
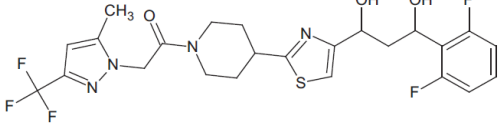
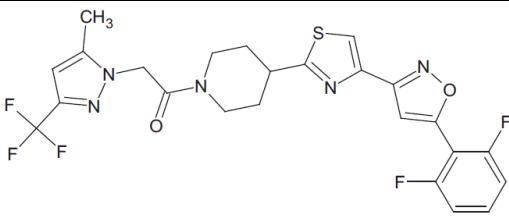
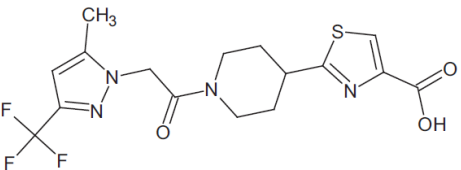
Metabolite	Molar mass (g/mol)	Chemical structure	Maximum observed occurrence in compartments (%)	Exposure assessment required due to
R234886	389.4		> 10 % of a.s. in soil > 10 % of a.s. in water > 10 % of a.s. in sediment	PEC _s : not covered by EU assessment PEC _{GW} : not covered by EU assessment PEC _{SW/SED} : not covered by EU assessment
R402173	333.3		> 10 % of a.s. in soil < 5 % of a.s. in water / sediment	PEC _s : not covered by EU assessment PEC _{GW} : not covered by EU assessment PEC _{SW/SED} : not covered by EU assessment
R401553	213.2		> 10 % of a.s. in soil > 5 % of a.s. in 2 sequential measurements in water / sediment	PEC _s : not covered by EU assessment PEC _{GW} : not covered by EU assessment PEC _{SW/SED} : not covered by EU assessment

Table 8.2-2: Metabolites of oxathiapiprolin potentially relevant for exposure assessment

Metabolite	Molar mass (g/mol)	Chemical structure	Maximum observed occurrence in compartments (%)	Exposure assessment required due to
IN-RDT31	555.53		Soil: > 5 % of as in 2 sequential measurements Water: nr Sediment: nr	PECs: not covered by EU assessment PEC _{GW} : not covered by EU assessment
IN-RAB06	569.51		Soil: > 10 % of a.s. Water: nr Sediment: nr Total System: 9.5%	PECs: not covered by EU assessment PEC _{GW} : not covered by EU assessment PEC _{SW/SED} : not covered by EU assessment
IN-QPS10	349.41		Soil: 8.7 % Water: nr Sediment: nr	PECs: not covered by EU assessment PEC _{GW} : not covered by EU assessment
IN-E8S72	180.09		Soil: > 10 % of a.s. Water: nr Sediment: nr	PECs: not covered by EU assessment PEC _{GW} : not covered by EU assessment
IN-S2K66	528.54		Soil: nr Water: nr Sediment: > 5 % of a.s. and maximum of formation not yet reached at the end of the study (8.7%)	PEC _{SW/SED} : not covered by EU assessment
IN-RSE01	542.53		Soil: nr Water: nr (3.8%) Sediment: 8.6% ^b Total System: > 10 % of a.s.	PEC _{SW/SED} : not covered by EU assessment
IN-RYJ52	544.54		Soil: nr Water: nr Sediment: > 10 % of a.s. (14.7%) (isomers combined) Max in total system: 16.0% ^a	PEC _{SW/SED} : not covered by EU assessment

Metabolite	Molar mass (g/mol)	Chemical structure	Maximum observed occurrence in compartments (%)	Exposure assessment required due to
IN-Q7D41	537.51		Soil: nr Water: nr Sediment: > 10 % of a.s. Max. in total system: > 10 % of a.s.	PEC _{SW/SED} : not covered by EU assessment
IN-P3X26	402.40		Soil: nr Water: > 10 % of a.s. (14%, aqueous photolysis, maximum value of two systems (natural water and buffer solution) Sediment: nr	PEC _{SW/SED} : not covered by EU assessment

nr not relevant

^a Maximum sum occurrence of two metabolites in the total system was observed for Calwich Abbey Lake system with thiazole label: isomer IN-RYJ52-A at 10.04% AR and isomer IN-RYJ52-B at 5.97% AR. Therefore, the sum of these two values of 16.0% AR was calculated

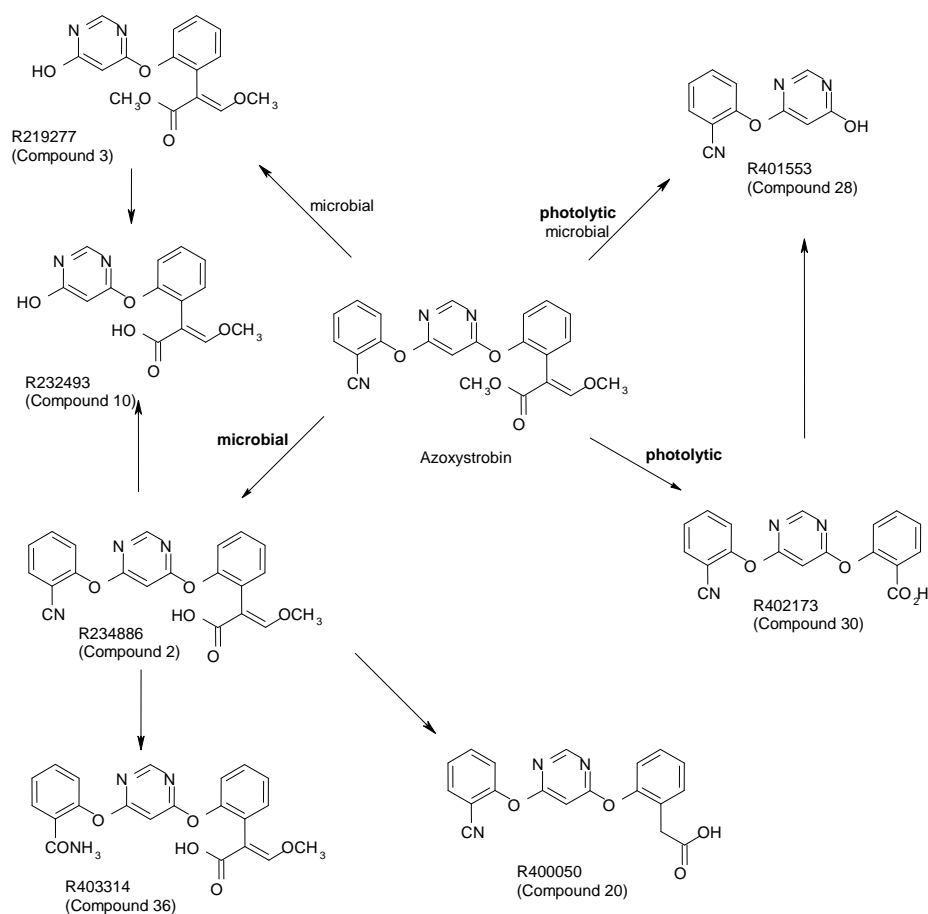
^b >5% of a.s. at two consecutive sampling points.

8.3 Rate of degradation in soil (KCP 9.1.1)

Azoxystrobin

The rate of degradation in soil of azoxystrobin was evaluated during the EU Review. The fate and behaviour of azoxystrobin and its metabolites R234886, R402173 and R401553 in soil are discussed in detail in the corresponding document of the EU review dossier where the study references can be found. Additional data were provided for metabolite R234886 as Confirmatory Data and evaluated by the EU RMS (DAR, 2014¹). All other metabolites shown in the degradation pathway of azoxystrobin in soil (Figure 8.3-1) are minor metabolites.

Figure 8.3-1: Proposed pathway of azoxystrobin in soil

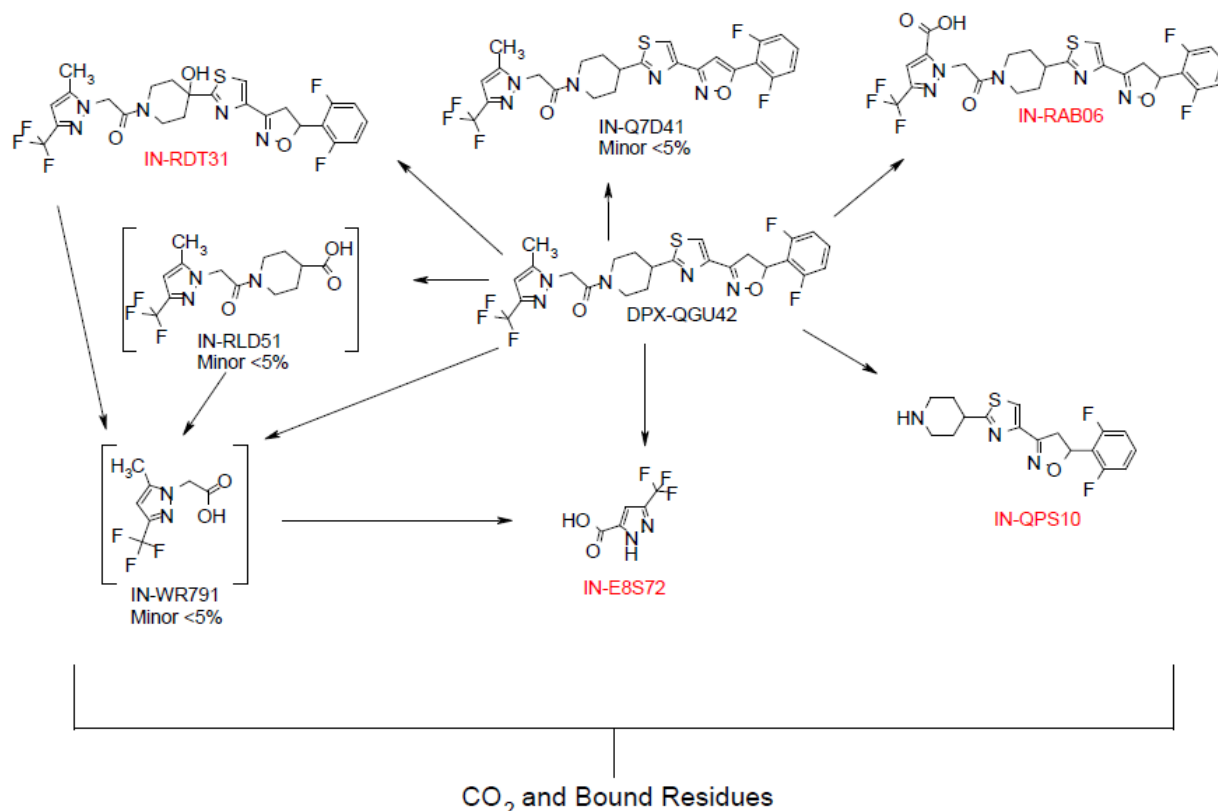


¹ DAR (2014): Azoxystrobin: Addendum – Confirmatory Information. RMS United Kingdom. December 2014

Oxathiapiprolin

As illustrated in the Figure 8.3-2 the major oxathiapiprolin metabolites in soil are IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72. All other metabolites shown in the degradation pathway of oxathiapiprolin in soil (Figure 8.3-2) are considered to be minor metabolites.

Figure 8.3-2: Proposed pathway of oxathiapiprolin in soil



Studies on degradation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substances.

8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

8.3.1.1 Azoxystrobin and its metabolites

Studies on the aerobic degradation rates of azoxystrobin and its metabolites R234886, R402173 and R401553 are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of azoxystrobin (**EFSA Journal 2010; 8(4): 1542**). Additional data were provided for metabolite R234886 in the Addendum for confirmatory Information (see **DAR, 2014¹** for further details).

A summary of the degradation rates is provided in Table 8.3-1 to Table 8.3-4.

In two soils a formation fraction of R234886 from parent could be derived (ff = 0.9716 in “Hyde farm“ soil and ff = 0.7764 in “18 Acres” soil). The following arithmetic mean formation fraction was calculated based on these data: ff of R234886 from parent = 0.874.

Table 8.3-1: Summary of aerobic degradation rates for azoxystrobin - laboratory studies

Azoxystrobin, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t.(°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
18 Acres	Sandy clay loam	6.4	20	40	56.4	187 ^a	35.2	3.70	SFO	Yes / EFSA, 2010; Tummon 1994
East Anglia	Sand	7.9	20	40	66.9	222	57.2	5.34	SFO	Yes / EFSA, 2010; Tummon 1994
Wisborough Green	Silty clay loam	5.9	20	40	94.1	313	54.1	5.60	SFO	Yes / EFSA, 2010; Tummon 1994
18 Acres	Sandy clay loam	7	20	75% 1/3 bar moisture	87.0	289 ^a	65.2	2.06	SFO	Yes / EFSA, 2010; Warinton, Chalofti, Harvey, 1996
Hyde Farm	Sandy clay loam	7	20	75% 1/3 bar moisture	72.8	242	48.5	7.10	SFO	Yes / EFSA, 2010; Warinton, Chalofti, Harvey, 1996
Visalia	Sandy loam	8.4	20	75% 1/3 bar moisture	141.6	470	79.9	2.97	SFO	Yes / EFSA, 2010; Warinton, Chalofti, Harvey, 1996
Derbyshire	Clay loam	7.5	20	Field Capacity	118.4	393	118.4	4.84	SFO	Yes / EFSA, 2010; Evans, 2001
Holland	Sandy loam	8.2	20	Field Capacity	153.4	510	153.4	1.92	SFO	Yes / EFSA, 2010; Evans, 2001

Azoxystrobin, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t.(°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lincolnshire	Sandy loam	7.4	20	Field Capacity	248	824	248	7.5	SFO	Yes / EFSA, 2010; Evans, 2001
Geometric mean (n=9)							84.5 ^a			
pH-dependency:							No			

^aTrue geometric mean (geometric mean of 18 Acres soils taken first)

Table 8.3-2: Summary of aerobic degradation rates for R234886 - laboratory studies

R234886, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t.(°C)	MWHC %	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Acidic soils										
Wisborough Green	Clay loam	5.3	20	pF2	97.6	259	97.6	3.4	DFOP	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Frensham	Sandy loam	5.4	20	pF2	110	309	110	2.4	DFOP	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Ohio	Loamy sand	5.8	20	pF2	89.9	299	89.9	5.0	SFO	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Nuptown	Sandy clay loam	6.2	20	pF2	94.9	203	94.9	6.0	DFOP	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Georgia	Loamy sand	7.1	20	pF2	102	339	102	5.7	SFO	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Alkaline soils										

R234886, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H₂O)	t.(°C)	MWHC %	DT₅₀ (d)	DT₉₀ (d)	DT₅₀ (d) 20°C pF2/10kPa	Chi² (%)	Kinetic model	Evaluated on EU level / Reference
18 Acres	Sandy clay loam	7.0	20	75% 1/3 bar moisture	23.7	78.8	17.8	5.9	SFO	Yes / DAR, 2014 ¹ ; Warinton, 1996
Gartenacker	Silt loam	7.3	20	pF2	25.7	85.3	25.7	3.6	SFO	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Pappelacker	Sandy loam	7.4	20	pF2	47.1	156	47.1	1.4	SFO	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Hyde Farm ^a	Sandy loam	7.5	20	75% 1/3 bar moisture	31.8	105.6	21.2	12.3	SFO	Yes / DAR, 2014 ¹ ; Warinton, 1996
East Anglia ^a	Loamy Sand	7.8	20	40	56.5	188	43.4	3.3	SFO	Yes / DAR, 2014 ¹ ; Jones & Robertson 1999
North Dakota	Sandy loam	7.8	20	pF2	65.4	217	65.4	4.7	SFO	Yes / DAR, 2014 ¹
Vetroz	Loam	7.9	20	pF2	69.1	229	69.1	2.8	SFO	Yes / DAR, 2014 ¹ ; Oddy & Simmonds, 2011
Geometric mean, acidic soils (n=5)							98.6			
Geometric mean, alkaline soils (n=7)							36.7			
pH-dependency:							Yes			

Soils were classified as either acidic or alkaline based on their adsorption and degradation characteristics as well as pH.

Value in bold was used for PEC soil calculation

^a original studies peer reviewed (EFSA Journal 2010; 8 (4):1542)

Figure 8.3-3: R234886 - Distribution of DegT₅₀ with soil pH

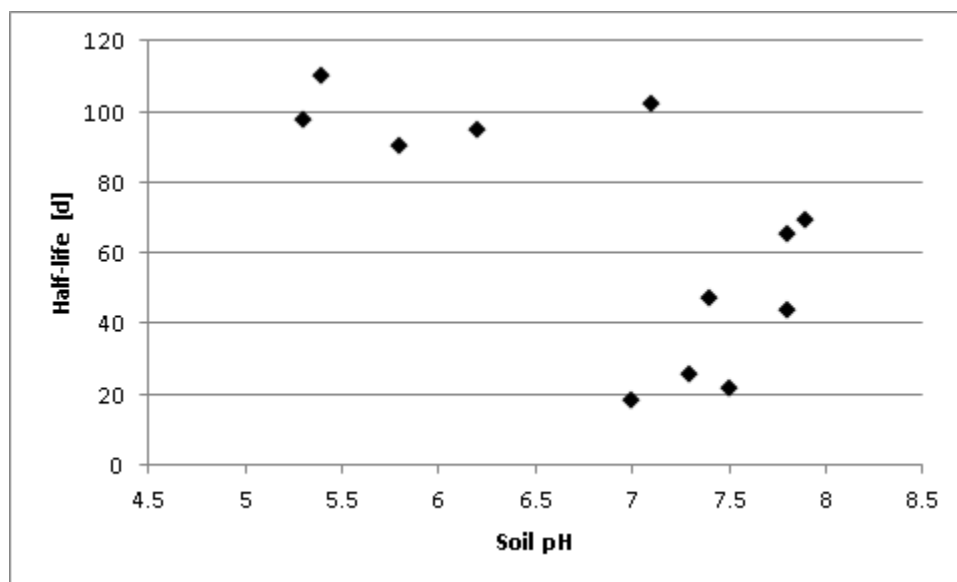


Table 8.3-3: Summary of aerobic degradation rates for R402173 - laboratory studies

R402173, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t.(°C)	MWHC %	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Frensham	Sandy loam	6.6	20	40	8.44	28.0	5.7	8.6	SFO	Yes / EFSA, 2010; Jones, Campbell, 1998
Wisborough Green	Silty clay loam	6.4	20	40	4.24	14.1	2.4	12.3	SFO	Yes / EFSA, 2010; Jones, Campbell, 1998
East Anglia	Loamy sand	7.9	20	40	9.80	32.6	7.5	12.7	SFO	Yes / EFSA, 2010; Jones, Campbell, 1998
Geometric mean (n=3)							4.68			
pH-dependency:							No			

Value in bold was used for PEC soil calculation

Table 8.3-4: Summary of aerobic degradation rates for R401553 - laboratory studies

R401553, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H₂O)	t.(°C)	MWHC %	DT₅₀ (d)	DT₉₀ (d)	DT₅₀ (d) 20°C pF2/10kPa	Chi² (%)	Kinetic model	Evaluated on EU level / Reference
Frensham	Sandy loam	6.6	20	40	1.36	4.52	0.9	9.1	SFO	Yes / EFSA, 2010; Jones, Entwistle, 1998
Wisborough Green	Silty clay loam	6.4	20	40	1.59	5.29	0.9	10.9	SFO	Yes / EFSA, 2010; Jones, Entwistle, 1998
East Anglia	Loamy sand	7.9	20	40	2.01	6.68	1.5	12.3	SFO	Yes / EFSA, 2010; Jones, Entwistle, 1998
Geometric mean (n=3)							1.07			
pH-dependency:							No			

Value in bold was used for PEC soil calculation

8.3.1.2 Oxathiapiprolin and its metabolites

Studies on the aerobic degradation rates of oxathiapiprolin and its metabolites IN-E8S72, IN-QPS10, IN-RDT31 and IN-E8S72 are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504**.

Trigger endpoints

Table 8.3-5: Summary of aerobic degradation rates for oxathiapiprolin - laboratory studies

Oxathiapiprolin Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH (H ₂ O)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lleida	Clay Loam	7.9	20		59.4	197.2	7	SFO	Yes / EFSA 2016; Manjunatha, 2011
Nambsheim	Sandy Loam	7.6	20		134.8	640	2	DFOP (k ₁ = 0.308, k ₂ = 0.00319, g = 0.2)	
Speyer 2.2	Sand	6.1	20		116.3	386.3	7	SFO	
Tama	Silty clay loam	6.8	20		18.2	1224	4	FOMC (a = 0.4, β = 3.907)	
Sassafras	Loamy sand	5.3	20	33.6	89.3	626.3	3	DFOP (k ₁ = 0.071, k ₂ = 0.00299, g = 0.3)	Yes / EFSA 2016; Cleland, 2013
Sassafras	Loamy sand	5.3	20	33.6	130.8	434.4	7	SFO	Yes / EFSA 2016; McCorquodale, 2013

* For HS kinetics $DT_{50} = \ln 2 / k_2$

Table 8.3-6: Summary of aerobic degradation rates for IN-RDT31 - laboratory studies

IN-RDT31, Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Nambsheim	Sandy Loam	7.4	20		46.3	235.2	5	DFOP (k ₁ = 0.336, k ₂ = 0.00852, g = 0.3)	Yes / EFSA, 2016; Sannappa, 2012
Tama	Silty clay loam	5.7	20		152	978.8	4	DFOP (k ₁ = 0.084, k ₂ = 0.00195, g = 0.3)	
Lleida	Clay	7.5	20		49.6	222.7	5	DFOP (k ₁ = 0.152, k ₂ = 0.009, g = 0.2)	
Speyer 2.2	Loamy sand	5.3	20		736.4	3652	2	DFOP (k ₁ = 0.262 , k ₂ = 0.00055 , g = 0.2)	
Sassafras	Sandy loam	5.1	20		216.2	1160	4	HS (k ₁ = 0.057, k ₂ = 0.00171, t _b = 5.9)	

IN-RDT31, Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lleida	Clay loam	7.9	20		47.1	156.5	18	SFO-SFO	Yes / EFSA, 2016; Manjunatha, 2011

Values in bold were used for PEC soil calculation

Table 8.3-7: Summary of aerobic degradation rates for IN-RAB06 - laboratory studies

IN-RAB06, Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model*	Evaluated on EU level / Reference
Speyer 2.2	Loamy sand	5.4	20		83.6	346.5	4	DFOP ($k_1 = 0.083$, $k_2 = 0.006$, $g = 0.2$)	Yes / EFSA, 2016; Ravi, 2013a
Lleida	Clay	7.7	20		51.7	258.2	5	FOMC ($a = 2.194$, $\beta = 139.09$)	
Tama	Silty clay loam	6.2	20		74.6	247.9	4	SFO	
Nambsheim	Sandy loam	7.6	20		38.5	214.1	6	FOMC ($a = 1.775$, $\beta = 80.549$)	
Cajon	Loam	7.3	20		68.1	226.4	4	SFO	
Tama	Silty Clay Loam	6.3	20		10.4	166.5	4	DFOP ($k_1 = 0.245$, $k_2 = 0.0098$, $g = 0.5$)	Yes / EFSA, 2016; Stenzel, Schaefer, 2012
Lleida	Clay	7.7	20		8.6	63.5	2	DFOP ($k_1 = 0.628$, $k_2 = 0.029$, $g = 0.4$)	
Sassafras	Loam	5.1	20		100.5	603.9	3	DFOP ($k_1 = 0.238$, $k_2 = 0.0032$, $g = 0.3$)	
Nambsheim	Sandy Loam	7.7	20		3.5	58.6	4	DFOP ($k_1 = 0.9$, $k_2 = 0.028$, $g = 0.5$)	
Speyer	Loamy Sand	5.5	20		170.2	565.2	5	SFO	
Lleida	Clay loam	7.9	20		24.1	80.2	17	SFO-SFO	Yes, EFSA, 2016; Manjunatha, 2011
Sassafras	Loamy Sand	5.3	20		38.2	127	20	DFOP-SFO	Yes / EFSA, 2016; Cleland, 2013

* For FOMC kinetics $DT_{50} = DT_{90}/3.32$; For HS and DFOP kinetics $DT_{50} = \ln(2)/k_2$

Value in bold was used for PEC soil calculation

Table 8.3-8: Summary of aerobic degradation rates for IN-E8S72 - laboratory studies

IN-E872, Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Speyer 2.2	Loamy sand	5.2	20		477.4	1585.8	2	SFO	Yes / EFSA, 2016; Ravi, 2013b
Lleida	Clay	7.7	20		271.7	902.5	0.82	SFO	
Tama	Silty clay loam	6.4	20		216.2	718.2	3	SFO	
Nambsheim	Sandy Loam	7.6	20		328.4	1090.9	2	SFO	
Sassafras	Sandy loam	5.1	20		379.6	1260.9	1	SFO	

Value in bold used for PEC soil calculation

Table 8.3-9: Summary of aerobic degradation rates for IN-QPS10 - laboratory studies

IN-QPS10, Laboratory studies, aerobic conditions									
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Nambsheim	Sandy Loam	7.4	20		3	171.3	9	DFOP (k ₁ = 0.645, k ₂ = 0.00847, g = 0.6)	Yes / EFSA, 2016; Yogeesha, S., 2012
Lleida	Clay	7.5	20		19	192.8	4	DFOP (k ₁ = 1.323, k ₂ = 0.00926, g = 0.4)	
Sassafras	Sandy loam	5.3	20		310.2	2266.6	5	DFOP (k ₁ = 0.811 , k ₂ = 0.00082 , g = 0.4)	
Speyer 2.2	Loamy sand	5.1	20		301.4	1722.3	6	DFOP (k ₁ = 5.827, k ₂ = 0.00113, g = 0.3)	

Values in bold were used for PEC soil calculation

Modelling endpoints

Table 8.3-10: Summary of aerobic degradation rates for oxathiapiprolin - laboratory studies

Oxathiapiprolin Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lleida	Clay Loam	7.9	20		59.4	-	59.4	7	SFO	Yes / EFSA 2016; Manjunatha, 2011
Nambsheim	Sandy Loam	7.6	20		217.3	-	217.3	2	HS (k ₁ = 0.036, k ₂ = 0.00319, t _b = 8.1)	
Speyer 2.2	Sand	6.1	20		116.3	-	116.3	7	SFO	
Tama	Silty clay loam	6.8	20		108.1	-	105.68	4	HS (k ₁ = 0.051, k ₂ = 0.00641, t _b = 14.7)	
Sassafras	Loamy sand	5.3	20	33.6	175	-	175	3	HS (k ₁ = 0.02, k ₂ = 0.00396, t _b = 19.9)	Yes / EFSA 2016; Cleland, 2013
Sassafras	Loamy sand	5.3	20	33.6	130.8	-	114.03	7	SFO	Yes / EFSA 2016; McCorquodale, 2013
Geometric mean (n=6)							121.2			
pH-dependency:							No			

* For HS kinetics $DT_{50} = \ln 2/k_2$

Table 8.3-11: Summary of aerobic degradation rates for IN-RDT31 - laboratory studies

IN-RDT31, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Nambsheim	Sandy Loam	7.4	20		81.5		81.5	5	HS (k ₁ = 0.092, k ₂ = 0.00851, t _b = 3.6)	Yes / EFSA, 2016; Sannappa, 2012
Tama	Silty clay loam	5.7	20		192		177	5	HS (k ₁ = 0.033, k ₂ = 0.00361, t _b = 8.4)	
Lleida	Clay	7.5	20		66.5		62.6	5	HS (k ₁ = 0.053, k ₂ = 0.01043, t _b = 4)	

IN-RDT31, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Speyer 2.2	Loamy sand	5.3	20		866.4		1260	2	DFOP (k ₁ = 0.262, k ₂ = 0.00055, g = 0.2)	Yes / EFSA, 2016; Manjunatha, 2011
Sassafras	Sandy loam	5.1	20		405.4		313.4	4	HS (k ₁ = 0.057, k ₂ = 0.00171, t _b = 5.9)	
Lleida	Clay loam	7.9	20		47.1		47.1	18	SFO-SFO	
Geometric mean (n=6)							160			
pH-dependency:							No			

Table 8.3-12: Summary of aerobic degradation rates for IN-RAB06 - laboratory studies

IN-RAB06, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model*	Evaluated on EU level / Reference
Speyer 2.2	Loamy sand	5.4	20		87.7	291.5	87.7	5	SFO	Yes / EFSA, 2016; Ravi, 2013a
Lleida	Clay	7.7	20				53.5	5	SFO	
Tama	Silty clay loam	6.2	20		74.6	247.9	74.6	4	SFO	
Nambsheim	Sandy loam	7.6	20		44.4	147.5	44.4	7	SFO	
Cajon	Loam	7.3	20		68.1	226.4	66.1	4	SFO	
Tama	Silty Clay Loam	6.3	20		10.4	166.5	70.7	4	DFOP ($k_1 = 0.245$, $k_2 = 0.0098$, $g = 0.5$)	Yes / EFSA, 2016; Stenzel, Schaefer, 2012
Lleida	Clay	7.7	20		30.4		23.1	8	FOMC ($a = 0.776$, $\beta = 5.458$)	
Sassafras	Loam	5.1	20				214.4	3	DFOP ($k_1 = 0.238$, $k_2 = 0.0032$, $g = 0.3$)	
Nambsheim	Sandy Loam	7.7	20				31.2	9	FOMC ($a = 0.564$, $\beta = 1.829$)	

IN-RAB06, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model*	Evaluated on EU level / Reference
Speyer	Loamy Sand	5.5	20				231	4	HS (k ₁ = 0.022, k ₂ = 0.003, t _b = 7.8)	
Lleida	Clay loam	7.9	20		24.1		24.1	17	SFO-SFO	Yes, EFSA, 2016; Manjunatha, 2011
Sassafras	Loamy Sand	5.3	20		38.2		38.2	20	DFOP-SFO	Yes / EFSA, 2016; Cleland, 2013
Geometric mean (n=12)							60.5			
pH-dependency:							No			

* For FOMC kinetics $DT_{50} = DT_{90}/3.32$; For HS and DFOP kinetics $DT_{50} = \ln(2)/k_2$

Table 8.3-13: Summary of aerobic degradation rates for IN-E8S72 - laboratory studies

IN-E872, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Speyer 2.2	Loamy sand	5.2	20		477.4	-	477.4	2	SFO	Yes / EFSA, 2016; Ravi, 2013b
Lleida	Clay	7.7	20		271.7	-	243	0.82	SFO	
Tama	Silty clay loam	6.4	20		216.2	-	213.9	3	SFO	
Nambsheim	Sandy Loam	7.6	20		328.4	-	328.4	2	SFO	
Sassafras	Sandy loam	5.1	20		379.6	-	352.3	1	SFO	
Geometric mean (n=5)							310.2			
pH-dependency:							No			

Table 8.3-14: Summary of aerobic degradation rates for IN-QPS10 - laboratory studies

IN-QPS10, Laboratory studies, aerobic conditions										
Soil name	Soil type (USDA)	pH (CaCl ₂)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Nambsheim	Sandy Loam	7.4	20		81.8	-	81.8	9	DFOP (k ₁ = 0.645, k ₂ = 0.00847, g = 0.6)	Yes / EFSA, 2016; Yogeesha, S., 2012
Lleida	Clay	7.5	20		74.9	-	70.5	4	DFOP (k ₁ = 1.323, k ₂ = 0.00926, g = 0.4)	
Sassafras	Sandy loam	5.3	20		673	-	520.3	7	HS (k ₁ = 0.161, k ₂ = 0.00103, t _b = 2.5)	
Speyer 2.2	Loamy sand	5.1	20		613.4	-	613.4	6	HS (k ₁ = 0.353, k ₂ = 0.00113, t _b = 1)	
Geometric mean acidic (n=2)							564.9			
Geometric mean alkaline (n=2)							75.9			
pH-dependency:							Yes			

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

8.3.2.1 Azoxystrobin and its metabolites

The study on the anaerobic degradation rates of azoxystrobin is considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of azoxystrobin (EFSA Journal 2010; 8(4): 1542). The soil anaerobic studies and endpoints are deemed not relevant to current risk assessment.

Table 8.3-15: Summary of anaerobic degradation rates of azoxystrobin – laboratory studies

Azoxystrobin, Laboratory studies, anaerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t.(°C)	MWHC %	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
18 Acres	Sandy clay loam	7.0	20	flooded	59.8	198	59.8	3.41	SFO	Yes / EFSA, 2010; Warinton, Chalofiti, Harvey, 1996
Hyde Farm	Sandy loam	7.0	20	flooded	49.0	163	49.0	6.76	SFO	Yes / EFSA, 2010 Warinton, Chalofiti, Harvey, 1996
Geometric mean (n=2)							54.1			
pH-dependency:							No			

All studies on anaerobic degradation in soil of azoxystrobin have been reviewed under Council Directive 91/414/EEC.

8.3.2.2 Oxathiapiprolin

Studies on the anaerobic degradation rates of oxathiapiprolin are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504**.

Table 8.3-16: Summary of anaerobic degradation rates for oxathiapiprolin - laboratory studies

Oxathiapiprolin Laboratory studies, anaerobic conditions										
Soil name	Soil type (USDA)	pH (H ₂ O)	t. (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2/10kPa	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Sassafras	Sandy loam	5.7	20	50	1505	4998	-		SFO	Yes / EFSA, 2016

8.4 Field studies (KCP 9.1.1.2)

8.4.1 Soil dissipation testing on a range of representative soils (KCP 9.1.1.2.1)

Studies on field dissipation rates, while commonly performed with a formulation, are considered to be data provided in support of the active substance.

8.4.1.1 Azoxystrobin and its metabolites

The field dissipation rate of azoxystrobin was evaluated during the EU review (EFSA Journal 2010; 8(4): 1542). No additional studies have been performed.

The dissipation of azoxystrobin was investigated in ten surface applied trials and five soil-incorporated trials. Data from all studies were evaluated according to FOCUS Kinetics (FOCUS, 2006) and normalised to FOCUS reference conditions (20°C and pF2 soil moisture content). After this process, 13 degradation end-points were considered relevant for evaluating the dissipation of azoxystrobin under field conditions. In the 10 surface-applied trials, bi-phasic decline of azoxystrobin was observed, which was attributed to photolysis on the surface followed by microbial degradation in the soil. In the remaining three in-furrow (i.e. soil incorporated) trials, degradation was best described by single first order kinetics and was assumed to occur via microbial processes in the absence of light. The resulting triggering and modelling endpoints are presented in Table 8.4-1 and Table 8.4-2 respectively.

Trigger endpoints

Table 8.4-1: Summary of aerobic degradation rates for azoxystrobin - field studies: Triggering endpoints

Azoxystrobin, Field studies – Trigger endpoints									
Soil type (USDA)	Location	pH (H ₂ O)	Depth (cm)	DissT ₅₀ (d) Actual	DT ₉₀ (d) Actual	Kinetic parameters	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Applied to bare soil and incorporated									
Sandy clay loam	Spalding (UK)	7.5 (0-15 cm)	30	261.9	869.9	-	10.6	SFO	Yes / EFSA, 2010; Kay, Emburey, 2002
Silty clay loam	Nagele (NL)	7.9 (0-15 cm)	30	186.4	619.3	-	10.2	SFO	Yes / EFSA, 2010; Poppezijn, Emburey, 2002
Sandy clay loam	Shirebrook (UK)	6.7 (0-20 cm)	30	120.9	401.7	-	17.2	SFO	Yes / EFSA, 2010; Emburey, 2002
Maximum (n=3)				261.9	869.9				

Modelling endpoints

Table 8.4-2: Summary of aerobic degradation rates for azoxystrobin - field studies: Modelling endpoints

Azoxystrobin, Field studies – Modelling endpoints							
Soil type (USDA)	Location	pH (H ₂ O)	Depth (cm)	DT ₅₀ (d) 20°C, pF2 fast phase	DT ₅₀ (d) 20°C, pF2 slow phase	Kinetic model	Evaluated on EU level / Reference
Applied to bare soil and incorporated							
Sandy clay loam	Spalding (UK)	7.5 (0-15 cm)	30	106.7		SFO	Yes / EFSA, 2010; Kay, Emburey, 2002
Silty clay loam	Nagele (NL)	7.9 (0-15 cm)	30	86.3		SFO	Yes / EFSA, 2010; Poppezijn, Emburey, 2002
Sandy clay loam	Shirebrook (UK)	6.7 (0-20 cm)	30	56.1		SFO	Yes / EFSA, 2010; Emburey, 2002
Geometric mean (n=3)				80.2			
Applied to soil and not incorporated							
Clay loam	Volpedo (IT)	8.2 (0-20 cm)	30	2.62 ^a	80.6 ^a	DFOP	Yes / EFSA, 2010; Bonfanti, Earl, 1995
Sandy loam	Bienenbittel-Varendorf (DE)	6.4 (0-30 cm)	30	2.95 ^a	61.3 ^a	DFOP	Yes / EFSA, 2010; Earl, Chamier, 1995
Sandy clay loam	Saxa-Anhalt (DE)	6.6 (0-30 cm)	30	1.64 ^a	93.7 ^a	DFOP	Yes / EFSA, 2010; Earl, Chamier, 1995a
Clay loam	Isle/Sorgue (FR)	8.5 (0-20 cm)	30	4.65 ^a	121.6 ^a	DFOP	Yes / EFSA, 2010; Barnaud, Tummon, Earl, 1995
Sandy loam	Monteux Vaucluse (FR)	8.5 (0-20 cm)	30	4.03 ^a	68 ^a	DFOP	Yes / EFSA, 2010; Barnaud, Tummon, Earl, 1995a
Silt loam	St Vigor (FR)	6.1 (0-20 cm)	30	3.02 ^a	34.5 ^a	DFOP	Yes / EFSA, 2010; Barnaud, Tummon, Earl, 1995b

Azoxystrobin, Field studies – Modelling endpoints							
Soil type (USDA)	Location	pH (H ₂ O)	Depth (cm)	DT ₅₀ (d) 20°C, pF2 fast phase	DT ₅₀ (d) 20°C, pF2 slow phase	Kinetic model	Evaluated on EU level / Reference
Silty clay loam	Massalombarda (FR)	8.3 (0-20 cm)	30	1.39 ^a	105 ^a	DFOP	Yes / EFSA, 2010; Bonfanti, Tummon, Earl, 1995
Clay loam	Grisolles (FR)	7.7 (0-20 cm)	30	13.3 ^a	66 ^a	DFOP	Yes / EFSA, 2010; Eschenbrenner, Tummon, Earl, 1995
Clay	Cambridgeshire (UK)	8.0 (0-20 cm)	30	2.09 ^a	93.7 ^a	DFOP	Yes / EFSA, 2010; Hall, Earl, 1995
Clay	Somerset (UK)	8.1 (0-20 cm)	30	0.42 ^a	73.7 ^a	DFOP	Yes / EFSA, 2010; Myles, Tummon, Earl, 1995
Geometric mean (n=10)				2.55	75.9		
Overall geometric mean, slow phase (n=13) ^b				78			
pH-dependency				No			

^a Q10 of 2.58 for the correction of the temperature effect was used in the normalization procedure for the whole, biphasic decline

^b calculated from the geometric mean of the soil incorporated field studies (80.2 days) and the slow phase of the non-incorporated studies (75.9 days)

The azoxystrobin degradation products R234886, R230130, R402173 and R401553 were analysed alongside parent in the bare soil dissipation trials. R230130 was not detected at any site (limit of quantification, LOQ 0.02 mg/kg). Both photolytic metabolites, R402173 and R401553 were found in field trials at significant levels (>10%), while less than 5% was found to be degraded into R234886. R234886 was only observed in one dissipation trial with a maximum residue of 0.03 mg/kg 92 days after application, then declining to below the LOQ (0.02 mg/kg) 176 days after application. A maximum occurrence of R402173 and R401553 were detected in all trials at a maximum level of 0.05 and 0.03 mg/kg, respectively. These residues were equivalent to a maximum of 17% of parent residue for both metabolites (corrected for molecular weight). These maximal amounts were all observed during the first three months of the trials and levels had fallen to less than the LOQ by the end of the studies (0.01 mg/kg for R402173 and R401553).

The following formation fractions were calculated based on these data: ffm of R402173 from parent = 0.385, ffm of R401553 from parent = 0.392, ffm of R401553 from R402173 = 0.468.

All studies supporting the field dissipation rates of azoxystrobin have been reviewed for azoxystrobin under Council Directive 91/414/EEC.

8.4.1.2 Oxathiapiprolin and its metabolites

Studies on the field dissipation rates of oxathiapiprolin and are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504**.

Trigger endpoints

Table 8.4-3: Summary of aerobic degradation rates for oxathiapiprolin - field studies: Trigger endpoints

Oxathiapiprolin, Field studies – Trigger endpoints					
Location	DT ₅₀ (d) Actual	DT ₉₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lucenay, France	5.5	178.5	8	DFOP ($k_1 = 0.194$, $k_2 = 0.005$, $g = 0.8$)	Yes / EFSA, 2016
Lentzke, Germany	23.9	556.7	12	DFOP ($k_1 = 0.055$, $k_2 = 0.002$, $g = 0.7$)	
Cambridgeshire, U.K.	101	524.5	6	DFOP ($k_1 = 0.07$, $k_2 = 0.004$, $g = 0.3$)	
Sevilla, Spain	8.1	211.5	10	DFOP ($k_1 = 0.239$, $k_2 = 0.007$, $g = 0.6$)	
North Rose, New York	3.9	208	19	DFOP ($k_1 = 0.367$, $k_2 = 0.006$, $g = 0.6$)	
Raymondville, Texas	9.8	75.8	13	FOMC ($a = 1.155$, $\beta = 11.956$)	
Citra, Florida	34.6	270.3	9	FOMC ($a = 1.14$, $\beta = 41.333$)	
Porterville, California	30	174.2	9	FOMC ($a = 1.659$, $\beta = 57.932$)	
Manitoba, Canada	205.3	682	19	SFO	
British Columbia, Canada	169.6	563.4	13	SFO	

Figures in bold used for PEC soil calculation

Table 8.4-4: Summary of aerobic degradation rates for IN-RDT31- field studies: Trigger endpoints

IN-RDT31, Field studies – Trigger endpoints					
Location	DT ₅₀ (d) Actual	DT ₉₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lentzke, Germany	134.5	446.8	19	SFO	Yes / EFSA, 2016
Cambridgeshire, U.K.	190.00	632.00	14	SFO	

Modelling endpoints

Table 8.4-5: Summary of aerobic degradation rates for oxathiapiprolin - field studies: Modelling endpoints

Oxathiapiprolin, Field studies – Modelling endpoints					
Location	pH	DT ₅₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lucenay, France	6.9	31.5	11	FOMC ($a = 0.567$, $\beta = 1.843$)	Yes / EFSA, 2016

Oxathiapiprolin, Field studies – Modelling endpoints					
Location	pH	DT ₅₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lentzke, Germany	6	97.9	11	FOMC (a = 0.61, β = 7.622)	
Cambridgeshire, U.K.	7.4	68.4	9	SFO	
Sevilla, Spain	8.1	104	13	FOMC (a = 0.468, β = 2.544)	
North Rose, New York	5.1	73.7	21	FOMC (a = 0.426, β = 1.104)	
Raymondville, Texas	8.3	52.8	15	FOMC (a = 1.05, β = 22.038)	
Citra, Florida	6.7	138.5	9	FOMC (a = 1.125, β = 68.16)	
Porterville, California	8.5	56.5	8	FOMC (a = 0.828, β = 12.369)	
Manitoba, Canada	7.9	76.2	21	SFO	
British Columbia, Canada	6.5	66.5	13	FOMC (a = 2.719, β = 165.82)	

* For FOMC kinetics DT₅₀ = DT₉₀/3.32

Table 8.4-6: Summary of aerobic degradation rates for IN-E8S72- field studies: Modelling endpoints

IN-E8S72, Field studies – Modelling endpoints					
Location	pH	DT ₅₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lucenay, France	6.9	47.3	15	SFO	Yes / EFSA, 2016
Cambridgeshire, U.K.	7.4	157.3	7	SFO	
North Rose, New York	5.1	56.6	20	FOMC (a = 0.621, β = 4.72)	
Raymondville, Texas	8.3	113.6	9	SFO	

* For FOMC kinetics DT₅₀ = DT₉₀/3.32

Table 8.4-7: Summary of aerobic degradation rates for IN-RDT31- field studies: Modelling endpoints

IN-RDT31, Field studies – Modelling endpoints					
Location	pH	DT ₅₀ (d) Actual	Chi ² (%)	Kinetic model	Evaluated on EU level / Reference
Lentzke, Germany	6	47.6	13	DFOP-SFO	Yes / EFSA, 2016
Cambridgeshire, U.K.	7.4	53.6	15	SFO-SFO	
Citra, Florida	6.7	111.7	20	FOMC-SFO	
British Columbia, Canada	6.5	105.1	7	FOMC-SFO	

Table 8.4-8: Summary of aerobic degradation rates for IN-RAB06- field studies: Modelling endpoints

IN-RAB06, Field studies – Modelling endpoints					
Location	pH	DT ₅₀ (d) Actual	Chi ² (%)	Kinetic model*	Evaluated on EU level / Reference
Lucenay, France	6.9	77.1	12	SFO	Yes / EFSA, 2016
North Rose, New York	5.1	34.2	20	FOMC (a = 0.616, β = 2.77)	
Citra, Florida	6.7	167.6	21	SFO	
British Columbia, Canada	6.5	208.6	10	SFO	

* For FOMC kinetics DT₅₀ = DT₉₀/3.32

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

8.4.2.1 Azoxystrobin and its metabolites

Based on the field dissipation data azoxystrobin is likely to significantly accumulate in soil with repeated applications. The potential for accumulation has been assessed by calculation under Section 8.7.

8.4.2.2 Oxathiapiprolin and its metabolites

Studies on the mobility of oxathiapiprolin and are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504**.

8.5 Mobility in soil (KCP 9.1.2)

Studies on mobility in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance.

8.5.1 Azoxystrobin and its metabolites

Studies on the mobility in soil of azoxystrobin and its metabolites R234886, R402173 and R401553 are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of azoxystrobin (**EFSA Journal 2010; 8(4): 1542**). Additional data were provided for metabolite R234886 in the Addendum for confirmatory Information (see **DAR, 2014¹** for further details) in order to provide more detailed information on pH-dependent sorption of this metabolite.

A summary of the soil adsorption data is provided in Table 8.5-1 to Table 8.5-4.

Table 8.5-1: Summary of soil adsorption/desorption for azoxystrobin

Azoxystrobin							
Soil name	Soil type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level/ Reference
Hyde Farm (UK)	Sandy clay loam	1.7	7.5	7.9	465	0.84	Yes / EFSA, 2010; Rowe, Lane, 1994
East Anglia (UK)	Loamy sand	1.7	7.8	4	235	0.82	Yes / EFSA, 2010; Rowe, Lane, 1994
Kenny Hill (UK)	Loamy sand	3.0	7.9	6.2	207	0.85	Yes / EFSA, 2010; Rowe, Lane, 1994
Lilly Field (UK)	Sand	0.3	5.5	1.5	500	0.84	Yes / EFSA, 2010; Rowe, Lane, 1994
Nebo (UK)	Silty clay loam	1.6	4.9	9.5	594	0.90	Yes / EFSA, 2010; Rowe, Lane, 1994
Pickett Piece (UK)	Clay loam	2.8	5.5	15	536	0.90	Yes / EFSA, 2010; Rowe, Lane, 1994
Arithmetic mean (n=6)					423	0.86	
Geometric mean (n=6)					392	-	
pH-dependency					No		

The adsorption of R234886 in soil has previously been determined in six soils and reviewed during the Annex I Renewal of azoxystrobin. The evaluation concluded that adsorption of R234886 was inversely correlated with pH; i.e. decreasing adsorption with increasing pH.

Since publication of the EFSA conclusion (2010), R234886 soil adsorption has been further evaluated in the same nine soils used for the additional degradation study (Simmonds, 2011) and was evaluated in the DAR, 2014¹

The soil adsorption data from all studies are presented in order of ascending pH in Table 8.5-2. The correlation of soil adsorption and pH was confirmed with the additional data. The relationship was linear with a fit of log K_{FOC} vs. pH (Figure 8.5-1). The Georgia soil had a higher K_{FOC} than would have been expected from its pH and appears to be an outlier. This soil also had a slower rate of degradation compared to its apparent pH.

Because of the clear relationship of adsorption with pH, paired acidic/alkaline values have been used in modelling assessments (Table 8.5-2).

Table 8.5-2: Summary of soil adsorption/desorption for R234886

R234886							
Soil Name	Soil Type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Acidic soils ^a							
Nebo (UK)	-	1.6	4.9	6.8	420	0.900	Yes / EFSA, 2010; Ferguson, Muller, Lane, 1994
Wisborough Green (UK)	-	2.4	5.3	2.43	101	0.542 ^b	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Frensham (UK)	-	1.8	5.4	1.83	100	0.639 ^b	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Lilly Field (UK)	-	0.3	5.5	1.4	490	0.790	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Pickett Piece (UK)	-	2.8	5.5	10	360	0.890	Yes / EFSA, 2010; Ferguson, Muller, Lane, 1994
Ohio (US)	-	1.4	5.8	1.52	112	0.663 ^b	Yes / DAR, 2014 ¹
Nuptown (UK)	-	2.5	6.2	1.53	62	0.705	Yes / DAR, 2014 ¹
Georgia (US)	-	0.7	7.1	1.22	182	0.832	Yes / DAR, 2014 ¹
Alkaline soils ^a							
Gartenacker (CH)	-	2.7	7.3	0.87	33	0.820	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Pappelacker (CH)	-	1.1	7.4	0.42	37	0.803	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Hyde Farm (UK)	-	1.7	7.5	0.85	49	0.850	Yes / EFSA, 2010, Ferguson, Muller, Lane, 1994

R234886							
Soil Name	Soil Type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
East Anglia (UK)	-	1.7	7.8	0.35	21	0.760	Yes / EFSA, 2010, Ferguson, Muller, Lane, 1994
North Dakota (US)	-	2.8	7.8	1.65	59	0.863	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Vetroz (CH)	-	2.4	7.9	0.72	30	0.861	Yes / DAR, 2014 ¹ ; Simmonds, 2011
Kenny Hill (UK)	-	3.0	7.9	0.82	28	0.900	Yes / EFSA, 2010, Ferguson, Muller, Lane, 1994
Arithmetic mean, acidic soils (n=8)					228.4	0.78 ^c	
Geometric mean, acidic soils (n=8)					177.0	-	
Arithmetic mean, alkaline soils (n=7)					36.7	0.83	
Geometric mean, alkaline soils (n=7)					34.8	-	
pH-dependency					Yes		

^a Soils were classified as either acidic or alkaline based on their adsorption and degradation characteristics as well as pH

^b values rounded to 0.7 used in modelling as this is the minimum reliable 1/n value stated in FOCUS (2000)

^c arithmetic mean used in modelling; based on 1/n values of 0.7 for Wisborough Green, Frensham and Ohio

Figure 8.5-1: R234886 – Distribution of log K_{FOC} vs. soil pH

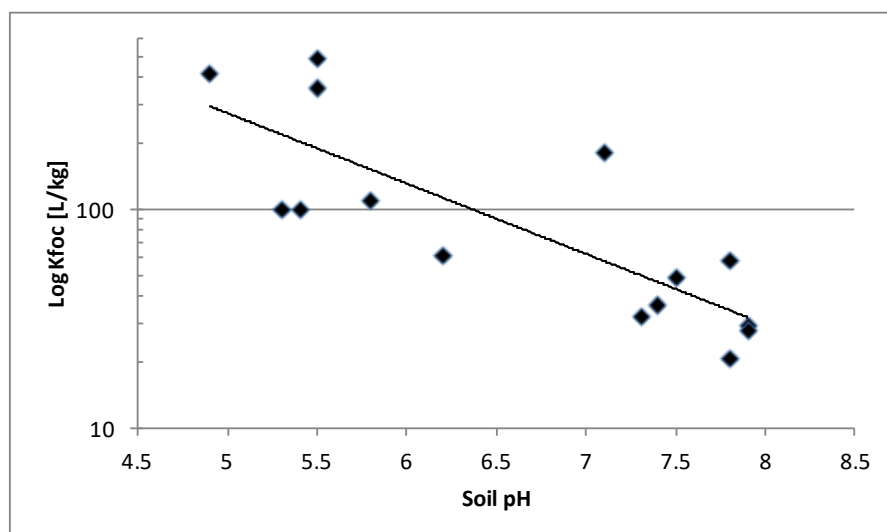


Table 8.5-3: Summary of soil adsorption/desorption for R402173

R402173							
Soil Name	Soil Type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Hyde Farm (UK)	Sandy clay loam	1.74	7.5	0.65	37	0.96	Yes / EFSA, 2010; Rowe, Lane, 1995
ERTC (UK)	Loamy sand	0.29	6.8	0.27	93	0.95	Yes / EFSA, 2010; Rowe, Lane, 1995
Kenny Hill (UK)	Sandy loam	2.96	8.5	0.74	25	0.96	Yes / EFSA, 2010; Rowe, Lane, 1995
NRTC (UK)	Silty clay loam	2.15	6.2	4.2	200	0.92	Yes / EFSA, 2010; Rowe, Lane, 1995
Wisborough Green (UK)	Silty clay loam	2.38	5.6	2.0	86	0.93	Yes / EFSA, 2010; Rowe, Lane, 1995
Pickett Piece (UK)	Clay loam	2.61	5.4	2.9	110	0.96	Yes / EFSA, 2010; Rowe, Lane, 1995
Arithmetic mean (n=6)					91.8	0.95	
Geometric mean (n=6)					73.9	-	
Minimum / maximum value used for modelling (n=6)					25 / 200	0.96^a	
pH-dependency					Yes		

^a 1/n related to minimum K_{FOC} was used in modelling

Table 8.5-4: Summary of soil adsorption/desorption for R401553

R401553							
Soil Name	Soil Type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level/ Reference
Hyde Farm (UK)	Sandy clay loam	1.74	7.5	1.9	110	0.81	Yes / EFSA, 2010; Rowe, Lane, 1995a
ERTC (UK)	Loamy sand	0.29	6.8	0.76	260	0.81	Yes / EFSA, 2010; Rowe, Lane, 1995a
Kenny Hill (UK)	Sandy loam	2.96	8.5	2.4	81	0.84	Yes / EFSA, 2010; Rowe, Lane, 1995a
NRTC (UK)	Silty clay loam	2.15	6.2	11	500	0.89	Yes / EFSA, 2010; Rowe, Lane, 1995a
Wisborough Green (UK)	Silty clay loam	2.38	5.6	1.6	66	0.85	Yes / EFSA, 2010; Rowe, Lane, 1995a
Pickett Piece (UK)	Clay loam	2.61	5.4	2.9	110	0.92	Yes / EFSA, 2010; Rowe, Lane, 1995a
Arithmetic mean (n=6)					188	0.85	
Geometric mean (n=6)					143	-	
pH-dependency					No		

8.5.2 Oxathiapiprolin and its metabolites

Studies on the mobility of oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10, and IN-E8S72 in soil are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504**.

Table 8.5-5: Summary of soil adsorption for oxathiapiprolin

Oxathiapiprolin							
Soil name	Soil type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level/ Reference
Drummer (USA) ^a	Clay loam	2.9	6.4	1322	45586	1.1207	Yes /EFSA, 2016 Manjunatha,
Gross Umstadt (Germany)	Loam	1.2	7.3	52.2	4350	0.9741	

Oxathiapiprolin							
Soil name	Soil type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level/ Reference
Nambsheim (France)	Sandy loam	1.4	7.7	102	7286	1.0294	S. 2010 Manjunatha, S. 2013
Lleida (Spain)	Silty clay	1.8	7.6	100	5556	0.9833	
Sassafras (USA)	Sandy loam	1.2	5.7	87.4	7283	0.9851	
Porterville (USA)	Loam	1.3	7.4	53.9	6738	0.8877	
Arithmetic mean (n=5)					6242.6	0.97	
Geometric mean (n=5)					6128	-	
pH-dependence					No		

^a The values obtained from the Clay loam (Drummer) soil were significantly higher than the other soils. This was most likely due to experimental shortcomings described in the evaluation report. Therefore the Drummer values were excluded from the arithmetic mean calculation. The Drummer soil K_{FOC} value was used as a worst case scenario for acidic soils during the PEC_{SED} assessment.

Table 8.5-6: Summary of soil adsorption for IN-RDT31

IN-RDT31							
Soil name	Soil type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Nambsheim (France)	Sandy loam	1.7	7.6	14.2	835	0.8654	Yes /EFSA 2016 Sannappa, H. 2012a
Tama (USA)	Silty clay loam	1.9	5.9	47.9	2521	0.9048	
Lleida (Spain)	Clay	2.0	7.5	12.6	630	0.8481	
Gross Umstadt (Germany)	Loam	1.2	7.0	14.1	1175	0.856	
Sassafras (USA)	Sandy loam	3.1	5.4	21.1	681	0.8814	
Arithmetic mean (n=5)					1168	0.87	
Geometric mean (n=5)					1012	-	
pH-dependence					No		

Table 8.5-7: Summary of soil adsorption of IN-RAB06

IN-RAB06							
Soil name	Soil type (USDA)	OC (%)	pH (H₂O)	K_F (mL/g)	K_{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Tama (USA)	Silty clay loam	1.9	6.3	9.98	521	0.7967	Yes /EFSA 2016 Schaefer, E.C., Ponizovsky, A.
Sassafras (USA)	Loam	1.5	5.5	6.93	460	0.8767	

IN-RAB06							
Soil name	Soil type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Lleida (Spain)	Clay	2.4	7.7	9.06	381	0.9614	2012
Gross Umstadt (Germany)	Loam	1.2	7.0	7.71	665	0.8865	
Nambsheim (France)	Sandy loam	1.7	7.7	7.59	451	0.9070	
Arithmetic mean (n=5)					496	0.89	
Geometric mean (n=5)					487	-	
pH-dependence					No		

Table 8.5-8: Summary of soil adsorption of IN-QPS10

IN-QPS10							
Soil name	Soil type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Nambsheim (France)	Sandy loam	1.7	7.6	39.2	2306	0.9034	Yes /EFSA 2016 Sannappa, H. 2012b
Tama (USA)	Silty clay loam	1.9	5.9	273	14368	0.9604	
Lleida (Spain)	Clay	2.0	7.5	51.4	2570	0.9127	
Gross Umstadt (Germany)	Loam	1.2	7.0	40.4	3367	0.8926	
Sassafras (USA)	Sandy loam	3.1	5.4	55.5	1790	0.9094	
Arithmetic mean (n=5)					4880.2	0.92	
Geometric mean (n=5)					3484	-	
pH-dependence					No		

Table 8.5-9: Summary of soil adsorption of IN-E8S72

IN-E8S72							
Soil name	Soil type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
Tama (USA)	Silty clay loam	2.2	6.6	0.135	6.14	1.07	Yes /EFSA 2016 Ravi, P.E. 2012
Lleida (Spain)	Clay	1.8	7.8	0.209	11	0.931	
Gross Umstadt	Loam	1.1	6.8	0.116	9.67	1.12	

IN-E8S72							
Soil name	Soil type (USDA)	OC (%)	pH (H ₂ O)	K _F (mL/g)	K _{FOC} (mL/g)	1/n (-)	Evaluated on EU level / Reference
(Germany)							
Nambsheim (France)	Sandy loam	1.5	7.8	0.075	5.01	0.928	
Sassafras (USA)	Sandy loam	1.1	5.4	0.058	4.83	1	
Arithmetic mean (n=5)					7.33	1	
Geometric mean (n=5)					6.91	-	
pH-dependence					No		

8.5.3 Column leaching (KCP 9.1.2.1)

Studies on column leaching are considered to be data provided in support of the active substance; no leaching was observed for azoxystrobin. All column leaching studies on azoxystrobin have been reviewed under Council Directive 91/414/EEC.

Column leaching studies were not conducted for oxathiapiprolin since reliable adsorption coefficient values were obtained from the adsorption/desorption studies reported for both active substances and their metabolites.

8.5.4 Lysimeter studies (KCP 9.1.2.2)

Where undertaken, lysimeter studies are considered to be data provided in support of the active substance. Based on the properties of azoxystrobin and oxathiapiprolin and the results of the ground water modelling (Section 8.8) lysimeter studies are not required.

8.5.5 Field leaching studies (KCP 9.1.2.3)

Based on the properties of azoxystrobin and oxathiapiprolin and the results of the ground water modelling (Section 8.8) field leaching studies are not required.

8.6 Degradation in the water/sediment systems (KCP 9.2, KCP 9.2.1, KCP 9.2.2, KCP 9.2.3)

Studies on degradation in water/sediment systems with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance.

8.6.1 Azoxystrobin and its metabolites

The rate of degradation in water/sediment systems of azoxystrobin was evaluated during the EU review (EFSA Journal 2010; 8(4): 1542). No additional studies have been performed. Data for the degradation of azoxystrobin metabolites R234886, R402173 and R401553 in water/sediment is not currently available.

Table 8.6-1: Summary of degradation in water/sediment of azoxystrobin

Azoxystrobin Distribution (max. water 91.2% after 0 days, max. sediment 90.5% after 0 days)										
Water/sediment system	pH water/sed.	DegT ₅₀ whole syst. (d)	DegT ₉₀ whole syst. (d)	Kinetic model	DissT ₅₀ water (d)	DissT ₉₀ water (d)	Kinetic model	DissT ₅₀ sed. (d)	Kinetic model	Evaluated on EU level / Reference
Old Basing	7.5 / 7.8	234	777	SFO	-	-	-	-	-	Yes / EFSA 2010; Warinton, 1994
Virginia water	6.4 / 6.9	180	598	SFO	-	-	-	-	-	Yes / EFSA, 2010; Warinton, 1994
Geometric mean (n=2)		205	682							

Table 8.6-2: Summary of observed metabolites of azoxystrobin

Metabolite	Maximum observed value in water/sediment system	Evaluated on EU level / Reference
R234886 Water/sediment system	Max. in water 10.8% after 152 d Max. in sediment 15.6% after 152 d Max in total system 18.1% ^a	Yes / EFSA, 2010; Warinton, 1994
R402173 Aquatic photolysis	Max. in total system water 2.4%	Yes / EFSA, 2010; Warinton, 1994
R401553 Aquatic photolysis	Max. in total system water 8.9%	Yes / EFSA, 2010; Warinton, 1994

^a note that the correct maximum occurrence level of this metabolite was agreed to be 18.1% AR (derived by calculating the individual mean for each of 3 label positions from data from 3 TLC solvent systems prior to calculating an overall mean). This value was used for modelling.

8.6.2 Oxathiapirolin and its metabolites

Studies on the mobility of oxathiapirolin and are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapirolin, **EFSA Journal 2016;14(7):4504**.

Table 8.6-3: Summary of degradation in water/sediment of oxathiapirolin

Oxathiapirolin, Distribution (Max.3.5% in water after 99 d. Max 43.27% in sed after 14 d)										
Water/sediment system	pH water/sed.	DegT ₅₀ whole syst. (d)	DegT ₉₀ whole syst. (d)	Kinetic model	DissT ₅₀ water (d)	DissT ₉₀ water (d)	Kinetic model	DissT ₅₀ sed. (d)	Kinetic model	Evaluated on EU level / Reference
Swiss Lake	5.8 / 6.3	44.9		SFO	13.6		SFO	112.7	SFO	Yes/ EFSA, 2016
Calwich Abbey	6.7 /	110		HS	30.1		DFOP	249.2	SFO	

Oxathiapiprolin, Distribution (Max.3.5% in water after 99 d. Max 43.27% in sed after 14 d)										
Water/sediment system	pH water/sed.	DegT ₅₀ whole syst. (d)	DegT ₉₀ whole syst. (d)	Kinetic model	DissT ₅₀ water (d)	DissT ₉₀ water (d)	Kinetic model	DissT ₅₀ sed. (d)	Kinetic model	Evaluated on EU level / Reference
	7.5									
Geometric mean (n=2)		70.3			20.2			167.6		

Table 8.6-4: Summary of observed metabolites

Metabolite (Water / sediment system)	Distribution in water / sediment system	Evaluated on EU level / Reference
IN-RAB06 (Water / sediment system)	Max. in water 4.2% after 28 d Max. in sediment 5.2% after 28 d Max. in total system: 9.5%	Yes/ EFSA, 2016
IN-S2K66 (Water / sediment system)	Max. in water: not observed Max. in sediment 8.7% after 99 d	
IN-RSE01 (Water / sediment system)	Max. in water 3.8% after 60 d Max. in sediment 8.6% after 14 d Max in total system: 10.4% after 28 d	
IN-RYJ52 (Water / sediment system)	Max. in water 7.9% after 28-60 d (isomers combined) Max. in sediment 14.7% after 28-60 d (isomers combined) Max in total system: 16.0% ^a	
IN-Q7D41 (Water / sediment system)	Max. in water 1.5% after 99 d Max. in sediment 10.5% after 99 d Max. in total system: 11.8% after 99 d	
IN-P3X26 (Aqueous photolysis)	Max. in water 14.0% after 15 d Max. in sediment: not observed	

^aMaximum sum occurrence of two metabolites in the total system was observed for Calwich Abbey Lake system with thiazole label: isomer IN-RYJ52-A at 10.04% AR and isomer IN-RYJ52-B at 5.97% AR. Therefore, the sum of these two values of 16.0% AR was calculated

8.7 Predicted Environmental Concentrations in soil (PECs) (KCP 9.1.3)

Review Comments:

The PEC_{soil} calculations for azoxystrobin, oxathiapiprolin and their metabolites and for formulation were provided by the Applicant and are considered acceptable. The EU agreed endpoints were used for PEC_{soil} calculations.

The PEC_{soil} reported below can be used for the risk assessment of the non-target organisms. Please refer to Section B9.

8.7.1 Justification for new endpoints

Unless otherwise stated, EU agreed endpoints refer to those stated in the EU review of azoxystrobin (EFSA Journal 2010; 8(4): 1542 and DAR, 2014¹) and oxathiapiprolin (EFSA Journal 2016;14(7):4504 and

DAR, 2015²).

8.7.2 Active substance(s) and relevant metabolite(s)

The following PEC_s calculations for azoxystrobin and its metabolites R234886, R402173, R401553 and oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 have not previously been reviewed are provided in support of this assessment in Appendix 3 of this document. Examples for the worst case (onions) of azoxystrobin and its metabolites can be found in A 3.1 and for oxathiapiprolin and its metabolites in A 3.2.

Table 8.7-1: Input parameters related to application for PEC_s calculations

Use No.	PL-28, PL-20	PL-30	PL-17
Crop	Cabbage ^a	Onions	Hops
Application rate (g as/ha), parent compounds	Azoxystrobin: 250 Oxathiapiprolin: 12	Azoxystrobin: 250 Oxathiapiprolin: 12	Azoxystrobin: 250 Oxathiapiprolin: 12
Number of applications/interval (d)	2 / 7	2 / 12	2 / 12
Pseudo application rate (g as/ha), metabolites ^b	Azoxystrobin: R234886: 139 R402173: 70.2 R401553: 44.9 Oxathiapiprolin: IN-RDT31: 2.32 IN-RAB06: 3.42 IN-QPS10: 1.35 IN-E8S72: 0.825		
Crop interception (%)	25 / 25 ^c	10 / 10 ^d	60 / 60 ^e
Depth of soil layer (relevant for PEC _{S,plateau}) (cm)	5 (PEC _{S,initial}) / 20 (PEC _{S,plateau})	5 (PEC _{S,initial}) / 20 (PEC _{S,plateau})	5 (PEC _{S,initial}) / 5 (PEC _{S,plateau})
Models used for calculation	ESCAPE v.2.0		

^a covers the application in tomatoes as the interception rate for tomatoes at BBCH 11 is 50%

^b metabolites were treated as pseudo parent compounds. PEC_{soil} for the metabolites was calculated based on the total application rate of the parent compounds adjusted for the molar mass differences between metabolites and parents and maximum occurrence in soil

^c worst case interception for cabbage BBCH 11 (EFSA, 2014)³

^d worst case interception for onions BBCH 11 (EFSA, 2014)³

^e worst case interception for vines BBCH 21 (EFSA, 2014)³

² Ireland (2015). Draft Assessment Report (DAR) on the active substance oxathiapiprolin prepared by the rapporteur Member State Ireland in the framework of Regulation (EC) No 1107/2009, February 2015

³ EFSA (2014). EFSA Guidance Document for evaluating laboratory and field dissipation studies to obtain DegT₅₀ values of active substances of plant protection products and transformation products of these active substances in soil. EFSA Journal 2014;12(5):3662, 37 pp., doi:10.2903/j.efsa.2014.3662

Table 8.7-2: Input parameter for active substance(s) and relevant metabolite(s) for PECs calculation

Compound	Molar mass (g/mol)	Maximum occurrence (%)	DT ₅₀ (d)	Value in accordance to EU endpoint / Reference
Azoxystrobin	403.4	-	262 (SFO, Maximum, field studies, n = 13, non-normalised)	Yes / EFSA, 2010
R234886	389.4	28.8	110 (DFOP slow phase, maximum, laboratory studies, n = 12, normalised)	Yes / DAR, 2014 ^a
R402173	333.3	17	9.8 (SFO, maximum, laboratory studies, n = 3, non-normalised)	Yes / EFSA, 2010
R401553	213.2	17	2.01 (SFO, maximum, laboratory studies, n = 3, non-normalised)	Yes / EFSA, 2010
Oxathiapiprolin	539.53	-	205.3 (SFO, maximum, field studies, n = 10, non-normalised)	Yes / EFSA, 2016
IN-RDT31	555.53	9.4	736.4 (2.6 / 1260.3) (DFOP ^b , maximum, field and lab studies, n = 7, non-normalised)	Yes / DAR, 2015
IN-RAB06	569.51	13.5	170.2 (SFO, maximum, lab studies, n = 12, non-normalised)	Yes / DAR, 2015
IN-QPS10	349.41	8.7	310.2 (0.855 / 845.3) (DFOP ^c , maximum, lab studies, n = 4, non-normalised)	Yes / DAR, 2015
IN-E8S72	180.09	10.3	477.4 (SFO, maximum, lab studies, n = 5, non-normalised)	Yes / DAR, 2015

^a DAR (2014): Azoxystrobin: Addendum – Confirmatory Information. RMS United Kingdom. December 2014.

^b DT₅₀ 1 and DT₅₀ 2, respectively, correspond to the maximum calculated half-life. Corresponding g = 0.2

^c DT₅₀ 1 and DT₅₀ 2, respectively, correspond to the maximum calculated half-life. Corresponding g = 0.4

8.7.2.1 Azoxystrobin and its metabolites

Table 8.7-3: PEC_S for azoxystrobin on cabbage

PEC _S (mg/kg)		PL-20, Cabbage, 2 × 250 g a.s./ha	
		Multiple application	
		Actual	TWA
PEC _{S,ini}		0.495	-
Short term	24h	0.494	0.495
	2d	0.493	0.494
	4d	0.490	0.493
Long term	7d	0.486	0.491
	14d	0.477	0.486
	21d	0.469	0.482
	28d	0.460	0.478
	42d	0.443	0.469
	50d	0.434	0.464
	100d	0.380	0.435
PEC _{S,plateau} (20 cm) with tillage after year 10		0.076	-
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})		0.572	-

Table 8.7-4: PEC_S for azoxystrobin on onions

PEC _S (mg/kg)		PL-30, Onions, 2 × 250 g a.s./ha	
		Multiple application	
		Actual	TWA
PEC _{S,ini}		0.591	-
Short term	24h	0.589	0.590
	2d	0.588	0.589
	4d	0.584	0.588
Long term	7d	0.580	0.585
	14d	0.569	0.580
	21d	0.559	0.575
	28d	0.549	0.569
	42d	0.529	0.559
	50d	0.517	0.553
	100d	0.453	0.519
PEC _{S,plateau} (20 cm) with tillage after year 10		0.091	-
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})		0.681	-

Table 8.7-5: PEC_S for azoxystrobin on hops

PEC _S (mg/kg)		PL-17, Hops, 2 × 250 g a.s./ha	
		Multiple application	
		Actual	TWA
PEC _{S,ini}		0.263	-
Short term	24h	0.262	0.262
	2d	0.261	0.262
	4d	0.260	0.261
Long term	7d	0.258	0.260
	14d	0.253	0.258
	21d	0.248	0.255
	28d	0.244	0.253
	42d	0.235	0.248
	50d	0.230	0.246
	100d	0.202	0.231
PEC _{S,plateau} (20 cm) with tillage after year 10		0.161	-
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})		0.424	-

PEC_S of metabolites

Table 8.7-6: PEC_S for R234886

Crop	PEC _S (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 139 g a.s./ha ^a	PEC _{S,ini}	0.139
	PEC _{S,plateau} (20 cm) with tillage after year 10	0.004
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.143
PL-30, Onions, 1 × 139 g a.s./ha ^a	PEC _{S,ini}	0.167
	PEC _{S,plateau} (20 cm) with tillage after year 10	0.005
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.171
PL-17, Hops, 1 × 139 g a.s./ha ^a	PEC _{S,ini}	0.074
	PEC _{S,plateau} (5 cm) without tillage after year 10	0.008
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.082

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

Table 8.7-7: PECs for R402173

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 70.2g a.s./ha ^a	PEC _{S,ini}	0.070
PL-30, Onions, 1 × 70.2 g a.s./ha ^a	PEC _{S,ini}	0.084
PL-17, Hops, 1 × 70.2 g a.s./ha ^a	PEC _{S,ini}	0.038

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

Table 8.7-8: PECs for R401553

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 44.9 g a.s./ha ^a	PEC _{S,ini}	0.045
PL-30, Onions, 1 × 44.9 g a.s./ha ^a	PEC _{S,ini}	0.054
PL-17, Hops, 1 × 44.9 g a.s./ha ^a	PEC _{S,ini}	0.024

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

8.7.2.2 Oxathiapiprolin and its metabolites

Table 8.7-9: PECs for oxathiapiprolin on cabbage

PECs (mg/kg)		PL-20, Cabbage, 2 × 12 g a.s./ha	
		Multiple applications	
		Actual	TWA
PEC _{S,ini}		0.024	-
Short term	24h	0.024	0.024
	2d	0.024	0.024
	4d	0.023	0.024
Long term	7d	0.023	0.023
	14d	0.023	0.023
	21d	0.022	0.023
	28d	0.022	0.023
	42d	0.021	0.022
	50d	0.020	0.022
	100d	0.017	0.020
PEC _{S,plateau} (20 cm) with tillage after year 10		0.002	-
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})		0.026	-

Table 8.7-10: PEC_s for oxathiapiprolin on onions

PEC _s (mg/kg)		PL-30, Onions, 2 × 12 g a.s./ha	
		Multiple applications	
		Actual	TWA
PEC _{S,ini}		0.028	-
Short term	24h	0.028	0.028
	2d	0.028	0.028
	4d	0.028	0.028
Long term	7d	0.028	0.028
	14d	0.027	0.028
	21d	0.026	0.027
	28d	0.026	0.027
	42d	0.025	0.026
	50d	0.024	0.026
	100d	0.020	0.024
PEC _{S,plateau} (20 cm) with tillage after year 10		0.003	-
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})		0.031	-

Table 8.7-11: PEC_s for oxathiapiprolin on hops

PEC _s (mg/kg)		PL-17, Hops, 2 × 12 g a.s./ha	
		Multiple applications	
		Actual	TWA
PEC _{S,ini}		0.013	-
Short term	24h	0.013	0.013
	2d	0.013	0.013
	4d	0.012	0.013
Long term	7d	0.012	0.012
	14d	0.012	0.012
	21d	0.012	0.012
	28d	0.011	0.012
	42d	0.011	0.012
	50d	0.011	0.012
	100d	0.009	0.011
PEC _{S,plateau} (5 cm) without tillage after year 10		0.005	-

PECs (mg/kg)	PL-17, Hops, 2 × 12 g a.s./ha	
	Multiple applications	
	Actual	TWA
PEC _{S,accumulation} (PEC _{S,accumulation} = PEC _{S,ini} + PEC _{S,plateau})	0.018	-

PEC_S of metabolites

Table 8.7-12: PEC_S for IN-RDT31

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 2.32 g a.s./ha ^a	PEC _{S,ini}	0.002
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	0.002
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.004
PL-30, Onions, 1 × 2.32 g a.s./ha ^a	PEC _{S,ini}	0.003
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	0.003
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.005
PL-17, Hops, 1 × 2.32 g a.s./ha ^a	PEC _{S,ini}	0.001
	PEC _{S,plateau} (5 cm) with tillage, plateau was not yet reached after year 10	0.004
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.006

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

Table 8.7-13: PEC_S for IN-RAB06

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 3.42 g a.s./ha ^a	PEC _{S,ini}	0.003
	PEC _{S,plateau} (20 cm) with tillage after year 10	<0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.004
PL-30, Onions, 1 × 3.42 g a.s./ha ^a	PEC _{S,ini}	0.004
	PEC _{S,plateau} (20 cm) with tillage after year 10	< 0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.004
PL-17, Hops, 1 × 3.42 g a.s./ha ^a	PEC _{S,ini}	0.002

Crop	PECs (mg/kg)	Single application ^a
	PEC _{S,plateau} (5 cm) without tillage after year 10	< 0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.002

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

Table 8.7-14: PECs for IN-QPS10

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 1.35 g a.s./ha ^a	PEC _{S,ini}	0.001
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	<0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.002
PL-30, Onions, 1 × 1.35 g a.s./ha ^a	PEC _{S,ini}	0.002
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	< 0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.002
PL-17, Hops, 1 × 1.35 g a.s./ha ^a	PEC _{S,ini}	< 0.001
	PEC _{S,plateau} (5 cm) without tillage, plateau was not yet reached after year 10	0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.002

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

Table 8.7-15: PECs for IN-E8S72

Crop	PECs (mg/kg)	Single application ^a
PL-20, Cabbage, 1 × 0.825g a.s./ha ^a	PEC _{S,ini}	< 0.001
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	< 0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.001
PL-30, Onions, 1 × 0.825g a.s./ha ^a	PEC _{S,ini}	0.001
	PEC _{S,plateau} (20 cm) with tillage, plateau was not yet reached after year 10	< 0.001
	PEC _{S,accumulation} (PEC _{S,ini} + PEC _{S,plateau})	0.001
PL-17, Hops, 1 × 0.825g a.s./ha ^a	PEC _{S,ini}	< 0.001

Crop	PEC _s (mg/kg)	Single application ^a
	PEC _{s,plateau} (5 cm) without tillage, plateau was not yet reached after year 10	< 0.001
	PEC _{s,accumulation} (PEC _{s,ini} + PEC _{s,plateau})	0.001

^a 'Pseudo application rate' of metabolite = parent total dose x MW correction factor x maximum formation

8.7.2.3 PEC_s of A22773A

Table 8.7-16: PEC_s for A22773A on cabbage, onions and hops

Formulation	Crop	Maximum use rate (g A22773A /ha ^a)	Crop interception (%)	PEC _{s,ini} (mg A22773A /kg) ^b
A22773A	PL-20, Cabbage	1097	25	1.10
	PL-30, Onions		10	1.32
	PL-17, Hops		60	0.585

^a The formulation components are considered to dissipate rapidly after application, therefore only one application is taken into consideration. The rate of formulation was based on a specific density of 1.097 g/mL with a maximum application of 1 L/ha.

^b Calculated as:

$$PEC_{s,ini} [mg/kg] = \frac{A \times (1 - I)}{z \times bd_{soil} \times 10}$$

Where:

A = application rate [g product/ha]

PEC_{s,ini} = initial (maximum) concentration in soil [mg product/kg soil]

I = Interception [-]

z = soil mixing depth (5 cm) [m]

bd_{soil} = bulk density of the soil (1500 kg/m³) [kg soil/m³]

8.8 Predicted Environmental Concentrations in groundwater (PEC_{GW}) (KCP 9.2.4)

Review Comments:

The PEC_{GW} calculations for azoxystrobin, oxathiapiprolin and their metabolites were provided by the Applicant and are considered acceptable.

According FOCUS DG SANTE for active substances and their relevant metabolites PEC_{GW} calculations after 1 January 2022 should be performed with new versions of models: FOCUS PEARL 5.5.5 and FOCUS PELMO 6.6.4. Nevertheless, as submission date is November 2021, thus the calculation performed with FOCUS MACRO 5.5.4, FOCUS PEARL 4.4.4 and FOCUS PELMO 5.5.3 were accepted. The EU agreed endpoints, derived from the datasets presented in the EFSA Journal 2016;14(7):4504 and EFSA Journal 2010; 8(4):1542 with Confirmatory Data for metabolite R234886, were used.

The results of FOCUS groundwater calculation for azoxystrobin indicated that PEC_{gw} values do not exceed the regulatory trigger of 0.1 µg/L at 1 m depth in any of the scenarios.

The maximum PEC_{GW} of R401553 and R402173 were below 0.1 µg/L in all scenarios.

The sorption of metabolites R234886 is pH dependent. Therefore, the simulations were performed using specific K_{foc} values for acidic and alkaline soils and at Tier 1 $\text{PUF}=0$ for azoxystrobin. The maximum Tier 1 PEC_{GW} was 5.21 $\mu\text{g/L}$ (FOCUS PEARL, application to Onions, $2 \times 250 \text{ g a.s./ha}$, BBCH 11, Hamburg scenario). Further simulations were performed for azoxystrobin at Tier 2 using $\text{PUF}=0.5$. The maximum Tier 2 PEC_{GW} of metabolites R234886 was 5.09 $\mu\text{g/L}$ (FOCUS PEARL, application to Onions, $2 \times 250 \text{ g a.s./ha}$, BBCH 11, Hamburg scenario).

The results of FOCUS groundwater calculation for oxathiapiprolin, indicated that PEC_{gw} values do not exceed the regulatory trigger of 0.1 $\mu\text{g/L}$ at 1 m depth in any of the scenarios.

The maximum PEC_{GW} of IN-RDT31, IN-RAB06 and IN-QPS10 were below 0.1 $\mu\text{g/L}$ in all scenarios.

However, PEC_{gw} for metabolite IN-E8S72 exceed this threshold. The maximum PEC_{GW} was 1.93 $\mu\text{g/L}$ (FOCUS PEARL, application to Onions, $2 \times 12 \text{ g a.s./ha}$, BBCH 11, Thiva scenario).

Assessment of the relevance of these metabolites according to the stepwise procedure of the EC guidance document SANCO/221/2000 –rev.10 is presented in Section B10.

In conclusion, the results demonstrate that A22773A can be applied safely according to the recommended use patterns without risk of azoxystrobin, oxathiapiprolin and their metabolites exceeding acceptable levels in groundwater.

Unless otherwise stated, EU agreed endpoints refer to those stated in the EU review of azoxystrobin (EFSA Journal 2010; 8(4): 1542 and DAR, 2014¹) and oxathiapiprolin (EFSA Journal 2016;14(7):4504 and DAR, 2015²).

8.8.1 Justification for new endpoints

EU agreed endpoints were used for PEC_{GW} modelling of azoxystrobin, oxathiapiprolin and their respective metabolites.

8.8.2 Active substance(s) and relevant metabolite(s) (KCP 9.2.4.1)

The following PEC_{GW} modelling for azoxystrobin and its metabolites R234886, R401553, R402173 as well as oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 have not previously been reviewed and are provided in support of this assessment in Appendix 3 of this document.

Table 8.8-1: Input parameters related to application for PEC_{GW} calculations

Use No.	PL-20		PL-28			PL-30		PL-17		
Crop	Cabbage		Tomatoes			Onions		Vines ^b		
Application rate (g a.s./ha)	Azoxystrobin: 250 Oxathiapiprolin: 12		Azoxystrobin: 250 Oxathiapiprolin: 12			Azoxystrobin: 250 Oxathiapiprolin: 12		Azoxystrobin: 250 Oxathiapiprolin: 12		
Number of applications / interval (d)	2 / 7		2 / 7			2 / 12		2 / 12		
PHI	7*		3			7		14*		
BBCH growth stage	11	49	11	51	89	11	49	21	60	89

Crop interception (%) ^a	25 + 25	70 + 70	50 + 50	80 + 80	80 + 80	10 + 10	40 + 40	60 + 60	60 ^d + 60 ^d	75 ^d + 75 ^d
Frequency of application	Annual									
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4									

^a interception rates according to EFSA, 2014³

^b FOCUS crop vines selected as a suitable surrogate covering GAP crop hops.

^c although hops is not a defined crop in FOCUS groundwater, AppDate 3.06 provides interception rate for hops in groundwater.

^d worst case, AppDate 3.06 suggests 90% for these BBCH stages

* Intended PHI for hops is 28 days. A worst case interception from PHI of 14 days was used in the calculations. Intended PHI for lettuce is 14 days. A worst case interception from PHI of 7 days was used in the calculations

Table 8.8-2: Application dates used for groundwater risk assessment

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
PL-20, Cabbage 7 days interval BBCH 11	First application on BBCH 11 (AppDate 3.06)	Châteaudun 1 st	25-Apr (115)	2-May (122)
		Châteaudun 2 nd	5-Aug (217)	12-Aug (224)
		Hamburg 1 st	25-Apr (115)	2-May (122)
		Hamburg 2 nd	5-Aug (217)	12-Aug (224)
		Jokioinen	1-Jun (152)	8-Jun (159)
		Kremsmünster 1 st	25-Apr (115)	2-May (122)
		Kremsmünster 2 nd	5-Aug (217)	12-Aug (224)
		Porto 1 st	9-Mar (68)	16-Mar (75)
		Porto 2 nd	4-Aug (216)	11-Aug (223)
		Sevilla 1 st	8-Mar (67)	15-Mar (74)
		Sevilla 2 nd	22-Jun (173)	29-Jun (180)
		Thiva	21-Aug (233)	28-Aug (240)
PL-20, Cabbage 7 days interval BBCH 49	Last application on BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun 1 ^{st a}	1-Jul (182)	8-Jul (189)
		Châteaudun 2 ^{nd a}	1-Oct (274)	8-Oct (281)
		Hamburg 1 ^{st a}	1-Jul (182)	8-Jul (189)
		Hamburg 2 ^{nd a}	1-Oct (274)	8-Oct (281)
		Jokioinen ^a	6-Sep (249)	13-Sep (256)
		Kremsmünster 1 ^{st a}	1-Jul (182)	8-Jul (189)
		Kremsmünster 2 ^{nd a}	1-Oct (274)	8-Oct (281)
		Porto 1 ^{st a}	17-Jun (168)	24-Jun (175)
		Porto 2 nd	31-Oct (304)	7-Nov (311)
		Sevilla 1 ^{st a}	18-May (138)	25-May (145)
		Sevilla 2 ^{nd a}	1-Sep (244)	8-Sep (251)
		Thiva ^a	16-Nov (320)	23-Nov (327)
PL-28, Tomatoes	First application on	Châteaudun	13-May (133)	20-May (140)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
7 days interval BBCH 11	BBCH 11 (AppDate 3.06)	Piacenza	13-May (133)	20-May (140)
		Porto	19-Mar (78)	26-Mar (85)
		Sevilla	17-Apr (107)	24-Apr (114)
		Thiva	13-Apr (103)	20-Apr (110)
PL-28, Tomatoes 7 days interval BBCH 51	First application on BBCH 51 (AppDate 3.06)	Châteaudun	15-Jun (166)	22-Jun (173)
		Piacenza	15-Jun (166)	22-Jun (173)
		Porto	19-May (139)	26-May (146)
		Sevilla	17-May (137)	24-May (144)
		Thiva	15-May (135)	22-May (142)
PL-28, Tomatoes; 7 days interval BBCH 89	Last application on BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	15-Aug (227)	22-Aug (234)
		Piacenza ^a	15-Aug (227)	22-Aug (234)
		Porto	21-Aug (233)	28-Aug (240)
		Sevilla ^a	21-Jun (172)	28-Jun (179)
		Thiva	31-Aug (243)	7-Sep (250)
PL-30, Onions 12 days interval BBCH 11	First application on BBCH 11 (AppDate 3.06)	Châteaudun	3-May (123)	15-May (135)
		Hamburg	3-May (123)	15-May (135)
		Jokioinen	25-May (145)	6-Jun (157)
		Kremsmünster	3-May (123)	15-May (135)
		Porto	9-Mar (68)	21-Mar (80)
		Thiva	18-Apr (108)	30-Apr (120)
PL-30, Onions 12 days interval BBCH 49	Last application on BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	13-Aug (225)	25-Aug (237)
		Hamburg ^a	13-Aug (225)	25-Aug (237)
		Jokioinen ^a	27-Jul (208)	8-Aug (220)
		Kremsmünster ^a	13-Aug (225)	25-Aug (237)
		Porto ^a	12-May (132)	24-May (144)
		Thiva ^a	11-Jun (162)	23-Jun (174)
PL-17, Vines ^b 12 days interval BBCH 21	First application on BBCH 19 ^c (AppDate 3.06)	Châteaudun	8-May (128)	20-May (140)
		Hamburg	24-May (144)	5-Jun (156)
		Kremsmünster	24-May (144)	5-Jun (156)
		Piacenza	8-May (128)	20-May (140)
		Porto	26-Apr (116)	8-May (128)
		Sevilla	24-Apr (114)	6-May (126)
		Thiva	17-Apr (107)	29-Apr (119)
PL-17, Vines ^b 12 days interval BBCH 60	First application on BBCH 60 (AppDate 3.06)	Châteaudun	21-Jun (172)	3-Jul (184)
		Hamburg	20-Jun (171)	2-Jul (183)
		Kremsmünster	20-Jun (171)	2-Jul (183)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
PL-17, Vines ^b 12 days interval BBCH 89	Last application on BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Piacenza	21-Jun (172)	3-Jul (184)
		Porto	15-Jun (166)	27-Jun (178)
		Sevilla	21-May (141)	2-Jun (153)
		Thiva	26-May (146)	7-Jun (158)
		Châteaudun ^a	6-Oct (279)	18-Oct (291)
		Hamburg ^a	4-Oct (277)	16-Oct (289)
		Kremsmünster ^a	4-Oct (277)	16-Oct (289)
		Piacenza ^a	6-Oct (279)	18-Oct (291)
		Porto ^a	4-Sep (242)	16-Sep (259)
		Sevilla ^a	4-Nov (308)	16-Nov (320)
		Thiva ^a	24-Sep (267)	6-Oct (279)

Numbers in brackets are corresponding Julian day numbers used for MACRO simulations

^a last application on harvest date minus PHI

^b FOCUS crop vines selected as a suitable surrogate covering GAP crop hops

^c the growth stage BBCH 21 is not defined in AppDate 3.06, thus BBCH 19 was chosen instead

8.8.2.1 Azoxystrobin and its metabolites

The input parameters of azoxystrobin and its metabolites R234886, R401553 and R402173 used in modelling are shown in the table below. Separate runs were done for two different substance parameter sets:

- Tier 1: EU agreed endpoints with a worst case plant uptake factor of 0 for azoxystrobin
- Tier 2: EU agreed endpoints with a plant uptake factor of 0.5 for azoxystrobin (Weinfurter, 2013)

Table 8.8-3: Input parameters related to active substance azoxystrobin, R234886, R402173 and R401553 for PEC_{GW} calculations

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	389.4	333.3	213.2	Yes / EFSA, 2010
Water solubility (mg/L) (20°C)	6.0	57 (25°C)	61 (25°C)	560 (25°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1 × 10 ^{-10*}	0	0	0	Yes / EFSA, 2010

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
DT ₅₀ in soil (d)	Microbial pathway: 78 ^{a*} (n = 2) Photolytic pathway: 2.55 ^{b*} (n = 10) (geometric mean, field studies normalisation to pF2, 20°C with Q ₁₀ of 2.58)	Acidic soils: 98.6 ^{**} (n = 5) Alkaline soils: 36.7 ^{**} (n = 7) (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58)	4.7 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	1.1 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	[*] Yes / EFSA, 2010 ^{**} Yes / DAR, 2014 ¹
Transformation rate	Microbial pathway: 0.007767 (to R234886) 0.001120 (to sink) Photolytic pathway: 0.104652 (to R402173) 0.106554 (to R401553) 0.060616 (to sink)	Acidic soils: 0.007030 (to sink) Alkaline soils: 0.018887 (to sink)	0.069020 (to R401553) 0.078458 (to sink)	0.630134 (to sink)	Calculated for PELMO; (ln(2) / DT ₅₀) × FFm
K _{FOC} / K _{FOM} (mL/g)	423 / 245 [*] (arithmetic mean, n = 6)	Acidic soils: 228.4 / 132.5 ^{**} (arithmetic mean, n = 8) Alkaline soils: 36.7 / 21.3 ^{**} (arithmetic mean, n = 7)	25 / 14.5 [*] (worst case, n = 6)	188 / 109 [*] (arithmetic mean, n = 6)	[*] Yes / EFSA, 2010 ^{**} Yes / DAR, 2014 ¹ K _{FOM} = K _{FOC} / 1.724
1/n	0.86 (arithmetic mean, n = 6)	Acidic soils: 0.78 (arithmetic mean, n = 8) Alkaline soils: 0.83 (arithmetic mean, n = 7)	0.96 (relate to worst case K _{FOC})	0.85 (arithmetic mean, n = 6)	Yes / EFSA, 2010

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Plant uptake factor	Tier 1: 0 (worst-case) Tier2: 0.5*	0**	0**	0**	*Yes / DAR, 2014 & Weinfurter, 2013 **Yes / DAR, 2014 ¹
Formation fraction	-	0.874 from parent	0.385 from parent	0.392 from parent 0.468 from R402173	Yes / EFSA, 2010
Conversion fraction	-	0.844 from parent	0.318 from parent	0.302 ^c from parent	for MACRO; molar mass (metabolite)/molar mass (parent) × formation fraction

^a calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^b geometric mean, quick phase, field

^c For the secondary metabolite R401553 the formation fraction was multiplied along the pathway; therefore $213.2/403.4 \times ((0.385 \times 0.468)+0.392)$

Tier 1

Table 8.8-4: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS PEARL v4.4.4 (A 3.3: Langa Peñalba, S., & Robinson, P. 2022, VV-961774)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.55	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.85	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	0.015	4.13	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.021	4.72	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	2.07	< 0.001	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	2.54	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.002	2.83	0.002	< 0.001
	Porto 1 st	< 0.001	< 0.001	1.61	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	2.91	< 0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.218	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.346	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.877	< 0.001	< 0.001
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.360	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.359	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.21	0.033	0.002
	Jokioinen	< 0.001	< 0.001	0.451	0.007	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.747	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.692	0.006	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.621	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
	Porto 2 nd	< 0.001	< 0.001	0.548	0.045	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.043	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.071	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.049	0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.03	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.40	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.00	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.124	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.280	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.208	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.381	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.300	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.018	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.060	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.248	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.456	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.422	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.027	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.074	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.48	< 0.001	< 0.001
	Hamburg	< 0.001	0.029	5.21	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.33	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.004	3.25	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.66	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.569	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.874	< 0.001	< 0.001
	Hamburg	< 0.001	0.008	3.25	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	1.22	0.006	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.98	0.002	< 0.001
	Porto	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.405	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.36	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	1.93	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.20	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.699	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.611	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.362	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	1.42	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.01	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.24	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.55	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.888	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.639	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.381	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.690	0.001	< 0.001
	Hamburg	< 0.001	< 0.001	1.02	0.027	0.001
	Kremsmünster	< 0.001	< 0.001	0.600	0.007	< 0.001
	Piacenza	< 0.001	< 0.001	0.642	0.017	< 0.001
	Porto	< 0.001	< 0.001	0.579	0.004	< 0.001
	Sevilla	< 0.001	< 0.001	0.273	0.005	< 0.001
	Thiva	< 0.001	< 0.001	0.253	0.002	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-5: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS PELMO v5.5.3 (A 3.3: Langa Peñalba, S., & Robinson, P. 2022, VV-961774)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ³ 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.29	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.51	0.001	< 0.001
	Hamburg 1 st	< 0.001	0.004	4.47	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.006	5.11	0.013	< 0.001
	Jokioinen	< 0.001	< 0.001	2.09	0.001	< 0.001
	Kremsmünster 1 st	< 0.001	0.001	2.65	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.001	2.90	0.005	< 0.001
	Porto 1 st	< 0.001	0.003	2.40	< 0.001	< 0.001
	Porto 2 nd	< 0.001	0.006	3.63	0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.146	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.243	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.946	< 0.001	< 0.001
PL-20, Cabbage ³ 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.291	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.285	0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.24	0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.22	0.052	0.001
	Jokioinen	< 0.001	< 0.001	0.446	0.019	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.781	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.719	0.016	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.872	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.796	0.084	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.032	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.044	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.066	0.005	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.685	< 0.001	< 0.001
	Piacenza	< 0.001	0.002	1.72	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.22	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.050	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.216	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.130	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.452	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.366	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.005	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.038	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.155	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.540	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.528	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.007	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.051	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.32	< 0.001	< 0.001
	Hamburg	< 0.001	0.007	5.20	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.22	0.001	< 0.001
	Kremsmünster	< 0.001	0.003	3.35	< 0.001	< 0.001
	Porto	< 0.001	0.002	3.18	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.290	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-30, Onions 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.714	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	3.37	0.016	< 0.001
	Jokioinen	< 0.001	< 0.001	1.18	0.009	< 0.001
	Kremsmünster	< 0.001	0.001	2.03	0.005	< 0.001
	Porto	< 0.001	0.001	2.04	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.178	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.18	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.13	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.49	0.001	< 0.001
	Piacenza	< 0.001	0.006	1.54	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.984	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.265	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Thiva	< 0.001	< 0.001	0.279	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.19	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.24	0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.53	0.001	< 0.001
	Piacenza	< 0.001	0.006	1.64	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.20	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Sevilla	< 0.001	< 0.001	0.258	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.267	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.694	0.002	< 0.001
	Hamburg	< 0.001	0.001	1.11	0.047	0.001
	Kremsmünster	< 0.001	< 0.001	0.759	0.014	< 0.001
	Piacenza	< 0.001	0.002	0.820	0.059	0.002
	Porto	< 0.001	< 0.001	0.867	0.007	< 0.001
	Sevilla	< 0.001	< 0.001	0.131	0.011	< 0.001
	Thiva	< 0.001	< 0.001	0.237	0.007	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-6: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS MACRO v5.5.4 (A 3.3: Langa Peñalba, S., & Robinson, P. 2022, VV-961774)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ^a , 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	0.002	1.56	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	0.009	2.31	0.002	< 0.001
PL-20, Cabbage ^a , 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.472	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.447	0.007	< 0.001
PL-28, Tomatoes, 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.680	< 0.001	< 0.001
PL-28, Tomatoes, 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.174	< 0.001	< 0.001
PL-28, Tomatoes, 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.183	< 0.001	< 0.001
PL-30, Onions, 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.39	< 0.001	< 0.001
PL-30, Onions, 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.891	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	0.485	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	0.524	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.278	0.003	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-7: Summary of maximum PEC_{GW} across all models for azoxystrobin, R234886, R402173 and R401553 (A 3.3: Langa Peñalba, S., & Robinson, P. 2022, VV-961774)

Substance		80 th Percentile PEC _{GW} (µg/L)	Crop	Applic ation rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Azoxystrobin		< 0.001	Cabbage	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Tomatoes	2 × 250	11 - 89	All models	All scenarios
		< 0.001	Onions	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Vines	2 × 250	21 - 89	All models	All scenarios
R234886	Acidic	0.021	Cabbage	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg 2 nd
		0.002	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		0.029	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		0.006	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
	Alkaline	5.11	Cabbage	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg 2 nd
		1.72	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		5.21	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		2.24	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Hamburg
R402173		0.084	Cabbage	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Porto, 2 nd
		0.002	Tomatoes	2 × 250	11 - 89	FOCUS PEARL v4.4.4/ FOCUS PELMO v5.5.3	Piacenza Porto
		0.016	Onions	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg
		0.059	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
R401553		0.002	Cabbage	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg 2 nd
		< 0.001	Tomatoes	2 × 250	11 - 89	All models	All scenarios
		< 0.001	Onions	2 × 250	11 - 49	All models	All scenarios
		0.002	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Tier 2

Table 8.8-8: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS PEARL v4.4.4 (Anagu, I. & Langa Peñalba, S., 2021, VV-911613)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy-strobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.50	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.82	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	0.014	4.03	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.020	4.64	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	2.04	< 0.001	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	2.49	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.002	2.79	0.003	< 0.001
	Porto 1 st	< 0.001	< 0.001	1.52	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	2.81	< 0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.190	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.312	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.848	< 0.001	< 0.001
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.353	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.353	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.21	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.20	0.033	0.002
	Jokioinen	< 0.001	< 0.001	0.446	0.007	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.738	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.683	0.006	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.601	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.533	0.045	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.038	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.070	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.049	0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.00	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.36	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.937	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.116	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.258	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.204	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.376	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.287	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.018	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.057	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.245	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.453	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.415	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.027	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.072	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.43	< 0.001	< 0.001
	Hamburg	< 0.001	0.027	5.09	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.27	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.004	3.20	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.62	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.547	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.864	< 0.001	< 0.001
	Hamburg	< 0.001	0.008	3.21	0.010	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-30, Onions 2 × 250 g a.s./ha BBCH 49	Jokioinen	< 0.001	< 0.001	1.20	0.006	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.96	0.002	< 0.001
	Porto	< 0.001	< 0.001	1.13	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.401	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.34	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	1.91	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.20	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	1.21	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.689	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.591	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.353	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	1.40	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.00	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.53	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.877	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.620	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.373	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.683	0.001	< 0.001
	Hamburg	< 0.001	< 0.001	1.02	0.027	0.002
	Kremsmünster	< 0.001	< 0.001	0.598	0.007	< 0.001
	Piacenza	< 0.001	< 0.001	0.637	0.017	< 0.001
	Porto	< 0.001	< 0.001	0.576	0.004	< 0.001
	Sevilla	< 0.001	< 0.001	0.268	0.005	< 0.001
	Thiva	< 0.001	< 0.001	0.250	0.002	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-9: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS PELMO v5.5.3 (Anagu, I. & Langa Peñalba, S., 2021, VV-911613)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.16	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.38	0.001	< 0.001
	Hamburg 1 st	< 0.001	0.003	4.03	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.004	4.73	0.013	< 0.001
	Jokioinen	< 0.001	< 0.001	1.94	0.001	< 0.001
	Kremsmünster 1 st	< 0.001	0.001	2.44	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.001	2.72	0.005	< 0.001
	Porto 1 st	< 0.001	0.002	2.11	< 0.001	< 0.001
	Porto 2 nd	< 0.001	0.004	3.39	0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.108	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.196	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.858	< 0.001	< 0.001
PL-20, Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.266	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.256	0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.13	0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.12	0.052	0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy- strobilin	R234886		R402173	R401553
			Acidic	Alkaline		
	Jokioinen	< 0.001	< 0.001	0.411	0.019	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.728	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.664	0.016	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.802	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.738	0.084	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.026	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.037	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.055	0.005	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.621	< 0.001	< 0.001
	Piacenza	< 0.001	0.002	1.62	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.05	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.041	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.177	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.119	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.430	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.331	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.004	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.033	< 0.001	< 0.001
PL-28, Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.140	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.501	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.491	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.006	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.044	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.18	< 0.001	< 0.001
	Hamburg	< 0.001	0.005	4.71	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.03	0.001	< 0.001
	Kremsmünster	< 0.001	0.002	3.10	< 0.001	< 0.001
	Porto	< 0.001	0.002	2.80	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.246	< 0.001	< 0.001
PL-30, Onions 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.635	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	3.10	0.016	< 0.001
	Jokioinen	< 0.001	< 0.001	1.08	0.009	< 0.001
	Kremsmünster	< 0.001	0.001	1.88	0.005	< 0.001
	Porto	< 0.001	< 0.001	1.82	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.161	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.13	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.04	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.45	0.001	< 0.001
	Piacenza	< 0.001	0.005	1.49	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.927	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.244	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.255	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.15	0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.49	0.001	< 0.001
	Piacenza	< 0.001	0.005	1.60	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.239	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.245	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.657	0.002	< 0.001
	Hamburg	< 0.001	0.001	1.05	0.047	0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy- strobilin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Kremsmünster	< 0.001	< 0.001	0.723	0.014	< 0.001
	Piacenza	< 0.001	0.002	0.785	0.059	0.002
	Porto	< 0.001	< 0.001	0.827	0.007	< 0.001
	Sevilla	< 0.001	< 0.001	0.114	0.011	< 0.001
	Thiva	< 0.001	< 0.001	0.215	0.007	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-10: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 on various crops with FOCUS MACRO v5.5.4 (Anagu, I. & Langa Peñalba, S., 2021, VV-911613)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
PL-20, Cabbage ^a , 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	0.002	1.49	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	0.009	2.28	0.002	< 0.001
PL-20, Cabbage ^a , 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.467	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.440	0.007	< 0.001
PL-28, Tomatoes, 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.634	< 0.001	< 0.001
PL-28, Tomatoes, 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.166	< 0.001	< 0.001
PL-28, Tomatoes, 32 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.179	< 0.001	< 0.001
PL-30, Onions, 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.30	< 0.001	< 0.001
PL-30, Onions, 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.872	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	0.462	0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	0.501	< 0.001	< 0.001
PL-17, Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.272	0.003	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-11: Summary of maximum PEC_{GW} across all models for azoxystrobin, R234886, R402173 and R401553 (Anagu, I. & Langa Peñalba, S., 2021, VV-911613)

Substance		80 th Percentile PEC _{GW} (µg/L)	Crop	Applic ation rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Azoxystrobin		< 0.001	Cabbage ^a PL-20	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Tomatoes PL-28	2 × 250	11 - 89	All models	All scenarios
		< 0.001	Onions PL-30	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Vines PL-17	2 × 250	21 - 89	All models	All scenarios
R234886	Acidic	0.020	Cabbage ^a PL-20	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
		0.002	Tomatoes PL-28	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		0.027	Onions PL-30	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		0.005	Vines PL-17	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
	Alkaline	4.73	Cabbage ^a PL-20	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg, 2 nd
		1.62	Tomatoes PL-28	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		5.09	Onions PL-30	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		2.15	Vines PL-17	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Hamburg
R402173		0.084	Cabbage ^a PL-20	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Porto, 2 nd
		0.002	Tomatoes PL-28	2 × 250	11 - 89	FOCUS PEARL v4.4.4/FOCUS PELMO v.5.5.3	Piacenza Porto
		0.016	Onions PL-30	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg
		0.059	Vines PL-17	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
R401553		0.002	Cabbage ^a PL-20	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
		< 0.001	Tomatoes PL-28	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Onions PL-30	2 × 250	21 - 89	All models	All scenarios
		0.002	Vines PL-17	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Piacenza

^a the first and second possible crop cycles simulated separately i.e. two applications per year

8.8.2.2 Oxathiapiprolin and its metabolites

Table 8.8-12: Summary of input parameters for oxathiapiprolin, IN-RDT31 and IN-RAB06 for PEC_{GW} calculations

Compound	Oxathiapiprolin	IN-RDT31	IN-RAB06	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	539.53*	555.53**	569.51**	*Yes / EFSA, 2016 **Yes / DAR, 2015 ²
Water solubility (mg/L) (20°C)	0.1844* (20°C)	0.1844** (20°C)	0.1844** (20°C)	*Yes / EFSA, 2016 **Parent data use for metabolite
Saturated vapour pressure (Pa)	1.141×10^{-6} * (20 °C)*	0** (20°C)	0** (20°C)	*Yes / EFSA, 2016 **worst case
DT ₅₀ in soil (d)	121.2 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	160 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	60.5 (geometric mean field and lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 12)	Yes / EFSA, 2016
Transformation rate	Pathway A: 0.004003 to IN-RDT31 0.001716 to IN-E8S72 Pathway B: 0.002288 to IN-RAB06 0.003431 to IN-QPS10	Pathway A: 0.001733 to IN-E8S72 0.002599 to sink	Pathway B: 0.011457 to IN- QPS10	Calculated for PELMO; (ln(2) / DT ₅₀) * FFm
K _{FOC} / K _{FOM} (mL/g)	6242.6 / 3621 (arithmetic mean, n = 5)	1168.4 / 677.7 (arithmetic mean, n = 5)	495.6 / 287.5 (arithmetic mean, n = 5)	Yes / EFSA, 2016
1/n (-)	0.97 (arithmetic mean, n = 5)	0.87 (arithmetic mean, n = 5)	0.89 (arithmetic mean, n = 5)	Yes / EFSA, 2016
Plant uptake factor (-)	0	0	0	Worst-case assumption
Formation fraction (-)	-	0.7 from parent	0.4 from parent	Yes / EFSA, 2016
Conversion fraction (-)	-	0.721 from parent	0.422 from parent	Calculated for MACRO; molar mass (metabolite) / molar mass (parent) × formation fraction

Table 8.8-13: Summary of input parameters for IN-QPS10 and IN-E8S72 for PEC_{GW} calculations

Compound	IN-QPS10	IN-E8S72	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	349.41	180.09	Yes / DAR, 2015 ²
Water solubility (mg/L)	0.1844** (20°C)	0.1844** (20°C)	**Parent data used for metabolite
Saturated vapour pressure (Pa)	0 (20°C)	0 (20°C)	worst case
DT ₅₀ in soil (d)	564.9 (geometric mean lab, acidic, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 2)	310.2 (geometric mean lab, normalisation to or pF2, 20 °C with Q ₁₀ of 2.58, n = 5)	Yes / EFSA, 2016
Transformation rate	Pathway B: 0.001227 to sink	Pathway A: 0.002235 to sink	Calculated for PELMO; (ln(2) / DT ₅₀) * FF _m
K _{FOC} / K _{FOM} (mL/g)	4880.2 / 2830.7 (arithmetic mean, n = 5)	7.33 / 4.25 (arithmetic mean, n = 5)	Yes / EFSA, 2016
1/n	0.92 (arithmetic mean, n = 5)	1 (arithmetic mean, n = 5)	Yes / EFSA, 2016
Plant uptake factor	0	0	Worst-case assumption
Formation fraction	0.6 from parent 1.0 from IN-RAB06	0.3 from parent 0.4 from IN-RDT31	Yes / EFSA, 2016
Conversion fraction	0.648 ^a from parent	0.194 ^b from parent	Calculated for MACRO; molar mass (metabolite) / molar mass (parent) x formation fraction

^aFor the secondary metabolite IN-QPS10 the formation fraction was multiplied along the pathway; therefore $349.41/539.53 \times ((0.4 \times 1.0)+0.6)$

^bFor the secondary metabolite IN-E8S72 the formation fraction was multiplied along the pathway; therefore $180.09/539.53 \times ((0.7 \times 0.4)+0.3)$

Table 8.8-14: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 on various crops with FOCUS PEARL v4.4.4 (Anagu, I. & Bo, Y., 2021, VV-911806)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
PL-20, Cabbage ^a 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.33
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.32
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.54
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.55
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.44
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.888
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.878
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.607

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.602
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.51
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.53
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.05
PL-20, Cabbage ^a 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.527
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.534
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.620
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.618
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.569
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.350
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.357
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.241
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.234
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.610
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.598
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.406
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.10
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.997
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 11	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.488
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.10
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.43
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.434
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.401
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 51	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.196
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.439
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.571
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.441
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.408
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 89	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.193
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.439
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.562
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.83
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.71
PL-30, Onions 2 × 12 g a.s./ha BBCH 11	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.39
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.01
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.734
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.93
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.21
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.14
PL-30, Onions 2 × 12 g a.s./ha BBCH 49	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.916
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.672
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.485
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.30
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.678
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.581
PL-17, Vines 2 × 12 g a.s./ha BBCH 21	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.711
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.294
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.615
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.19
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.672
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.582
PL-17, Vines 2 × 12 g a.s./ha BBCH 60	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.727

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.297
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.614
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.18
PL-17, Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.423
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.362
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.231
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.451
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.184
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.381
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.728

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-15: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 on various crops with FOCUS PELMO v5.5.3 (Anagu, I. & Bo, Y., 2021, VV-911806)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
PL-20, Cabbage ^a 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.22
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.19
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.18
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.29
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.963
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.953
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.473
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.467
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.16
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.924
PL-20, Cabbage ^a 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.456
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.475
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.466
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.489
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.521
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.380
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.381
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.164
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.184
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.394
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.353
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.374
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.995
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.689
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.415
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.967
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.394
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.276
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.169
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.426
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.384

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
PL-28, Tomatoes 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.375
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.249
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.152
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.241
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.326
PL-30, Onions 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.54
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.34
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.36
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.06
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.747
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.31
PL-30, Onions 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.961
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.899
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.909
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.701
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.484
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.798
PL-17, Vines 2 × 12 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.645
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.654
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.424
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.414
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.326
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.05
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.20
PL-17, Vines 2 × 12 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.632
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.652
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.422
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.413
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.326
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.03
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.19
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.19
PL-17, Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.392
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.423
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.265
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.257
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.193
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.622
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.693
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.693

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-16: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 on various crops with MACRO v5.5.4 (Anagu, I. & Bo, Y., 2021, VV-911806)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
PL-20, Cabbage ^a , 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.931
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.933
PL-20, Cabbage ^a , 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.372

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
PL-28, Tomatoes, 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.809
PL-28, Tomatoes, 2 × 12 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.322
PL-28, Tomatoes, 3 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.325
PL-30, Onions, 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.38
PL-30, Onions, 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.918
PL-17, Vines 2 × 12 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.745
PL-17, Vines 2 × 12 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.666
PL-17, Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.480

^a the first and second possible crop cycles simulated separately i.e. two applications per year

Table 8.8-17: Summary of maximum PEC_{GW} across all models for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 (Anagu, I. & Bo, Y., 2021, VV-911806)

Substance	80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Oxathiapiprolin	< 0.001	Cabbage PL-20	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes PL-28	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions PL-30	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines PL-17	2 × 12	21 - 89	All models	All scenarios
IN-RDT31	< 0.001	Cabbage PL-20	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes PL-28	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions PL-30	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines PL-17	2 × 12	21 - 89	All models	All scenarios
IN-RAB06	< 0.001	Cabbage PL-20	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes PL-28	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions PL-30	2 × 12	11 - 49	All models	All scenarios

Substance	80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
	< 0.001	Vines PL-17	2 × 12	21 - 89	All models	All scenarios
IN-QPS10	< 0.001	Cabbage PL-20	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes PL-28	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions PL-30	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines PL-17	2 × 12	21 - 89	All models	All scenarios
IN-E8S72	1.54	Cabbage PL-20	2 × 12 ^a	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 1 st season
	1.43	Tomatoes PL-28	2 × 12	11 - 89	FOCUS PEARL v4.4.4	Thiva
	1.93	Onions PL-30	2 × 12	11 - 49	FOCUS PEARL v4.4.4	Thiva
	1.20	Vines PL-17	2 × 12	21 - 89	FOCUS PELMO v5.5.3	Thiva

^a the first and second possible crop cycles simulated separately i.e. two applications per year

8.9 Predicted Environmental Concentrations in surface water (PEC_{SW}) and sediment (PEC_{SED}) (KCP 9.2.5)

Review Comments:

The PEC_{SW/SED} calculations for azoxystrobin, oxathiapiprolin and their metabolites were provided by the Applicant and are considered acceptable.

For active substances and relevant metabolites PEC_{SW} calculations were performed with FOCUS STEPS 1-2 (both active substances and metabolites) and FOCUS STEP 3 - 4 (active substances).

The EU agreed endpoints, derived from the datasets presented in the EFSA Journal 2016;14(7):4504 and EFSA Journal 2010; 8(4):1542 with Confirmatory Data for metabolite R234886, were used.

In zRMS opinion, PEC_{SW} values calculated with PUF=0 should be used in the RA for aquatic organisms.

The PEC_{SW} reported below can be used for the risk assessment for aquatic organisms. Please refer to section 9.

Unless otherwise stated, EU agreed endpoints refer to those stated in the EU review of azoxystrobin (EFSA Journal 2010; 8(4): 1542 and DAR, 2014¹) and oxathiapiprolin (EFSA Journal 2016;14(7):4504 and DAR, 2015²).

8.9.1 Justification for new endpoints

EU agreed endpoints were used for PEC_{SW} and PEC_{SED} modelling of azoxystrobin, oxathiapiprolin and their respective metabolites.

8.9.2 Active substance(s), relevant metabolite(s) and the formulation (KCP 9.2.5)

The following PEC_{SW} and PEC_{SED} modelling for azoxystrobin and its metabolites R234886, R402173 and R401553 as well as oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10, IN-E8S72, IN-S2K66, IN-RSE01, IN-RYJ52, IN-Q7D41, and IN-P3X26 has not previously been reviewed and is provided in support of this assessment in Appendix 3 of this document.

Table 8.9-1: Input parameters related to application for PEC_{SW/SED} calculations

Plant protection product	A22773A			
Use No.	PL-20	PL-28	PL-30	PL-17
Crop	Vegetables, leafy	Vegetables, fruiting	Vegetables, bulb	Hops
Application rate (g as/ha)	Azoxystrobin: 250 Oxathiapiprolin: 12	Azoxystrobin: 250 Oxathiapiprolin: 12	Azoxystrobin: 250 Oxathiapiprolin: 12	Azoxystrobin: 250 Oxathiapiprolin: 12
Number of applications/interval (d)	2 / 7	2 / 7	2 / 12	2 / 12
BBCH growth stage	11 – 49	11 – 89	11 – 49	21 – 89
Application window (relevant for STEP 1 and 2 only)	Mar-May Jun-Sep Oct-Feb	Mar-May Jun-Sep	Mar-May Jun-Sep Oct-Feb	Mar-May Jun-Sep Oct-Feb
Interception (relevant for STEP 1 and 2 only)	Minimal crop cover	Minimal crop cover	Minimal crop cover	Average crop cover
Application method	Ground spray	Ground spray	Ground spray	Airblast
CAM (Chemical application method)	2 (application foliar linear)			
Soil depth (cm)	4 (default)			
Models used for calculation	FOCUS-STEPS 1-2 v3.2, FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, ECPA SWAN v5.0.0			

Table 8.9-2: FOCUS Step 3 scenario related input parameters for PEC_{SW/SED} calculations for the application of A22773A

Crop	Rationale	Scenario	Azoxystrobin / Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Vegetables, leafy, 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D3	30-Apr (120)	30-May (150)	30-Apr (120)	6-Jun (157)
		D3	10-Aug (222)	9-Sep (252)	10-Aug (222)	16-Sep (259)
		D4	18-May (138)	17-Jun (168)	18-May (138)	24-Jun (175)
		D6	21-Aug (233)	20-Sep (263)	21-Aug (233)	27-Sep (270)
		R1	25-Apr (115)	25-May (145)	25-Apr (115)	1-Jun (152)
		R1	5-Aug (217)	4-Sep (247)	5-Aug (217)	11-Sep (254)

Crop	Rationale	Scenario	Azoxystrobin / Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	15-Apr (105)
		R2	4-Aug (216)	3-Sep (246)	4-Aug (216)	10-Sep (253)
		R3	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R3	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
		R4	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R4	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
Vegetables, leafy, 7 days interval, BBCH 49	End of window at harvest	D3	20-Jun (171)	20-Jul (201)	13-Jun (164)	20-Jul (201)
		D3	20-Sep (263)	20-Oct (293)	13-Sep (256)	20-Oct (293)
		D4	27-Aug (239)	26-Sep (269)	20-Aug (232)	26-Sep (269)
		D6	31-Oct (304)	30-Nov (334)	24-Oct (297)	30-Nov (334)
		R1	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
		R1	15-Sep (258)	15-Oct (288)	8-Sep (251)	15-Oct (288)
		R2	1-Jun (152)	1-Jul (182)	25-May (145)	1-Jul (182)
		R2	16-Oct (289)	15-Nov (319)	9-Oct (282)	15-Nov (319)
		R3	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R3	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
		R4	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R4	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
Vegetables, fruiting, 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D6	13-Apr (103)	13-May (133)	13-Apr (103)	20-May (140)
		R2	19-Mar (78)	18-Apr (108)	19-Mar (78)	25-Apr (115)
		R3	13-May (133)	12-Jun (163)	13-May (133)	19-Jun (170)
		R4	23-Apr (113)	23-May (143)	23-Apr (113)	30-May (150)
Vegetables, fruiting, 7 days interval, BBCH 51	Start of window at BBCH 51 (AppDate 3.06)	D6	15-May (135)	14-Jun (165)	15-May (135)	21-Jun (172)
		R2	19-May (139)	18-Jun (169)	19-May (139)	25-Jun (176)
		R3	15-Jun (166)	15-Jul (196)	15-Jun (166)	22-Jul (203)
		R4	26-May (146)	25-Jun (176)	26-May (146)	2-Jul (183)
Vegetables, fruiting, 7 days interval, BBCH 89	End of window at harvest	D6	11-Jul (192)	10-Aug (222)	4-Jul (185)	10-Aug (222)
		R2	1-Aug (213)	31-Aug (243)	25-Jul (206)	31-Aug (243)
		R3	26-Jul (207)	25-Aug (237)	19-Jul (200)	25-Aug (237)
		R4	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
Vegetables, bulb, 12 days interval, BBCH 11	Start of window at BBCH 11	D3	3-May (123)	2-Jun (153)	3-May (123)	14-Jun (165)
		D4	2-May (122)	1-Jun (152)	2-May (122)	13-Jun (164)
		D6	16-May (136)	15-Jun (166)	16-May (136)	27-Jun (178)

Crop	Rationale	Scenario	Azoxystrobin / Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
	(AppDate 3.06)	D6	4-Nov (308)	4-Dec (338)	4-Nov (308)	16-Dec (350)
		R1	28-Apr (118)	28-May (148)	28-Apr (118)	9-Jun (160)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R3	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R4	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
Vegetables, bulb, 12 days interval, BBCH 49	End of window at harvest	D3	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)
		D4	14-Aug (226)	13-Sep (256)	2-Aug (214)	13-Sep (256)
		D6	1-Jul (182)	31-Jul (212)	19-Jun (170)	31-Jul (212)
		D6	11-Mar (70)	10-Apr (100)	27-Feb (58)	10-Apr (100)
		R1	26-Jul (207)	25-Aug (237)	14-Jul (195)	25-Aug (237)
		R2	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R3	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R4	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
Hops 12 days interval, BBCH 21	Start of window at BBCH 21 (AppDate 3.06)	R1	15-May (135)	14-Jun (165)	15-May (135)	26-Jun (177)
Hops 12 days interval, BBCH 51	Start of window at BBCH 51 (AppDate 3.06)	R1	7-Jul (188)	6-Aug (218)	7-Jul (188)	18-Aug (230)
Hops 12 days interval, BBCH 89	End of window at harvest	R1	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)

Numbers in brackets are the corresponding 'Julian Day' numbers

8.9.2.1 Azoxystrobin and its metabolites

The input parameters of azoxystrobin and its metabolites R234886, R401553 and R402173 used in modelling are shown in the table below. For azoxystrobin separate runs were done for two different substance parameter sets for Steps 3 and 4:

- Tier 1: EU agreed endpoints with a worst case plant uptake factor of 0 for azoxystrobin
- Tier 2: EU agreed endpoints with a plant uptake factor of 0.5 for azoxystrobin (Weinfurtner, 2013)

Please note that the results for Step 1, 2 are identical for Tier 1 and Tier 2 as the plant uptake factor is not an input parameter in the FOCUS-STEPPS 1-2 v3.2 model.

Table 8.9-3: Input parameters related to active substance azoxystrobin, R401553, R402173 and R234886 for PEC_{SW/SED} calculations STEPs 1/2 and 3/4

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	389.4	333.3	213.2	Yes, EFSA, 2010
Water solubility (mg/L)	6.0 (20°C)	57 (25°C)	61 (25°C)	560 (25°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1×10^{-10} (20°C)	Not required for Step 1/2	Not required for Step 1/2	Not required for Step 1/2	No ^a / EFSA, 2010
K _{FOC} / K _{FOM} (mL/g)	423 / 245* (arithmetic mean, n = 6)	Acidic soils: 228.4 / 132.5** (arithmetic mean, n = 8) Alkaline soils: 36.7 / 21.3** (arithmetic mean, n = 7)	25 / 14.5* (worst case, n = 6)	188 / 109* (arithmetic mean, n = 6)	*Yes / EFSA, 2010 **Yes / EFSA, 2010 & DAR, 2014 ^b K _{FOM} = K _{FOC} / 1.724
Freundlich Exponent 1/n	0.86 (arithmetic mean, n = 6)	not required for Step 1/2	not required for Step 1/2	not required for Step 1/2	Yes / EFSA, 2010
Plant Uptake	Tier 1: 0 (worst-case) Tier2: 0.5	not required for Step 1/2	not required for Step 1/2	not required for Step 1/2	Yes / Weinfurtner, 2013, DAR, 2014
DT _{50,soil} (d)	78 ^c (geometric mean field, n = 13)	98.6** (geometric mean, acidic soils, n = 5) 36.7** (geometric mean, alkaline soils, n = 7)	4.7* (geometric mean, n = 3)	1.1* (geometric mean, n = 3)	*Yes / EFSA, 2010 **Yes / DAR 2014 ¹ normalisation to pF ₂ , 20 °C with Q ₁₀ of 2.58, n = 5

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
DT _{50,water} (d)	205 (Step 2, geometric mean, total system, n = 2) Option 1: 1000 ^d (Step 3, default) Option 2: 205 ^d (Step 3, geometric mean, total system, n = 2)	1000 (default value)	1000 (default value)	1000 (default value)	Yes / EFSA, 2010
DT _{50,soil} (d)	205 (Step 2, geometric mean, total system, n = 2) Option 1: 205 ^d (Step 3, geometric mean, total system, n = 2) Option 2: 1000 ^d (Step 3, default)	1000 (default value)	1000 (default value)	1000 (default value)	Yes / EFSA, 2010
DT _{50,whole system} (d)	205 (geometric mean, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 2)	1000 (default value)	1000 (default value)	1000 (default value)	Yes / EFSA, 2010
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 28.8 ^e Total system: 18.1	Soil: 17 ^f Total system: 2.4 ^g	Soil: 17 ^f Total system: 8.9 ^g	Yes / EFSA, 2010

^a although the value is given in EFSA, 2010, loss due to volatilisation was not considered in the EU review

^b DAR (2014): Azoxystrobin: Addendum – Confirmatory Information. RMS United Kingdom. December 2014.

^c calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^d two options were simulated based on FOCUS (2015): Generic guidance for FOCUS surface water scenarios, version 1.4. 367pp

^e in aerobic laboratory studies

^f in field studies

^g in aquatic photolysis studies

PEC_{SW/SED}

Tier 1

Table 8.9-4: FOCUS Step 1,2 and 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, leafy – maximum over single and multiple application (see A 3.6 and A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 11-49	Step 1 ^a				
			111		462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	40.3		168
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	32.8		137
Step 3					
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 11	D3	ditch	1.58*	Drift	0.935
	D3 2 nd	ditch	1.59*	Drift	0.962
	D4	pond	1.38	Drainage	8.50
	D4	stream	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.58
	R1	pond	0.450	Runoff	2.79
	R1 2 nd	pond	0.412	Runoff	3.11
	R1	stream	4.91	Runoff	1.81
	R1 2 nd	stream	4.26	Runoff	2.19
	R2	stream	2.51	Runoff	5.18
	R2 2 nd	stream	1.40*	Drift	2.83
	R3	stream	4.35	Runoff	2.69
	R3 2 nd	stream	5.77	Runoff	4.89
	R4	stream	6.45	Runoff	3.13
	R4 2 nd	stream	8.52	Runoff	4.82
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 49	D3	ditch	1.59*	Drift	0.935
	D3 2 nd	ditch	1.58*	Drift	0.720
	D4	pond	1.40	Drainage	8.40
	D4	stream	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	14.1
	R1	pond	0.897	Runoff	5.50
	R1 2 nd	pond	0.721	Runoff	4.23
	R1	stream	4.88	Runoff	4.93

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
	R1 2 nd	stream	3.76	Runoff	1.48
	R2	stream	1.74	Runoff	4.54
	R2 2 nd	stream	1.41	Runoff	4.92
	R3	stream	4.38	Runoff	3.05
	R3 2 nd	stream	5.58	Runoff	7.88
	R4	stream	7.15	Runoff	3.95
	R4 2 nd	stream	6.92	Runoff	4.76

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-5: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, fruiting – maximum over single and multiple application (see A 3.6 and A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 11-89	Step 1 ^a				
	!	!	111	!	462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep ^b	17.8	!	73.8
	Southern Europe	Mar-May / Jun-Sep ^b	32.8	!	137
Step 3					
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 11	D6	ditch	1.56*	Drift	0.866
	R2	stream	1.72	Runoff	2.21
	R3	stream	4.22	Runoff	2.78
	R4	stream	8.52	Runoff	4.66
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 51	D6	ditch	1.58*	Drift	1.19
	R2	stream	1.90	Runoff	3.91
	R3	stream	5.55	Runoff	4.42
	R4	stream	7.40	Runoff	3.54
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 89	D6	ditch	3.67	Drainage	3.33
	R2	stream	1.40*	Drift	5.52
	R3	stream	5.49	Runoff	5.72
	R4	stream	6.62	Runoff	3.84

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-6: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, bulb – maximum over single and multiple application (see A 3.6 and A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 11-49	Step 1 ^a				
	I	I	111	I	462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	46.8	I	196
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 11	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	38.0	I	159
	Step 3				
	D3	stream	1.58*	Drift	0.921
	D4	pond	1.31	Drainage	8.14
	D4	stream	1.26	Drainage	3.18
	D6 1 st	ditch	2.37	Drainage	2.58
	D6 2 nd	ditch	12.7	Drainage	14.1
	R1	pond	0.493	Runoff	2.69
	R1	stream	5.52	Runoff	2.23
	R2	stream	2.42	Runoff	3.96
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 49	R3	stream	4.48	Runoff	2.71
	R4	stream	6.23	Runoff	3.51
	D3	stream	1.59*	Drift	0.921
	D4	pond	1.36	Drainage	8.37
	D4	stream	1.61	Drainage	3.17
	D6 1 st	ditch	1.73	Drainage	3.5
	D6 2 nd	ditch	1.61*	Drift	2.18
	R1	pond	0.284	Runoff	1.99
	R1	stream	2.86	Runoff	1.00
	R2	stream	1.87	Runoff	4.06
	R3	stream	5.07	Runoff	2.18
	R4	stream	6.45	Runoff	3.92

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-7: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to hops – maximum over single and multiple application (see A 3.6 and A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-17, Hops 2 × 250 g a.s./ha; BBCH 21 - 89	Step 1 ^a				
	I	I	139	I	536
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	45.2	I	180
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	40.3	I	159
Step 3					
PL-17, Hops 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	9.44*	Drift	1.25*
PL-17, Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	9.21*	Drift	0.759
PL-17, Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	9.46*	Drift	1.33*

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c maximum over option 1 & 2, values resulting from single applications are marked with *

FOCUS Step 4

Table 8.9-8: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, leafy – Maximum over single and multiple applications application (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a						
Vegetative strip (m)		10 – 12 ^b			18 – 20 ^c	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.217	Runoff	0.139	Runoff
	R1	pond 2 nd	0.191	Runoff	0.121	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.94	Runoff	1.05*	Drift
	R2	stream 1 st	1.38*	Drift	1.38*	Drift
	R2	stream 2 nd	1.40*	Drift	1.40*	Drift
	R3	stream 1 st	1.99	Runoff	1.47*	Drift
	R3	stream 2 nd	2.63	Runoff	1.47*	Drift
	R4	stream 1 st	2.93	Runoff	1.54	Runoff
	R4	stream 2 nd	3.87	Runoff	2.03	Runoff
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.407	Runoff	0.240	Runoff
	R1	pond 2 nd	0.323	Runoff	0.182	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.71	Runoff	1.05*	Drift
	R2	stream 1 st	1.40*	Drift	1.40*	Drift
	R2	stream 2 nd	1.39*	Drift	1.39*	Drift
	R3	stream 1 st	1.99	Runoff	1.48*	Drift
	R3	stream 2 nd	2.54	Runoff	1.47*	Drift
	R4	stream 1 st	3.24	Runoff	1.70	Runoff

Mitigation options ^a						
Vegetative strip (m)		10 – 12 ^b			18 – 20 ^c	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R4	stream 2 nd	3.15	Runoff	1.65	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-9: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1	1
	D3 2 nd	ditch	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	R1	pond	0.083	Drift
	R1 2 nd	pond	0.088	Runoff
	R1	stream	1.04*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.38*	Drift
	R2 2 nd	stream	1.40*	Drift
	R3	stream	1.61	Runoff
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.04*	Drift
	R4 2 nd	stream	1.04*	Drift

Mitigation options ^a				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	–	–
	D3 2 nd	ditch	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch	–	–
	R1	pond	0.234	Runoff
	R1 2 nd	pond	0.171	Runoff
	R1	stream	1.05*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.40*	Drift
	R2 2 nd	stream	1.39*	Drift
	R3	stream	1.48*	Drift
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.02*	Drift
	R4 2 nd	stream	1.05*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-10: FOCUS Step 4 global maximum PEC_{SW} for azoxystrobin following application of A22773A to vegetables, fruiting – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a						
Vegetative strip (m)		10 – 12 ^b			18 – 20 ^c	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.38*	Drift	1.38*	Drift
	R3	stream	1.92	Runoff	1.47*	Drift
	R4	stream	3.86	Runoff	2.02	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.53	Runoff	1.48*	Drift
	R4	stream	3.37	Runoff	1.76	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.50	Runoff	1.48*	Drift
	R4	stream	3.01	Runoff	1.58	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-11: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	–	–
	R2	stream	1.38*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.04*	Drift
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	–	–
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.02*	Drift
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	–	–
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.05*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-12: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, bulb – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a						
Vegetative strip (m)		10 – 12 ^b			18 – 20 ^c	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.236	Runoff	0.149	Runoff
	R1	stream	2.50	Runoff	1.31	Runoff
	R2	stream	1.50	Drift	1.38*	Drift
	R3	stream	2.05	Runoff	1.47*	Drift
	R4	stream	2.83	Runoff	1.48	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.134	Runoff	0.080	Runoff
	R1	stream	1.29	Runoff	1.03*	Drift
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.29	Runoff	1.47*	Drift
	R4	stream	2.92	Runoff	1.52	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-13: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	D6 2 nd	ditch	1	1
	R1	pond	0.081	Drift
	R1	stream	1.04*	Drift
	R2	stream	1.38*	Drift
	R3	stream	1.60	Runoff
	R4	stream	1.03*	Drift
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	D6 2 nd	ditch	1	1
	R1	pond	0.077	Drift
	R1	stream	1.03*	Drift
	R2	stream	1.40*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.01*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-14: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to hops – Maximum over single and multiple applications (see A 3.7, Langa Peñalba, S, 2022 & Robinson, P., VV-961781)

Mitigation options ^a																
Vegetative strip (m)			0		0		0		0		0		0		0	
No spray buffer (m)			10		10		10		15		15		15		20	
Nozzle reduction (%)			0		75		90		0		50		75		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops, 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.525	Drift	0.143	Drift	0.066	Drift	0.295	Drift	0.155	Drift	0.085	Drift	0.171	Drift
	R1	stream	4.02*	Drift	1.25	Runoff	1.25	Runoff	2.65*	Drift	1.33*	Drift	1.25	Runoff	1.25	Runoff
Hops, 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.508	Drift	0.128	Drift	0.052	Drift	0.279	Drift	0.140	Drift	0.071	Drift	0.156	Drift
	R1	stream	3.92*	Drift	0.979*	Drift	0.572*	Runoff	2.59*	Drift	1.29*	Drift	0.646*	Drift	1.18*	Drift
Hops, 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.496	Drift	0.123	Drift	0.049	Drift	0.271	Drift	0.135	Drift	0.067	Drift	0.150	Drift
	R1	stream	4.03*	Drift	1.01*	Drift	0.403*	Drift	2.66*	Drift	1.33*	Drift	0.664*	Drift	1.21*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Tier 2

Table 8.9-15: FOCUS Step 1,2 and 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, leafy – maximum over single and multiple application (see A 3.6 and A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911814)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 11-49	Step 1 ^a				
	-	-	111	-	462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	40.3	-	168
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	32.8	-	137
Step 3					
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 11	D3	ditch	1.58*	Drift	0.935
	D3 2 nd	ditch	1.59*	Drift	0.962
	D4	pond	1.35	Drainage	8.37
	D4	stream	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.5
	R1	pond	0.435	Runoff	2.65
	R1 2 nd	pond	0.399	Runoff	3.03
	R1	stream	4.73	Runoff	1.75
	R1 2 nd	stream	4.18	Runoff	2.15
	R2	stream	2.5	Runoff	5.18
	R2 2 nd	stream	1.4*	Drift	2.82
	R3	stream	4.23	Runoff	2.62
	R3 2 nd	stream	5.69	Runoff	4.84
	R4	stream	6.36	Runoff	3.09
	R4 2 nd	stream	8.41	Runoff	4.77
PL-20, Vegetables, leafy 2 × 250 g a.s./ha BBCH 49	D3	ditch	1.59*	Drift	0.935
	D3 2 nd	ditch	1.58*	Drift	0.72
	D4	pond	1.4	Drainage	8.36
	D4	stream	1.68	Drainage	3.31
	D6	ditch	12	Drainage	14.1
	R1	pond	0.892	Runoff	5.33
	R1 2 nd	pond	0.705	Runoff	4.15
	R1	stream	4.83	Runoff	4.91
	R1 2 nd	stream	3.73	Runoff	1.46

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
	R2	stream	1.74	Runoff	4.54
	R2 2 nd	stream	1.41	Runoff	4.92
	R3	stream	4.33	Runoff	2.99
	R3 2 nd	stream	5.55	Runoff	7.86
	R4	stream	7.10	Runoff	3.93
	R4 2 nd	stream	6.90	Runoff	4.75

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.8

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-16: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, fruiting – maximum over single and multiple application (see A 3.6 and A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 11-89	Step 1 ^a				
	-	-	111	-	462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep ^b	17.8	-	73.8
	Southern Europe	Mar-May / Jun-Sep ^b	32.8	-	137
Step 3					
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 11	D6	ditch	1.56*	Drift	0.837
	R2	stream	1.70	Runoff	2.20
	R3	stream	4.11	Runoff	2.73
	R4	stream	8.46	Runoff	4.63
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 51	D6	ditch	1.58*	Drift	1.16
	R2	stream	1.89	Runoff	3.90
	R3	stream	5.55	Runoff	4.42
	R4	stream	7.31	Runoff	3.50
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha BBCH 89	D6	ditch	3.64	Drainage	3.30
	R2	stream	1.40*	Drift	5.51
	R3	stream	5.46	Runoff	5.70
	R4	stream	6.57	Runoff	3.82

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.8

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-17: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to vegetables, bulb – maximum over single and multiple application (see A 3.6 and A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 11-49	Step 1 ^a				
	-	-	111	-	462
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	46.8	-	196
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	38.0	-	159
Step 3					
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 11	D3	stream	1.58*	Drift	0.921
	D4	pond	1.27	Drainage	7.91
	D4	stream	1.22*	Drift	3.09
	D6 1 st	ditch	2.34	Drainage	2.56
	D6 2 nd	ditch	12.7	Drainage	14.1
	R1	pond	0.479	Runoff	2.60
	R1	stream	5.37	Runoff	2.18
	R2	stream	2.41	Runoff	3.95
	R3	stream	4.33	Runoff	2.63
	R4	stream	6.17	Runoff	3.49
PL-30, Vegetables, bulb 2 × 250 g a.s./ha BBCH 49	D3	stream	1.59*	Drift	0.921
	D4	pond	1.34	Drainage	8.28
	D4	stream	1.59	Drainage	3.14
	D6 1 st	ditch	1.72	Drainage	3.49
	D6 2 nd	ditch	1.61*	Drift	2.15
	R1	pond	0.267	Runoff	1.89
	R1	stream	2.72	Runoff	0.955
	R2	stream	1.86	Runoff	4.05
	R3	stream	4.98	Runoff	2.15
	R4	stream	6.40	Runoff	3.89

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.8

^c maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-18: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application of A22773A to hops – maximum over single and multiple application (see A 3.6 and A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-17, Hops 2 × 250 g a.s./ha; BBCH 21 - 89	Step 1 ^a				
	-	-	139	-	536
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	45.2	-	180
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	40.3	-	159
Step 3					
PL-17, Hops 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	9.44 [*]	Drift	1.25 [*]
PL-17, Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	9.21 [*]	Drift	0.759
PL-17, Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	9.46 [*]	Drift	1.33 [*]

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.8

^c maximum over option 1 & 2, values resulting from single applications are marked with *

FOCUS Step 4

Table 8.9-19: FOCUS Step 4 global maximum PEC_{Sw} for azoxystrobin following application of A22773A to vegetables, leafy – Maximum over single and multiple applications application (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a														
Vegetative strip (m)			5 ^b		10 – 12 ^c		18 – 20 ^d		0		10 – 12 ^c		18 – 20 ^d	
No spray buffer (m)			5 ^b		0		0		10		10		20	
Nozzle reduction (%)			0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{Sw} (µg/L)	Dominant Route of Entry	PEC _{Sw} (µg/L)	Dominant Route of Entry	PEC _{Sw} (µg/L)	Dominant Route of Entry	PEC _{Sw} (µg/L)	Dominant Route of Entry	PEC _{Sw} (µg/L)	Dominant Route of Entry	PEC _{Sw} (µg/L)	Dominant Route of Entry
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.118*	Drift
	D3 2 nd	ditch	0.430*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.118*	Drift
	D4	pond	1.35	Drainage	-	-	-	-	1.35	Drainage	1.35	Drainage	1.35	Drainage
	D4	stream	1.31	Drainage	-	-	-	-	1.31	Drainage	1.31	Drainage	1.31	Drainage
	D6	ditch	5.58	Drainage	-	-	-	-	5.58	Drainage	5.58	Drainage	5.58	Drainage
	R1	pond	0.278	Runoff	0.211	Runoff	0.136	Runoff	0.411	Runoff	0.187	Runoff	0.100	Runoff
	R1 2 nd	pond	0.255	Runoff	0.185	Runoff	0.120	Runoff	0.389	Runoff	0.174	Runoff	0.091	Runoff
	R1	stream	3.08	Runoff	2.15	Runoff	1.12	Runoff	4.73	Runoff	2.15	Runoff	1.12	Runoff
	R1 2 nd	stream	2.73	Runoff	1.90	Runoff	1.05*	Drift	4.18	Runoff	1.90	Runoff	0.996	Runoff
	R2	stream	1.62	Runoff	1.38*	Drift	1.38*	Drift	2.50	Runoff	1.13	Runoff	0.591	Runoff
	R2 2 nd	stream	0.822	Runoff	1.40*	Drift	1.40*	Drift	1.27	Runoff	0.571	Runoff	0.299	Runoff
	R3	stream	2.76	Runoff	1.93	Runoff	1.47*	Drift	4.23	Runoff	1.93	Runoff	1.01	Runoff
	R3 2 nd	stream	3.71	Runoff	2.59	Runoff	1.47*	Drift	5.69	Runoff	2.59	Runoff	1.36	Runoff
	R4	stream	4.15	Runoff	2.89	Runoff	1.52	Runoff	6.36	Runoff	2.89	Runoff	1.52	Runoff
	R4 2 nd	stream	5.49	Runoff	3.82	Runoff	2.00	Runoff	8.41	Runoff	3.82	Runoff	2.00	Runoff

Mitigation options ^a														
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.118*	Drift
	D3 2 nd	ditch	0.428*	Drift	-	-	-	-	0.227*	Drift	0.227*	Drift	0.118*	Drift
	D4	pond	1.39	Drainage	-	-	-	-	1.39	Drainage	1.39	Drainage	1.38	Drainage
	D4	stream	1.68	Drainage	-	-	-	-	1.68	Drainage	1.68	Drainage	1.68	Drainage
	D6	ditch	12.0	Drainage	-	-	-	-	12.0	Drainage	12.0	Drainage	12.0	Drainage
	R1	pond	0.559	Runoff	0.405	Runoff	0.239	Runoff	0.864	Runoff	0.377	Runoff	0.196	Runoff
	R1 2 nd	pond	0.446	Runoff	0.317	Runoff	0.178	Runoff	0.692	Runoff	0.303	Runoff	0.157	Runoff
	R1	stream	3.15	Runoff	2.19	Runoff	1.15	Runoff	4.83	Runoff	2.19	Runoff	1.15	Runoff
	R1 2 nd	stream	2.43	Runoff	1.70	Runoff	1.05*	Drift	3.73	Runoff	1.70	Runoff	0.887	Runoff
	R2	stream	1.14	Runoff	1.40*	Drift	1.40*	Drift	1.74	Runoff	0.791	Runoff	0.415	Runoff
	R2 2 nd	stream	0.909	Runoff	1.39*	Drift	1.39*	Drift	1.41	Runoff	0.631	Runoff	0.329	Runoff
	R3	stream	2.82	Runoff	1.97	Runoff	1.48*	Drift	4.33	Runoff	1.97	Runoff	1.03	Runoff
	R3 2 nd	stream	3.63	Runoff	2.53	Runoff	1.47*	Drift	5.55	Runoff	2.53	Runoff	1.33	Runoff
	R4	stream	4.62	Runoff	3.22	Runoff	1.68	Runoff	7.10	Runoff	3.22	Runoff	1.68	Runoff
	R4 2 nd	stream	4.50	Runoff	3.14	Runoff	1.65	Runoff	6.90	Runoff	3.14	Runoff	1.65	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 40% (BAES, 2020)

^c equivalent to 60% runoff mitigation

^d equivalent to 80% runoff mitigation

Table 8.9-20: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.083	Drift
	R1 2 nd	pond	0.085	Runoff
	R1	stream	1.04*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.38*	Drift
	R2 2 nd	stream	1.40*	Drift
	R3	stream	1.57	Runoff
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.04*	Drift
	R4 2 nd	stream	1.04*	Drift
PL-20, Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.233	Runoff
	R1 2 nd	pond	0.168	Runoff
	R1	stream	1.05*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.40*	Drift
	R2 2 nd	stream	1.39*	Drift
	R3	stream	1.48*	Drift
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.02*	Drift
	R4 2 nd	stream	1.05*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-21: FOCUS Step 4 global maximum PEC_{SW} for azoxystrobin following application of A22773A to vegetables, fruiting – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a												
Vegetative strip (m)			10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		18 - 20 ^c	
No spray buffer (m)			0		0		10		10		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-	-	-	0.688	Drainage	0.688	Drainage	0.688	Drainage
	R2	stream	1.38*	Drift	1.38*	Drift	1.70	Runoff	0.761	Runoff	0.395	Runoff
	R3	stream	1.87	Runoff	1.47*	Drift	4.11	Runoff	1.87	Runoff	0.983	Runoff
	R4	stream	3.83	Runoff	2.00	Runoff	8.46	Runoff	3.83	Runoff	2.00	Runoff
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-	-	-	0.945	Drainage	0.945	Drainage	0.945	Drainage
	R2	stream	1.40*	Drift	1.40*	Drift	1.89	Runoff	0.862	Runoff	0.452	Runoff
	R3	stream	2.53	Runoff	1.48*	Drift	5.55	Runoff	2.53	Runoff	1.33	Runoff
	R4	stream	3.32	Runoff	1.74	Runoff	7.31	Runoff	3.32	Runoff	1.74	Runoff
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-	-	-	3.64	Drainage	3.64	Drainage	3.64	Drainage
	R2	stream	1.40*	Drift	1.40*	Drift	0.934	Runoff	0.424	Runoff	0.222	Runoff
	R3	stream	2.49	Runoff	1.48*	Drift	5.46	Runoff	2.49	Runoff	1.31	Runoff
	R4	stream	2.99	Runoff	1.57	Runoff	6.57	Runoff	2.99	Runoff	1.57	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-22: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-
	R2	stream	1.38*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.04*	Drift
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.02*	Drift
PL-28, Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.05*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-23: FOCUS Step 4 global maximum PEC_{SW} for azoxystrobin following application of A22773A to vegetables, bulb – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a												
Vegetative strip (m)			10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		18 - 20 ^c	
No spray buffer (m)			0		0		10		10		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-	-	-	0.228*	Drift	0.228*	Drift	0.118*	Drift
	D4	pond	-	-	-	-	1.27	Drainage	1.27	Drainage	1.27	Drainage
	D4	stream	-	-	-	-	1.22	Drainage	1.22	Drainage	1.22	Drainage
	D6	ditch	-	-	-	-	2.34	Drainage	2.34	Drainage	2.34	Drainage
	D6 2 nd	ditch	-	-	-	-	12.7	Drainage	12.7	Drainage	12.7	Drainage
	R1	pond	0.230	Runoff	0.146	Runoff	0.454	Runoff	0.206	Runoff	0.109	Runoff
	R1	stream	2.43	Runoff	1.27	Runoff	5.37	Runoff	2.43	Runoff	1.27	Runoff
	R2	stream	1.50	Drift	1.38*	Drift	2.41	Runoff	1.09	Runoff	0.568	Runoff
	R3	stream	1.98	Runoff	1.47*	Drift	4.33	Runoff	1.98	Runoff	1.04	Runoff
	R4	stream	2.80	Runoff	1.47	Runoff	6.17	Runoff	2.80	Runoff	1.47	Runoff
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-	-	-	0.228*	Drift	0.228*	Drift	0.118*	Drift
	D4	pond	-	-	-	-	1.33	Drainage	1.33	Drainage	1.32	Drainage
	D4	stream	-	-	-	-	1.59	Drainage	1.59	Drainage	1.59	Drainage
	D6	ditch	-	-	-	-	1.72	Drainage	1.72	Drainage	1.72	Drainage
	D6 2 nd	ditch	-	-	-	-	1.16	Drainage	1.16	Drainage	1.16	Drainage
	R1	pond	0.127	Runoff	0.077	Drift	0.259	Runoff	0.118	Runoff	0.062	Runoff

Mitigation options ^a												
	R1	stream	1.22	Runoff	1.03*	Drift	2.72	Runoff	1.22	Runoff	0.637	Runoff
	R2	stream	1.40*	Drift	1.40*	Drift	1.86	Runoff	0.833	Runoff	0.433	Runoff
	R3	stream	2.25	Runoff	1.47*	Drift	4.98	Runoff	2.25	Runoff	1.18	Runoff
	R4	stream	2.89	Runoff	1.51	Runoff	6.40	Runoff	2.89	Runoff	1.51	Runoff

^a maximum over option 1 & 2, values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-24: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.081	Drift
	R1	stream	1.04*	Drift
	R2	stream	1.38*	Drift
	R3	stream	1.55	Runoff
	R4	stream	1.03*	Drift
PL-30, Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.077	Drift
	R1	stream	1.03*	Drift
	R2	stream	1.40*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.01*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Table 8.9-25: FOCUS Step 4 global maximum PEC_{sw} for azoxystrobin following application of A22773A to hops – Maximum over single and multiple applications (see A 3.8, Anagu, I. & Langa Peñalba, S, 2021, VV-911782)

Mitigation options ^a						
Vegetative strip (m)			0		0	
No spray buffer (m)			10		20	
Nozzle reduction (%)			0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
PL-17, Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.525	Drift	0.170	Drift
	R1	stream	4.02*	Drift	1.24	Runoff
PL-17, Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.508	Drift	0.156	Drift
	R1	stream	3.92*	Drift	1.18*	Drift
PL-17, Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.496	Drift	0.150	Drift
	R1	stream	4.03*	Drift	1.21*	Drift

^a maximum over option 1 & 2, values resulting from single applications are marked with *

Metabolites of azoxystrobin

Table 8.9-26: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R234886 following application of A22773A to vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Acidic soils		Alkaline soils	
		Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1					
-	-	58.6	133	72.7	26.7
Step 2					
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	21.1	48.0	24.8	9.11
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	17.0	38.6	20.0	7.33

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-27: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R234886 following application of A22773A to vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11-89 (A 3.6)

Scenario FOCUS	Period	Acidic soils		Alkaline soils	
		Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1					
-	-	58.6	133	72.7	26.7
Step 2					
Northern Europe	Mar-May / Jun-Sep ^b	8.78	19.9	10.3	3.79
Southern Europe	Mar-May / Jun-Sep ^b	17.0	38.6	20.0	7.33

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-28: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R234886 following application of A22773A to vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Acidic soils		Alkaline soils	
		Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1					
-	-	58.6	133	72.7	26.7
Step 2					
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	24.7	56.3	28.7	10.5
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	19.9	45.3	23.1	8.46

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-29: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R234886 following application of A22773A to hops, 2 × 250 g a.s./ha, BBCH 21-89 (A 3.6)

Scenario FOCUS	Period	Acidic soils		Alkaline soils	
		Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1					
-	-	63.5	142	77.6	28.4
Step 2					
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	17.7	39.6	20.5	7.50
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	15.0	33.4	17.4	6.36

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-30: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R402173 following application of A22773A to vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^{a c}	Max PEC _{SED} (µg/kg) ^{a d}
Step 1			
-	-	25.9	42.3
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	4.40	7.16
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	3.53	5.76

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^d worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table 8.9-31: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R402173 following application of A22773A to vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11-89 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^{a c}	Max PEC _{SED} (µg/kg) ^{a d}
Step 1			
-	-	25.9	42.3
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	1.81	2.94
Southern Europe	Mar-May / Jun-Sep ^b	3.53	5.76

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^d worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table 8.9-32: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R402173 following application of A22773A to vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^{a c}	Max PEC _{SED} (µg/kg) ^{a d}
Step 1			
-	-	25.9	42.3
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	4.70	7.67
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	3.78	6.16

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^d worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table 8.9-33: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R402173 following application of A22773A to hops, 2 × 250 g a.s./ha, BBCH 21-89 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^{a c}	Max PEC _{SED} (µg/kg) ^{a d}
Step 1			
-	-	26.5	43.2
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	3.14	5.11
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.63	4.27

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

^c worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^d worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table 8.9-34: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R401553 following application of A22773A to vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.55	4.76
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.07	3.87

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-35: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R401553 following application of A22773A to vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11-89 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	1.12	2.08

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Southern Europe	Mar-May / Jun-Sep ^b	2.07	3.87

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-36: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R401553 following application of A22773A to vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11-49 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.96	5.55
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.40	4.50

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

Table 8.9-37: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for R401553 following application of A22773A to hops, 2 × 250 g a.s./ha, BBCH 21-89 (A 3.6)

Scenario FOCUS	Period	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	19.8	36.6
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.74	5.00
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	2.43	4.41

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.6

8.9.2.2 Oxathiapiprolin and its metabolites

Table 8.9-38: Input parameters related to active substance oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 for PEC_{SW/SED} calculations STEPs 1/2 and 3/4

Compound	Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72	Value in accordance to EU endpoint / Reference
Molar mass (g/mol)	539.53 [*]	555.53 ^{**}	569.51 ^{**}	349.41 ^{**}	180.09 ^{**}	[*] Yes / EFSA, 2016 ^{**} DAR / 2015
Water solubility (mg/L)	0.1844 [*] (20°C)	0.1844 ^{**} (20°C)	0.1844 ^{**} (20°C)	0.1844 ^{**} (20°C)	0.1844 ^{**} (20°C)	[*] Yes / EFSA, 2016 ^{**} Parent data
Saturated vapour pressure (Pa)	1.141 × 10 ⁻⁶ (20°C)	- ^a	- ^a	- ^a	- ^a	Yes / EFSA, 2016

Compound	Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72	Value in accordance to EU endpoint / Reference
K _{FOC} / K _{FOM} (mL/g)	6242.6 / 3621 (arithmetic mean, n = 5) 45586 (single value, worst case, Step 1-2 only)	1168.4 / 677.7 (arithmetic mean, n = 5)	495.6 / 287.5 (arithmetic mean, n = 5)	4880.2 / 2830.7 (arithmetic mean, n = 5)	7.33 / 4.25 (arithmetic mean, n = 5)	Yes / EFSA, 2016
Freundlich Exponent 1/n (-)	0.97 (arithmetic mean, n = 5)	- ^a	- ^a	- ^a	- ^a	Yes / EFSA, 2016
Plant Uptake	0	- ^a	- ^a	- ^a	- ^a	Worst-case assumption
DT _{50,soil} (d)	121.2 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	160 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	60.5 (geometric mean field and lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 12)	564.9 (geometric mean lab, acidic, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 2)	310.2 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 5)	Yes / EFSA, 2016
DT _{50,water} (d)	70.3 ^b (geometric mean, total system, n = 2)	1000 (FOCUS default)				Yes / EFSA, 2016
DT _{50,sed} (d)	1000 ^b (FOCUS default)	1000 (FOCUS default)				Yes / EFSA, 2016
DT _{50,whole system} (d)	70.3 (geometric mean, total system, n = 2)	1000 (FOCUS default)				Yes / EFSA, 2016
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 9.4 Total system: -	Soil: 13.5 Total system: 9.5	Soil: 8.7 Total system: -	Soil: 10.3 Total system: -	Yes / EFSA, 2016

^a not required for Steps 1 & 2

^b for compounds with K_{oc} above 2000 mL/g the FOCUS kinetics advice recommends to use the default DT₅₀ in the water compartment., however the proposed approach is in accordance with the DAR where it is stated: “The case with water compartment set to P-I level degradation rate and sediment to 1000 days was selected as it resulted in higher concentrations in both columns”²

Table 8.9-39: Input parameters related to metabolites of oxathiapiprolin IN-S2K66, IN-RSE01, IN-RYJ52, IN-Q7D41, and IN-P3X26 for PEC_{SW/SED} calculations STEPs 1/2

Compound	IN-S2K66	IN-RSE01	IN-RYJ52	IN-Q7D41	IN-P3X26	Value in accordance to EU endpoint / Reference
Molar mass (g/mol)	528.54	510.47 ^{\$}	544.54	537.51	402.4	Yes / DAR, 2015 ²
Water solubility (mg/L)	0.1844* (20°C)					*Parent data
K _{FOC} (mL/g)	10 / 10000 (FOCUS default)				0.1 / 10000 (FOCUS default)	Yes / EFSA, 2016
DT _{50,soil} (d)	1000 (FOCUS default)					Yes / EFSA, 2016
DT _{50,water} (d)	1000 (FOCUS default)					Yes / EFSA, 2016
DT _{50,sed} (d)	1000 (FOCUS default)					Yes / EFSA, 2016
DT _{50,whole system} (d)	1000 (FOCUS default)					Yes / EFSA, 2016
Maximum occurrence observed (% molar basis with respect to the parent)	Soil: - Total system: 8.7	Soil: - Total system: 10.4	Soil: - Total system: 16	Soil: - Total system: 11.8	Soil: - Total system: 14 (aqueous photolysis)	Yes / EFSA, 2016

\$ Incorrect input value was used in the modelling. Using the correct molar mass (542.53), higher PEC values by a factor of 1.06 (differences between correct and incorrect molar weight correction factor) would be obtained. This is foreseen to have no impact on the aquatic risk assessment for metabolite IN-RSE01 because of the high safety factor.

PEC_{SW/SED}

Table 8.9-40: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy - maximum over single and multiple applications (see A 3.9 and A 3.10, Anagu, I. & Bo, Y., 2021, VV-911814)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-20, Vegetables, leafy 2 × 12 g a.s./ha BBCH 11-49	Step 1 ^a				
	-	-	1.08	0.801	60.1
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.338	0.321	22.6
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.276	0.261	18.4
Step 3					

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.076*	Drift	0.077
	D3 2 nd	ditch	0.076*	Drift	0.081
	D4	pond	0.004	Drift	0.035
	D4	stream	0.060*	Drift	0.007
	D6	ditch	0.074*	Drift	0.030
	R1 1 st	pond	0.015	Runoff	0.358
	R1 2 nd	pond	0.016	Runoff	0.371
	R1 1 st	stream	0.050*	Drift	2.02
	R1 2 nd	stream	0.050*	Drift	1.10
	R2 1 st	stream	0.066*	Drift	2.76
	R2 2 nd	stream	0.067*	Drift	5.55
	R3 1 st	stream	0.070*	Drift	2.02
	R3 2 nd	stream	0.070*	Drift	1.03
	R4 1 st	stream	0.056	Runoff	0.516
	R4 2 nd	stream	0.061	Runoff	0.382
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.076*	Drift	0.077
	D3 2 nd	ditch	0.075*	Drift	0.056
	D4	pond	0.004	Drift	0.038
	D4	stream	0.054*	Drift	0.004
	D6	ditch	0.072*	Drift	0.033
	R1 1 st	pond	0.015	Runoff	0.365
	R1 2 nd	pond	0.017	Runoff	0.392
	R1 1 st	stream	0.050*	Drift	1.65
	R1 2 nd	stream	0.050*	Drift	1.58
	R2 1 st	stream	0.067*	Drift	3.21
	R2 2 nd	stream	0.066*	Drift	6.44
	R3 1 st	stream	0.070*	Drift	4.34
	R3 2 nd	stream	0.070*	Drift	2.32
	R4 1 st	stream	0.051	Runoff	1.04
	R4 2 nd	stream	0.051	Runoff	1.39

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

^c values resulting from single applications are marked with *

Table 8.9-41: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to vegetables, fruiting - maximum over single and multiple applications (see A 3.9 and A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-28, Vegetables, fruiting 2 × 12 g a.s./ha BBCH 11-89	Step 1 ^a				
	-	-	1.08	0.801	60.1
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep ^b	0.153	0.140	9.90
	Southern Europe	Mar-May / Jun-Sep ^b	0.276	0.261	18.4
Step 3					
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.074*	Drift	0.028
	R2	stream	0.066*	Drift	2.13
	R3	stream	0.070*	Drift	0.746
	R4	stream	0.064	Runoff	0.658
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.075*	Drift	0.034
	R2	stream	0.067*	Drift	2.58
	R3	stream	0.070*	Drift	1.15
	R4	stream	0.052	Runoff	0.628
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.075*	Drift	0.035
	R2	stream	0.067*	Drift	6.17
	R3	stream	0.070*	Drift	1.96
	R4	stream	0.053	Runoff	0.593

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

^c values resulting from single applications are marked with *

Table 8.9-42: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to vegetables, bulb - maximum over single and multiple applications (see A 3.9 and A 3.10, Anagu, I. & Bo, Y., 2021, VV-911814)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-30, Vegetables, bulb	Step 1 ^a				

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
2 × 12 g a.s./ha BBCH 11-49	-	-	1.08	0.801	60.1
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.394	0.376	26.5
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.321	0.305	21.5
Step 3					
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	0.076*	Drift	0.075
	D4	pond	0.004	Drift	0.034
	D4	stream	0.058*	Drift	0.007
	D6 1 st	ditch	0.076*	Drift	0.168
	D6 2 nd	ditch	0.073*	Drift	0.257
	R1	pond	0.009	Runoff	0.241
	R1	stream	0.050*	Drift	0.590
	R2	stream	0.066*	Drift	2.18
	R3	stream	0.070*	Drift	0.216
	R4	stream	0.062	Runoff	0.437
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	0.076*	Drift	0.075
	D4	pond	0.004	Drift	0.040
	D4	stream	0.054*	Drift	0.006
	D6 1 st	ditch	0.076*	Drift	0.314
	D6 2 nd	ditch	0.076*	Drift	0.109*
	R1	pond	0.016	Runoff	0.306
	R1	stream	0.049*	Drift	1.06
	R2	stream	0.067*	Drift	2.48
	R3	stream	0.070*	Drift	0.257
	R4	stream	0.056	Runoff	0.640

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

^c values resulting from single applications are marked with *

Table 8.9-43: FOCUS Step 1,2 and 3 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to hops - maximum over single and multiple applications (see A 3.9 and A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Application scenario	Scenario FOCUS	Period/ Water body	Max PEC _{SW} (µg/L) ^c	21 d- PEC _{SW, twa} (µg/L)/ Dominant Route of Entry	Max PEC _{SED} (µg/kg) ^c
PL-17, Hops 2 × 12 g a.s./ha; BBCH 21 - 89	Step 1 ^a				
	-	-	2.40	0.958	69.8
	Step 2 ^a				
	Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.813	0.351	24.3
	Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.813	0.318	21.5
Step 3					
PL-17, Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.036	Drift	0.320
	R1	stream	0.451*	Drift	0.068*
PL-17, Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.036	Drift	0.315
	R1	stream	0.440*	Drift	0.048
PL-17, Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.034	Drift	0.324
	R1	stream	0.452*	Drift	0.074

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

^c values resulting from single applications are marked with *

FOCUS Step 4

Table 8.9-44: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to vegetables, leafy – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options ^a														
Vegetative strip (m)			5 ^b		10-12 ^c		-		18-20 ^d		10-12 ^c		18-20 ^d	
No spray buffer (m)			5		-		10		-		10		20	
Nozzle reduction (%)			-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.020*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D3 2 nd	ditch	0.021*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drainage
	D4	stream	0.022*	Drift	-	-	0.012*	Drift	-	-	0.012*	Drift	0.008	Drainage
	D6	ditch	0.025	Drainage	-	-	0.025	Drainage	-	-	0.025	Drainage	0.025	Drainage
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.004	Drift	0.006	Runoff	0.003	Runoff
	R1 2 nd	pond	0.010	Runoff	0.007	Runoff	0.016	Runoff	0.004	Drift	0.007	Runoff	0.004	Runoff
	R1 1 st	stream	0.026	Runoff	0.050*	Drift	0.040	Runoff	0.050*	Drift	0.018	Runoff	0.009	Runoff
	R1 2 nd	stream	0.021	Runoff	0.050*	Drift	0.032	Runoff	0.050*	Drift	0.014	Runoff	0.008	Runoff
	R2 1 st	stream	0.024*	Drift	0.066*	Drift	0.014	Runoff	0.066*	Drift	0.013*	Drift	0.007*	Drift
	R2 2 nd	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.007*	Drift
	R3 1 st	stream	0.026*	Drift	0.070*	Drift	0.036	Runoff	0.070*	Drift	0.016	Runoff	0.009	Runoff
	R3 2 nd	stream	0.026*	Drift	0.070*	Drift	0.034	Runoff	0.070*	Drift	0.016	Runoff	0.008	Runoff
	R4 1 st	stream	0.037	Runoff	0.050*	Drift	0.056	Runoff	0.050*	Drift	0.026	Runoff	0.013	Runoff

Mitigation options ^a														
	R4 2 nd	stream	0.040	Runoff	0.050*	Drift	0.061	Runoff	0.050*	Drift	0.028	Runoff	0.015	Runoff
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.021*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D3 2 nd	ditch	0.020*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.001	Drift
	D4	stream	0.020*	Drift	-	-	0.010*	Drift	-	-	0.010*	Drift	0.005*	Drift
	D6	ditch	0.020	Drainage	-	-	0.020	Drainage	-	-	0.020	Drainage	0.020	Drainage
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.005	Drift	0.006	Runoff	0.003	Runoff
	R1 2 nd	pond	0.011	Runoff	0.008	Runoff	0.016	Runoff	0.004	Runoff	0.007	Runoff	0.004	Runoff
	R1 1 st	stream	0.024	Runoff	0.050*	Drift	0.037	Runoff	0.050*	Drift	0.017	Runoff	0.009	Runoff
	R1 2 nd	stream	0.019	Runoff	0.050*	Drift	0.028	Runoff	0.050*	Drift	0.013	Runoff	0.007	Runoff
	R2 1 st	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.007*	Drift
	R2 2 nd	stream	0.024*	Drift	0.066*	Drift	0.013*	Drift	0.066*	Drift	0.013*	Drift	0.007*	Drift
	R3 1 st	stream	0.026*	Drift	0.070*	Drift	0.028	Runoff	0.070*	Drift	0.014*	Drift	0.007*	Drift
	R3 2 nd	stream	0.026*	Drift	0.070*	Drift	0.034	Runoff	0.070*	Drift	0.015	Runoff	0.008	Runoff
	R4 1 st	stream	0.033	Runoff	0.049*	Drift	0.051	Runoff	0.049*	Drift	0.023	Runoff	0.012	Runoff
	R4 2 nd	stream	0.033	Runoff	0.050*	Drift	0.051	Runoff	0.050*	Drift	0.023	Runoff	0.012	Runoff

^a values resulting from single applications are marked with *

^b equivalent to 40% (BAES, 2020)

^c equivalent to 60% runoff mitigation

^d equivalent to 80% runoff mitigation

Table 8.9-45: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to application to vegetables, leafy – VFMod – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation option ^a					
Vegetative strip (m)			VFMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SED} (µg/L)
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	-	-	-
	D3 2 nd	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6	ditch	-	-	-
	R1 1 st	pond	0.004	Drift	0.068
	R1 2 nd	pond	0.004	Drift	0.085
	R1 1 st	stream	0.050*	Drift	0.285
	R1 2 nd	stream	0.050*	Drift	0.191
	R2 1 st	stream	0.066*	Drift	0.047
	R2 2 nd	stream	0.067*	Drift	0.268
	R3 1 st	stream	0.070*	Drift	0.624
	R3 2 nd	stream	0.070*	Drift	0.179
	R4 1 st	stream	0.050*	Drift	0.061
	R4 2 nd	stream	0.050*	Drift	0.035
PL-20, Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	-	-	-
	D3 2 nd	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6	ditch	-	-	-
	R1 1 st	pond	0.005	Drift	0.078
	R1 2 nd	pond	0.004	Drift	0.093
	R1 1 st	stream	0.05*	Drift	0.255
	R1 2 nd	stream	0.05*	Drift	0.286
	R2 1 st	stream	0.067*	Drift	0.099*
	R2 2 nd	stream	0.066*	Drift	0.215
	R3 1 st	stream	0.070*	Drift	1.37
	R3 2 nd	stream	0.070*	Drift	0.786
	R4 1 st	stream	0.049*	Drift	0.157

Mitigation option ^a					
Vegetative strip (m)			VFSTMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SED} (µg/L)
	R4 2 nd	stream	0.050*	Drift	0.314

^a values resulting from single applications are marked with *

Table 8.9-46: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A vegetables, fruiting – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options ^a												
Vegetative strip (m)			10-12 ^b		-		18-20 ^c		10-12 ^b		18-20 ^c	
No spray buffer (m)			-		10		-		10		20	
Nozzle reduction (%)			-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage
	R2	stream	0.066*	Drift	0.013*	Drift	0.066*	Drift	0.013*	Drift	0.007*	Drift
	R3	stream	0.070*	Drift	0.033	Runoff	0.070*	Drift	0.015	Runoff	0.008	Runoff
	R4	stream	0.050*	Drift	0.064	Runoff	0.050*	Drift	0.029	Runoff	0.015	Runoff
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage
	R2	stream	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.007*	Drift
	R3	stream	0.070*	Drift	0.029	Runoff	0.070*	Drift	0.014*	Drift	0.007*	Drift
	R4	stream	0.049*	Drift	0.052	Runoff	0.049*	Drift	0.024	Runoff	0.012	Runoff
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage
	R2	stream	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.007*	Drift
	R3	stream	0.070*	Drift	0.031	Runoff	0.070*	Drift	0.014	Runoff	0.007	Runoff
	R4	stream	0.050*	Drift	0.053	Runoff	0.050*	Drift	0.024	Runoff	0.013	Runoff

^a values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-47: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to application to vegetables, fruiting – VFSMod – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options ^a					
Vegetative strip (m)			VFSMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SED} (µg/L)
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	-	-	-
	R2	stream	0.066*	Drift	0.038
	R3	stream	0.070*	Drift	0.121
	R4	stream	0.050*	Drift	0.088
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	-	-	-
	R2	stream	0.067*	Drift	0.051
	R3	stream	0.070*	Drift	0.211
	R4	stream	0.049*	Drift	0.164
PL-28, Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	-	-	-
	R2	stream	0.067*	Drift	0.272
	R3	stream	0.070*	Drift	0.530
	R4	stream	0.050*	Drift	0.108

^a values resulting from single applications are marked with *

Table 8.9-48: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to vegetables, bulb – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options												
Vegetative strip (m)			10-12 ^b		-		18-20 ^c		10-12 ^b		18-20 ^c	
No spray buffer (m)			-		10		-		10		20	
Nozzle reduction (%)			-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D4	pond	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drainage
	D4	stream	-	-	0.011*	Drift	-	-	0.011*	Drift	0.008	Drainage
	D6 1 st	ditch	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage
	D6 2 nd	ditch	-	-	0.029	Drainage	-	-	0.029	Drainage	0.029	Drainage
	R1	pond	0.004	Runoff	0.009	Runoff	0.004	Drift	0.004	Runoff	0.002	Runoff
	R1	stream	0.050*	Drift	0.042	Runoff	0.050*	Drift	0.019	Runoff	0.010	Runoff
	R2	stream	0.066*	Drift	0.015	Drift	0.066*	Drift	0.013*	Drift	0.007*	Drift
	R3	stream	0.070*	Drift	0.038	Runoff	0.070*	Drift	0.017	Runoff	0.009	Runoff
	R4	stream	0.049*	Drift	0.062	Runoff	0.049*	Drift	0.028	Runoff	0.015	Runoff
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	-	-	0.011*	Drift	-	-	0.011*	Drift	0.006*	Drift
	D4	pond	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drainage
	D4	stream	-	-	0.010*	Drift	-	-	0.010*	Drift	0.006	Drainage
	D6 1 st	ditch	-	-	0.011*	Drift	-	-	0.011*	Drift	0.008	Drainage
	D6 2 nd	ditch	-	-	0.016	Drainage	-	-	0.016	Drainage	0.016	Drainage
	R1	pond	0.007	Runoff	0.015	Runoff	0.004	Runoff	0.007	Runoff	0.003	Runoff

Mitigation options												
	R1	stream	0.049*	Drift	0.030	Runoff	0.049*	Drift	0.013	Runoff	0.007	Runoff
	R2	stream	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.007*	Drift
	R3	stream	0.070*	Drift	0.032	Runoff	0.070*	Drift	0.014	Runoff	0.008	Runoff
	R4	stream	0.048*	Drift	0.056	Runoff	0.048*	Drift	0.025	Runoff	0.013	Runoff

^a values resulting from single applications are marked with *

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

Table 8.9-49: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to application to vegetables, bulb– VFSSMod – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options ^a					
Vegetative strip (m)			VFSSMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SED} (µg/L)
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6 1 st	ditch	-	-	-
	D6 2 nd	ditch	-	-	-
	R1	pond	0.004	Drift	0.044
	R1	stream	0.050*	Drift	0.036
	R2	stream	0.066*	Drift	0.026
	R3	stream	0.070*	Drift	0.054
	R4	stream	0.049*	Drift	0.042
PL-30, Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6 1 st	ditch	-	-	-
	D6 2 nd	ditch	-	-	-
	R1	pond	0.004	Drift	0.072
	R1	stream	0.049*	Drift	0.187
	R2	stream	0.067*	Drift	0.035
	R3	stream	0.070*	Drift	0.061
	R4	stream	0.048*	Drift	0.142

^a values resulting from single applications are marked with *

Table 8.9-50: FOCUS Step 4 global maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application of A22773A to application to hops – maximum over single and multiple applications (see A 3.10, Anagu, I. & Bo, Y, 2021, VV-911814)

Mitigation options ^a						
Vegetative strip (m)			-		-	
No spray buffer (m)			10		20	
Nozzle reduction (%)			-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
PL-17, Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.022	Drift	0.007	Drift
	R1	stream	0.192*	Drift	0.058*	Drift
PL-17, Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.022	Drift	0.007*	Drift
	R1	stream	0.187*	Drift	0.056*	Drift
PL-17, Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.021	Drift	0.007	Drift
	R1	stream	0.192*	Drift	0.058*	Drift

^a values resulting from single applications are marked with *

Metabolites of oxathiapiprolin

Table 8.9-51: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RDT31 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.110	1.28
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.088	1.03

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-52: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RDT31 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.044	0.514
Southern Europe	Mar-May / Jun-Sep ^b	0.088	1.03

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-53: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RDT31 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.131	1.53
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.104	1.22

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-54: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RDT31 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.073	0.847
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.058	0.678

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-55: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RAB06 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-(see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.19	5.86
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.424	2.09
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.342	1.68

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-56: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RAB06 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.19	5.86
Step 2			

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Northern Europe	Mar-May / Jun-Sep ^b	0.178	0.870
Southern Europe	Mar-May / Jun-Sep ^b	0.342	1.68

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-57: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RAB06 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.19	5.86
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.495	2.44
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.399	1.97

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-58: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RAB06 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.33	6.25
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.366	1.75
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.312	1.48

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-59: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-QPS10 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.022	1.09
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.018	0.871

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-60: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-QPS10 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.009	0.436
Southern Europe	Mar-May / Jun-Sep ^b	0.018	0.871

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-61: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-QPS10 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.027	1.30
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.021	1.04

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-62: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-QPS10 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.015	0.724
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.012	0.579

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-63: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-E8S72 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.100	0.007
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.080	0.006

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-64: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-E8S72 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.040	0.003
Southern Europe	Mar-May / Jun-Sep ^b	0.080	0.006

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-65: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-E8S72 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.120	0.009
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.096	0.007

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-66: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-E8S72 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.067	0.005
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.053	0.004

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-67: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-S2K66 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89(see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.692	4.89
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.258	1.82

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.210	1.48

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-68: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-S2K66 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.692	4.89
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.113	0.799
Southern Europe	Mar-May / Jun-Sep ^b	0.210	1.48

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-69: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-S2K66 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.692	4.89
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.303	2.14
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.245	1.73

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-70: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-S2K66 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.805	5.67
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.278	1.96
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.246	1.74

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-71: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RSE01 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.799	5.64
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.298	2.11
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.242	1.71

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-72: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RSE01 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.799	5.64
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.131	0.922
Southern Europe	Mar-May / Jun-Sep ^b	0.242	1.71

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-73: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RSE01 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.799	5.64
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.349	2.47
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.283	2.00

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-74: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RSE01 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.929	6.55
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.321	2.26

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.284	2.00

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-75: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RYJ52 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.31	9.26
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.489	3.46
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.398	2.81

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-76: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RYJ52 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.31	9.26
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.214	1.51
Southern Europe	Mar-May / Jun-Sep ^b	0.398	2.81

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-77: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RYJ52 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.31	9.26
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.573	4.05
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.465	3.28

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-78: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-RYJ52 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.53	10.8
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.527	3.71
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.466	3.29

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-79: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-Q7D41 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.954	6.74
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.356	2.52
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.289	2.04

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-80: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-Q7D41 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.954	6.74
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.156	1.10
Southern Europe	Mar-May / Jun-Sep ^b	0.289	2.04

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-81: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-Q7D41 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-(see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.954	6.74
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.417	2.95

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.338	2.39

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-82: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-Q7D41 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	1.11	7.82
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.383	2.70
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.340	2.39

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-83: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-P3X26 following application of A22773A to vegetables, leafy, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.858	5.99
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.320	2.23
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.260	1.82

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-84: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-P3X26 following application of A22773A vegetables, fruiting, 2 × 12 g a.s./ha, BBCH 11-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.858	5.99
Step 2			
Northern Europe	Mar-May / Jun-Sep ^b	0.140	0.978
Southern Europe	Mar-May / Jun-Sep ^b	0.260	1.82

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-85: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-P3X26 following application of A22773A to vegetables, bulb, 2 × 12 g a.s./ha, BBCH 11-49 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.858	5.99
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.375	2.62
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.304	2.12

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

Table 8.9-86: Maximum FOCUS Step 1 and 2 PEC_{SW/SED} for IN-P3X26 following application of A22773A to hops, 2 × 12 g a.s./ha, BBCH 21-89 (see A 3.9)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L) ^a	Max PEC _{SED} (µg/kg) ^a
Step 1			
-	-	0.997	6.95
Step 2			
Northern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.344	2.40
Southern Europe	Mar-May / Jun-Sep / Oct-Feb ^b	0.305	2.13

^a all PEC resulted from multiple applications

^b maximum over all periods simulated. Full set of results available in Appendix A 3.9

8.9.2.3 PEC_{SW} of A22773A

For foliar-applied crop protection products, spray drift is the most important route of contamination of surface waters. As formulations consist of a mixture of components, the spray drift PEC cannot be estimated by the FOCUS models, therefore it is considered using the FOCUS SWASH Drift calculator.

Table 8.9-87: Initial PEC_{SW} for A22773A following a single spray application

Formulation	No. of applications	Maximum use rate (g A22773A /ha) ^a	Crop	PEC _{SW} ^b (µg A22773A /L)				
				Spray drift buffer (m)	Drift-reducing nozzles (%)			
A22773A	1	1097	Vegetables, leafy Vegetables, fruiting Vegetables, bulb		0	50	75	90
				FOCUS default	7.05	3.52	1.76	0.705
				5	1.91	0.955	0.478	0.191
				10	1.01	0.507	0.253	0.101
				15	0.692	0.346	0.173	0.069
				20	0.526	0.263	0.132	0.053
			Hops	FOCUS default	53.2	26.6	13.3	5.32
				5	38.6	19.3	9.64	3.86
				10	20.1	10.1	5.03	2.01
				15	13.3	6.63	3.32	1.33
				20	6.05	3.02	1.51	0.605

^a the rate of formulation is based on a specific density of 1.097 g/mL with a maximum application of 1 L A22773A/ha

^b PEC_{SW} values represent the maximum over ditch, pond and stream

8.10 Fate and behaviour in air (KCP 9.3, KCP 9.3.1)

Review Comments:

The data on atmospheric degradation and behaviour in air for azoxystrobin and oxathiapiprolin provided by the Applicant are considered acceptable. The justification for non-assessment via volatilization is accepted. Both active substances are regarded as non-volatile and, consequently, exposure of adjacent surface waters and terrestrial ecosystems by azoxystrobin and oxathiapiprolin due to volatilization with subsequent deposition is not expected.

8.10.1 Azoxystrobin

The fate and behaviour of azoxystrobin in air are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of azoxystrobin (EFSA Journal 2010; 8(4): 1542).

Table 8.10-1: Summary of atmospheric degradation and behaviour

Compound	Azoxystrobin
Direct photolysis in air ^a	-

Quantum yield of direct phototransformation ^a	-
Photochemical oxidative degradation in air	DT ₅₀ (h): 2.7 derived by the Atkinson model
Volatilisation	Vapour pressure (Pa): 1.1×10^{-10} (at 20°C) Henry's Law Constant (Pa.m ³ /mol): 7.3×10^{-9} (at 25°C)
Metabolites	-

^a data not currently available

The vapour pressure at 20 °C of the active substance azoxystrobin is $< 10^{-5}$ Pa. Hence the active substance azoxystrobin is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance azoxystrobin due to volatilization with subsequent deposition should not be considered.

8.10.2 Oxathiapiprolin

The fate and behaviour of oxathiapiprolin in air are considered to be data provided in support of the active substance. All relevant detailed experimental information has been submitted for EU review of oxathiapiprolin, **EFSA Journal 2016;14(7):4504..**

Table 8.10-2 Summary of atmospheric degradation and behaviour

Compound	Oxathiapiprolin
Direct photolysis in air	Not required as oxathiapiprolin is not volatile
Quantum yield of direct phototransformation	Not required as oxathiapiprolin is not volatile
Photochemical oxidative degradation in air	DT ₅₀ (h): 3.307 derived by the Atkinson model OH (12h) concentration assumed = 1.5×10^6 cm ⁻³
Volatilisation	Not required as oxathiapiprolin is not volatile.
Metabolites	Metabolites of oxathiapiprolin are not anticipated to be volatile so no additional work was performed.

The vapour pressure at 20 °C of the active substance oxathiapiprolin is $< 10^{-5}$ Pa. Hence the active substance oxathiapiprolin is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance oxathiapiprolin due to volatilization with subsequent deposition should not be considered.

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on - Azoxystrobin

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 9.2.4	Langa Peñalba, S., & Robinson, P.	18/08/2022	Azoxystrobin - A Leaching Assessment for Parent and Metabolites R234886, R402173 and R401553 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops Report No. 120095-1 Document No. VV-961774 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN
KCP 9.2.4	Anagu, I. Penalba, S.	30/06/2021	Azoxystrobin - A Leaching Assessment for Parent and Metabolites R234886, R402173 and R401553 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops Using EU Agreed Endpoints Report No. 116223-1 Document No. VV-911613 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN
KCP 9.2.5	Langa Peñalba, S., & Robinson, P.	18/08/2022	Azoxystrobin - A European Environmental Fate Assessment Using the FOCUS Surface Water Models at Steps 3 to 4 Following Spray Application to Various Crops Report No. 120095-3 Document No. VV-961781 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 9.2.5	Anagu, I. Penalba, S.	28/06/2021	Azoxystrobin - A European Environmental Fate Assessment Using the FOCUS Surface Water Models at Steps 3 to 4 Following Spray Application to Various Crops Using Arithmetic Mean Sorption Endpoints Report No. 116223-3 Document No. VV-911782 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN

List of data submitted by the applicant and relied on - Oxathiapiprolin

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 9.2.4	Anagu, I. Bo, Y.	14/06/2021	Oxathiapiprolin - A Leaching Assessment for Parent and Metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops Using EU Agreed Endpoints Report No. 116223-5 Document No. VV-911806 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN
KCP 9.2.5	Anagu, I. Bo, Y.	30/06/2021	Oxathiapiprolin - A European Environmental Fate Assessment for Parent Using the FOCUS Surface Water Models at Step 3 to 4 Following Spray Application to Various Crops Using Arithmetic Mean Sorption Endpoints Report No. 116223-7 Document No VV-911814 Test Facility Knoell Germany GmbH Not GLP Unpublished	N	SYN

List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			n/a		

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP <x>	<Author>	<YYYY>	<Title> <Company Report No> <Source> <GLP/non GLP/GEP/non GEP> <Published/Unpublished>	Y/N	<Owner>

List of data relied on not submitted by the applicant but necessary for evaluation

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP <x>	<Author>	<YYYY>	<Title> <Company Report No> <Source> <GLP/non GLP/GEP/non GEP> <Published/Unpublished>	Y/N	<Owner>

Appendix 2 Detailed evaluation of the new Annex II studies

No studies provided.

Appendix 3 Additional information provided by the applicant (e.g. detailed modelling data)

A 3.1 KCP 9.1.3: Azoxystrobin - PECs following application to Onions

Comments of zRMS:	All input parameters for azoxystrobin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC_{soil} calculations acceptable for the parent and its metabolites.
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Simulation of $PEC_{S,ini}$, short-term and long-term PEC_S values as well as $PEC_{S,plateau}$ and $PEC_{S,accumulation}$ were carried out using the tool ESCAPE (v.2). ESCAPE output files for azoxystrobin and its metabolites R234886, R402173 and R401553 are presented below.

Azoxystrobin, onions, 2 x 250 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 10:10:47
Calculation problem: AZT_onions

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: AZT_onions
Name of the soil: Borstel
Soil density (kg/L): 1.5
Soil depth (cm): 5
Tillage depth (cm)*: 20
Organic carbon content (%): 1.5
Field capacity (Vol%): 29.2
Wilting point (Vol%): 6.4

Climatic conditions: 20 °C constant
(* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation: every year
Number of Applications : 2
1st Application date: 1 May

Application rate (g/ha): 250
Time between two applications (d): 12
Crop interception (%): 10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study: soil study 1

Metabolism scheme: Parent compound without metabolites

Kinetics for AZT_onions: Single First order (SFO)
DT50 (d): 262
Rate constant (1/d): 0.0026
Q10-factor: 2.58
Walker-exponent: 0.7
Ref. temperature (°C): 20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: AZT_onions

Calculations over one year

Maximum annual total soil concentration for AZT_onions over 5 cm(mg/kg): 0.5906 occurring on day 12

Calculated time dependent total soil concentrations over 5 cm for AZT_onions after one year (mg/kg)

Time(d)	PECact*	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.5891	0.5898	12	13
2	0.5875	0.5891	12	14
4	0.5844	0.5875	12	16
7	0.5798	0.5852	12	19
14	0.5691	0.5798	12	26
21	0.5587	0.5745	12	33
28	0.5485	0.5693	12	40
42	0.5285	0.5590	12	54
50	0.5174	0.5532	12	62
100	0.4533	0.5190	12	112

(* PECact values are related to the time after the maximum concentration)

Calculation of background concentrations after many years

Final Background concentration in total soil for AZT_onions over 20 cm(mg/kg):
0.0908**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0908

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for AZT_onions over 5 cm considering accumulation* (mg/kg)
0.6814

(* a tillage depth of 20 cm was considered for calculating the background concentration)

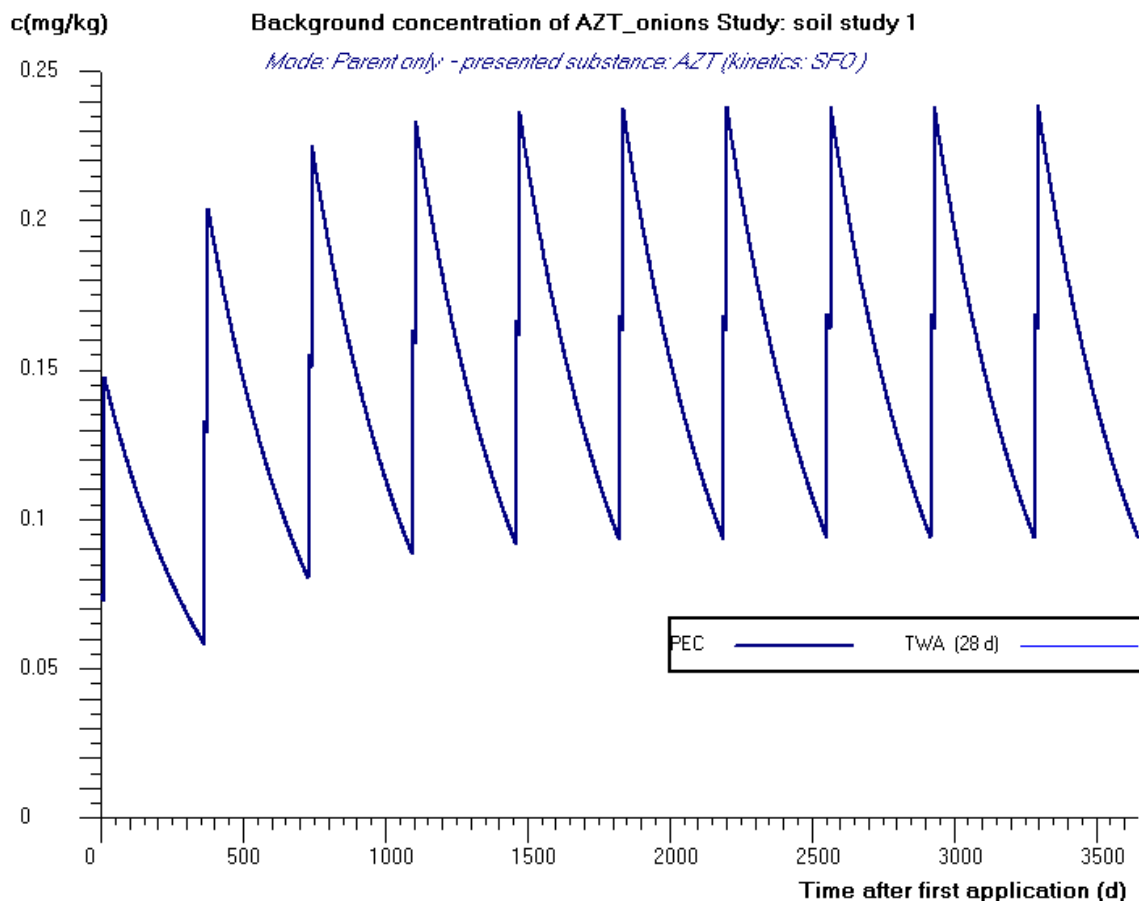
Calculated time dependent total soil concentrations over 5 cm for AZT_onions(mg/kg) considering accumulation*

Time(d)	PECact**	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.6798	0.6806	12	13
2	0.6783	0.6798	12	14
4	0.6752	0.6783	12	16
7	0.6706	0.6760	12	19
14	0.6599	0.6706	12	26
21	0.6495	0.6653	12	33
28	0.6392	0.6601	12	40
42	0.6193	0.6498	12	54
50	0.6082	0.6440	12	62
100	0.5441	0.6097	12	112

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the maximum concentration)'

GRAPHIC REPRESENTATION OF THE CALCULATION



R234886, onions, 1 x 139 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 10:11:09
Calculation problem: R234886_alk_onions

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: R234886_alk_onions

Name of the soil:	Borstel
Soil density (kg/L):	1.5
Soil depth (cm):	5
Tillage depth (cm)*:	20
Organic carbon content (%):	1.5
Field capacity (Vol%):	29.2
Wilting point (Vol%):	6.4

Climatic conditions: 20 °C constant
(* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	139.0024789
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for R234886_alk_onions:	Single First order (SFO)
DT50 (d):	110
Rate constant (1/d):	0.0063
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: R234886_alk_onions

Calculations over one year

Maximum annual total soil concentration for R234886_alk_onions over 5 cm(mg/kg): 0.1668
occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for R234886_alk_onions after one year (mg/kg)

Time(d)	PECact*	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.1658	0.1663	0	1

2	0.1647	0.1658	0	2
4	0.1627	0.1647	0	4
7	0.1596	0.1632	0	7
14	0.1527	0.1597	0	14
21	0.1461	0.1562	0	21
28	0.1398	0.1529	0	28
42	0.1280	0.1466	0	42
50	0.1217	0.1431	0	50
100	0.0888	0.1237	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for R234886_alk_onions over 20 cm(mg/kg):
 0.0046**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0046

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for R234886_alk_onions over 5 cm considering accumulation*
 (mg/kg) 0.1714

(* a tillage depth of 20 cm was considered for calculating the background concentration)

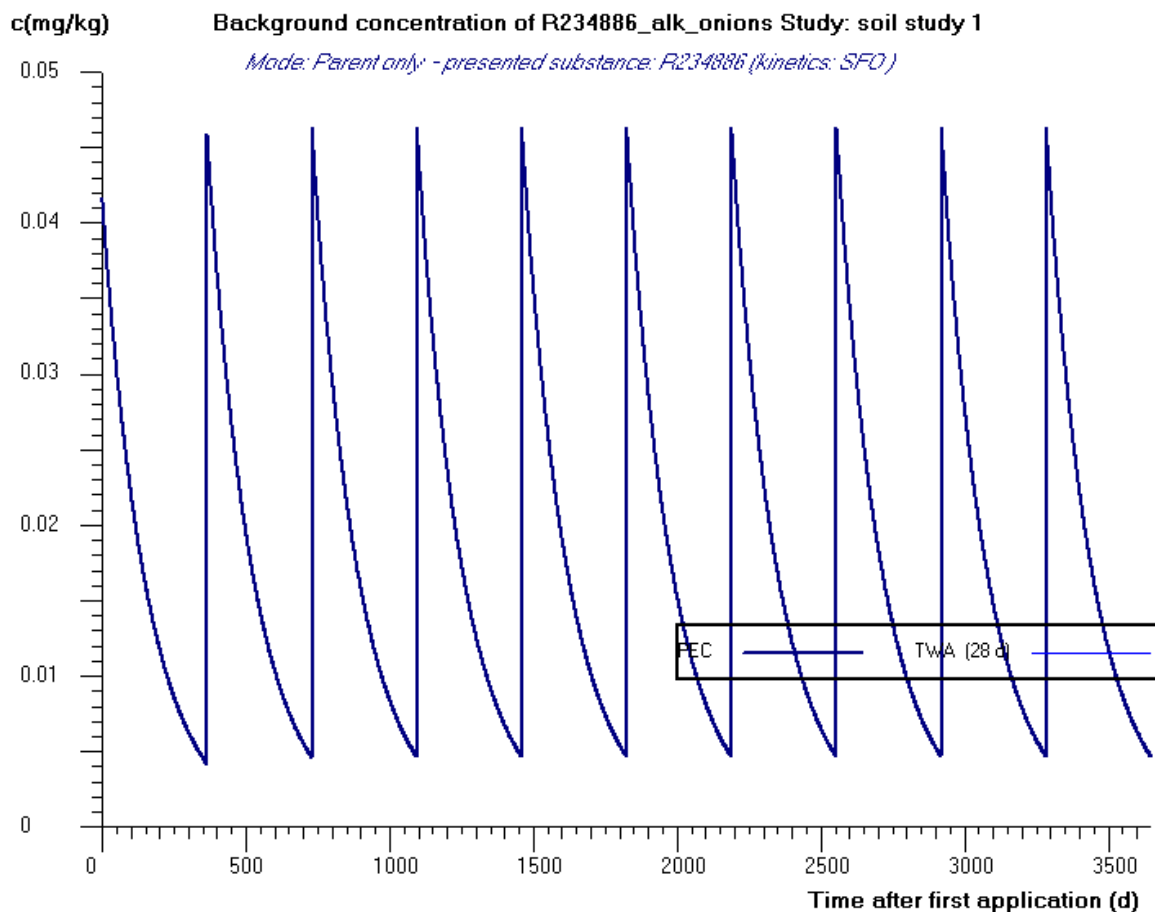
Calculated time dependent total soil concentrations over 5 cm for R234886_alk_onions(mg/kg)
 considering accumulation*

Time(d)	PECact**	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.1704	0.1709	0	1
2	0.1694	0.1704	0	2
4	0.1673	0.1694	0	4
7	0.1643	0.1678	0	7
14	0.1574	0.1643	0	14
21	0.1508	0.1609	0	21
28	0.1445	0.1576	0	28
42	0.1327	0.1512	0	42
50	0.1264	0.1477	0	50
100	0.0935	0.1284	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



R402173, onions, 1 x 70.2g g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 11/05/2021, 22:12:59
Calculation problem: R402173_onions

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Single annual application pattern (calculation period 1
year)

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario:	R402173_onions	
Name of the soil:		Borstel
Soil density (kg/L):		1.5
Soil depth (cm):	5	
Tillage depth (cm)*:	20	
Organic carbon content (%):	1.5	
Field capacity (Vol%):	29.2	
Wilting point (Vol%):	6.4	
Climatic conditions:	20 °C constant	
(* for calculation of background concentrations)		

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	70.22930094
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme:	Parent compound without metabolites
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DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for R402173_onions:	Single First order (SFO)
DT50 (d):	9.8
Rate constant (1/d):	0.0707
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: R402173_onions

Calculations over one year

Maximum annual total soil concentration for R402173_onions over 5 cm(mg/kg): 0.0843
occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for R402173_onions after one year
(mg/kg)

Time(d)	PECact*	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0785	0.0814	0	1
2	0.0732	0.0786	0	2
4	0.0635	0.0734	0	4
7	0.0514	0.0665	0	7
14	0.0313	0.0535	0	14
21	0.0191	0.0439	0	21
28	0.0116	0.0367	0	28
42	0.0043	0.0269	0	42
50	0.0025	0.0231	0	50
100	0.0001	0.0119	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for R402173_onions over 20 cm(mg/kg):
<0.0001**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): <0.0001

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for R402173_onions over 5 cm considering accumulation*
(mg/kg) 0.0843

(* a tillage depth of 20 cm was considered for calculating the background concentration)

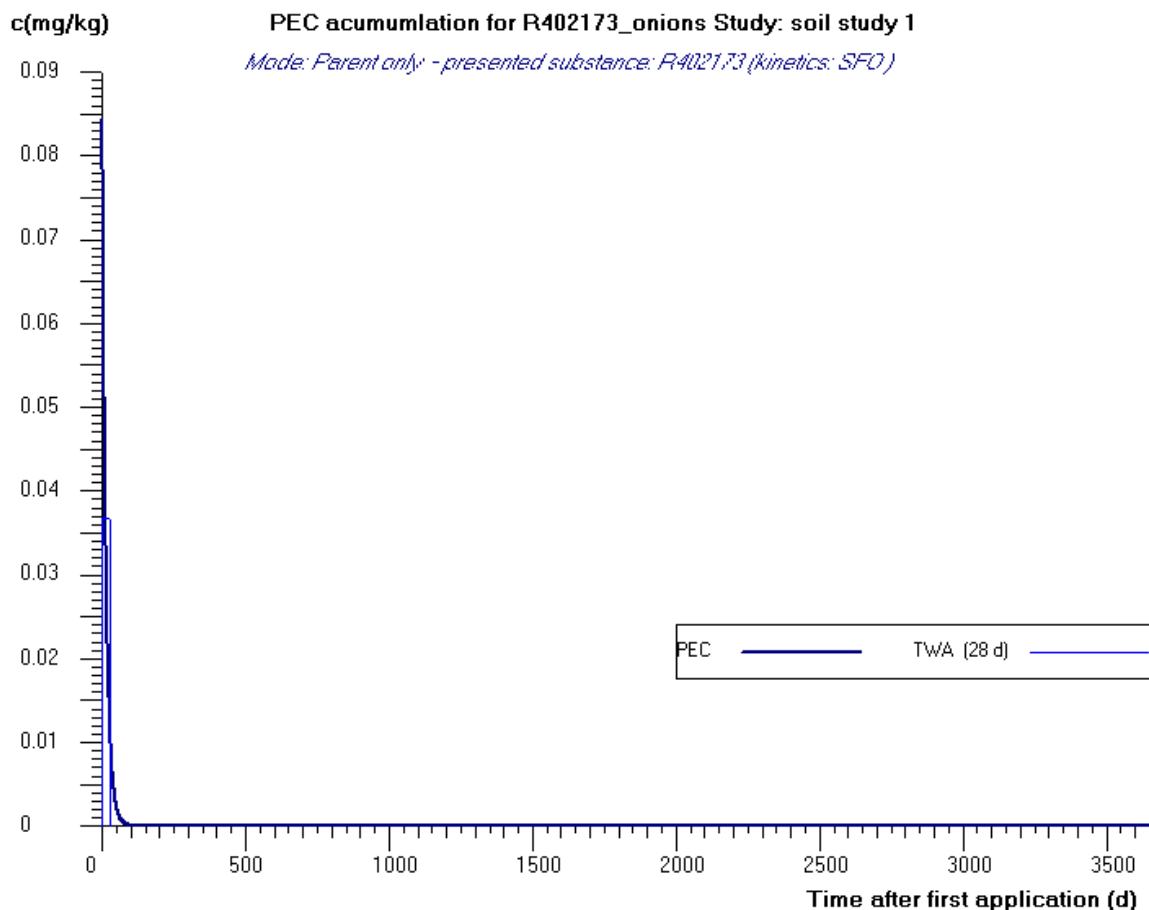
Calculated time dependent total soil concentrations over 5 cm for R402173_onions(mg/kg)
considering accumulation*

Time(d)	PECact**	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0785	0.0814	0	1
2	0.0732	0.0786	0	2
4	0.0635	0.0734	0	4
7	0.0514	0.0665	0	7
14	0.0313	0.0535	0	14
21	0.0191	0.0439	0	21
28	0.0116	0.0367	0	28
42	0.0043	0.0269	0	42
50	0.0025	0.0231	0	50
100	0.0001	0.0119	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



R401553, onions, 1 x 44.9 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 11/05/2021, 22:12:44
Calculation problem: R40153_onions

PROGRAM SETTINGS

Calculation mode:	Residues from different applications are considered
separately over one year	
Application mode:	Single annual application pattern (calculation period 1
year)	

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: R401553_onions
Name of the soil: Borstel
Soil density (kg/L): 1.5
Soil depth (cm): 5
Tillage depth (cm)*: 20
Organic carbon content (%): 1.5
Field capacity (Vol%): 29.2
Wilting point (Vol%): 6.4

Climatic conditions: 20 °C constant
(* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation: every year

Application date: 1 May
Application rate (g/ha): 44.9231532
Crop interception (%): 10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study: soil study 1

Metabolism scheme: Parent compound without metabolites

Kinetics for R40153_onions: Single First order (SFO)
DT50 (d): 2.01
Rate constant (1/d): 0.3448
Q10-factor: 2.58
Walker-exponent: 0.7
Ref. temperature (°C): 20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: R40153_onions

Calculations over one year

Maximum annual total soil concentration for R40153_onions over 5 cm(mg/kg): 0.0539
occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for R40153_onions after one year
(mg/kg)

Time(d)	PECact*	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0382	0.0460	0	1
2	0.0270	0.0393	0	2
4	0.0136	0.0295	0	4
7	0.0048	0.0205	0	7
14	0.0004	0.0112	0	14
21	<0.0001	0.0075	0	21
28	<0.0001	0.0056	0	28
42	<0.0001	0.0038	0	42
50	<0.0001	0.0032	0	50
100	<0.0001	0.0016	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for R40153_onions over 20 cm(mg/kg):
 <0.0001**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): <0.0001

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for R40153_onions over 5 cm considering accumulation*
 (mg/kg) 0.0539

(* a tillage depth of 20 cm was considered for calculating the background concentration)

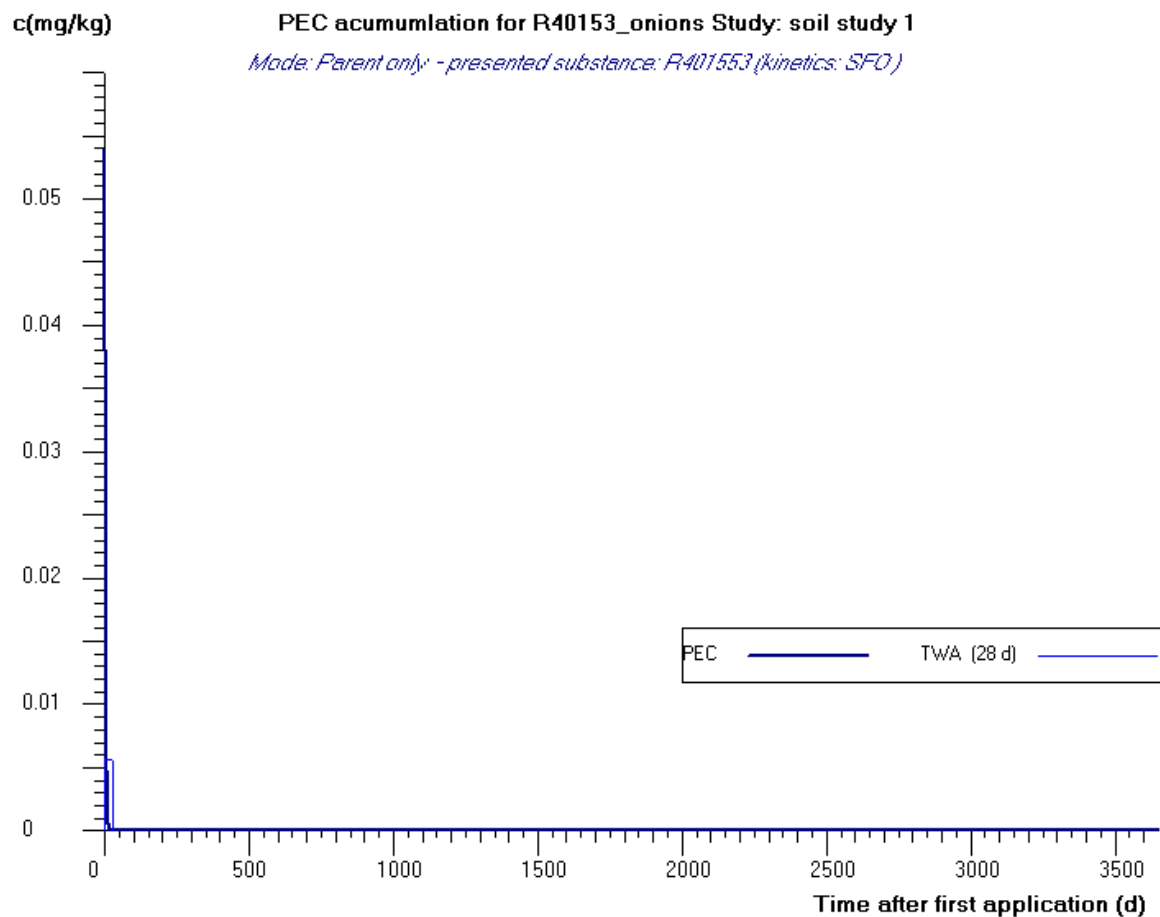
Calculated time dependent total soil concentrations over 5 cm for R40153_onions(mg/kg)
 considering accumulation*

Time(d)	PECact**	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0382	0.0460	0	1
2	0.0270	0.0393	0	2
4	0.0136	0.0295	0	4
7	0.0048	0.0205	0	7
14	0.0004	0.0112	0	14
21	<0.0001	0.0075	0	21
28	<0.0001	0.0056	0	28
42	<0.0001	0.0038	0	42
50	<0.0001	0.0032	0	50
100	<0.0001	0.0016	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



A 3.2 KCP 9.1.3: Oxathiapiprolin - PECs following application to Onions

Comments of zRMS:	All input parameters for oxathiapiprolin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{soil} calculations acceptable for the parent and its metabolites.
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Simulation of PEC_{S,ini}, short-term and long-term PEC_S values as well as PEC_{S,plateau} and PEC_{S,accumulation} were carried out using the tool ESCAPE (v.2). ESCAPE output files for oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 are presented below.

Oxathiapiprolin, onions, 2 x 12 g/ha, BBCH 11

E S C A P E

Estimation of Soil Concentrations After Pesticide Applications

developed by Michael Klein

Program version: 2.0 (26 November 2019)
 Date of this simulation: 27/05/2021, 09:50:39
 Calculation problem: Onions_OXTP

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered separately over one year
 Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: Onions_OXTP
 Name of the soil: Borstel
 Soil density (kg/L): 1.5
 Soil depth (cm): 5
 Tillage depth (cm)*: 20
 Organic carbon content (%): 1.5
 Field capacity (Vol%): 29.2
 Wilting point (Vol%): 6.4
 Climatic conditions: 20 °C constant
 (* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation: every year
 Number of Applications : 2
 1st Application date: 1 May
 Application rate (g/ha): 12
 Time between two applications (d): 12
 Crop interception (%): 10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study: soil study 1

Metabolism scheme: Parent compound without metabolites

Kinetics for Onions_OXTP: Single First order (SFO)

DT50 (d): 205.3

Rate constant (1/d): 0.0034

Q10-factor: 2.58

Walker-exponent: 0.7

Ref. temperature (°C): 20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: Onions_OXTP

Calculations over one year

Maximum annual total soil concentration for Onions_OXTP over 5 cm(mg/kg): 0.0282 occurring on day 12

Calculated time dependent total soil concentrations over 5 cm for Onions_OXTP after one year (mg/kg)

Time(d)	PECact*	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0281	0.0282	12	13
2	0.0280	0.0281	12	14
4	0.0278	0.0280	12	16
7	0.0276	0.0279	12	19
14	0.0269	0.0276	12	26
21	0.0263	0.0273	12	33
28	0.0257	0.0269	12	40
42	0.0245	0.0263	12	54
50	0.0238	0.0260	12	62
100	0.0201	0.0240	11	111

(* PECact values are related to the time after the maximum concentration)

Calculation of background concentrations after many years

Final Background concentration in total soil for Onions_OXTP over 20 cm(mg/kg):
0.0029**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0029

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for Onions_OXTP over 5 cm considering accumulation* (mg/kg)
0.0311

(* a tillage depth of 20 cm was considered for calculating the background concentration)

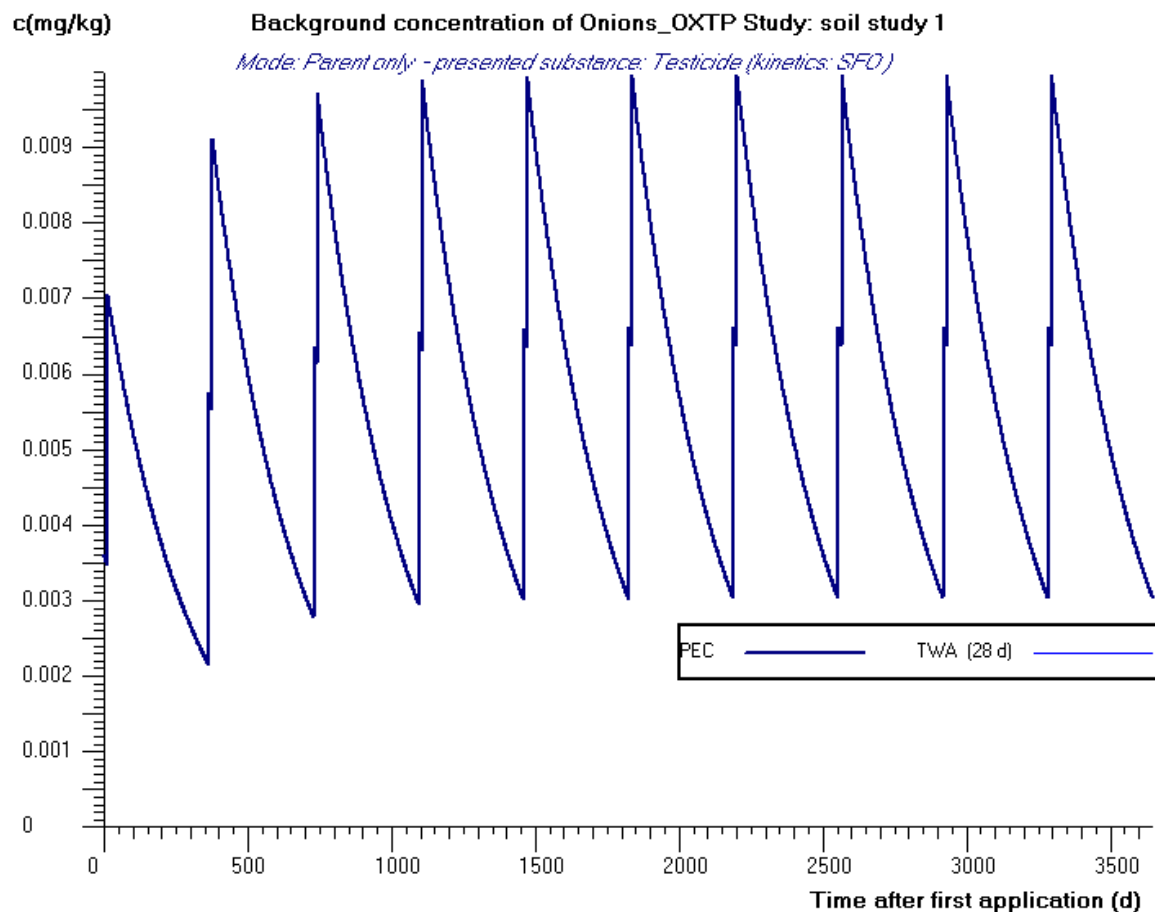
Calculated time dependent total soil concentrations over 5 cm for Onions_OXTP(mg/kg)
considering accumulation*

Time(d)	PECact**	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0310	0.0311	12	13
2	0.0309	0.0310	12	14
4	0.0308	0.0309	12	16
7	0.0305	0.0308	12	19
14	0.0298	0.0305	12	26
21	0.0292	0.0302	12	33
28	0.0286	0.0298	12	40
42	0.0274	0.0292	12	54
50	0.0267	0.0289	12	62
100	0.0230	0.0269	11	111

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the maximum concentration)'

GRAPHIC REPRESENTATION OF THE CALCULATION



IN-RDT31, onions, 1 x 2.32 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 09:52:43
Calculation problem: Onions_RDT

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: Onions_RDT

Name of the soil:	Borstel
Soil density (kg/L):	1.5
Soil depth (cm):	5
Tillage depth (cm)*:	20
Organic carbon content (%):	1.5
Field capacity (Vol%):	29.2
Wilting point (Vol%):	6.4

Climatic conditions: 20 °C constant
(* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	2.322902675
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for Onions_RDT:	Double First Order in Parallel (DFOP)
DT50 1(d):	2.6
DT50 2(d):	1260.3
Rate constant 1 (1/d):	0.2666
Rate constant 2 (1/d):	0.0005
Parameter g:	0.2
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: Onions_RDT

Calculations over one year

Maximum annual total soil concentration for Onions_RDT over 5 cm(mg/kg): 0.0028 occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for Onions_RDT after one year (mg/kg)

Time(d)	PECact*	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0027	0.0027	0	1
2	0.0026	0.0027	0	2
4	0.0024	0.0026	0	4
7	0.0023	0.0025	0	7
14	0.0022	0.0024	0	14
21	0.0022	0.0023	0	21
28	0.0022	0.0023	0	28
42	0.0022	0.0023	0	42
50	0.0022	0.0022	0	50
100	0.0021	0.0022	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for Onions_RDT over 20 cm(mg/kg):
0.0025**

(** according to the estimation 84% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0025

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for Onions_RDT over 5 cm considering accumulation* (mg/kg)
0.0053

(* a tillage depth of 20 cm was considered for calculating the background concentration)

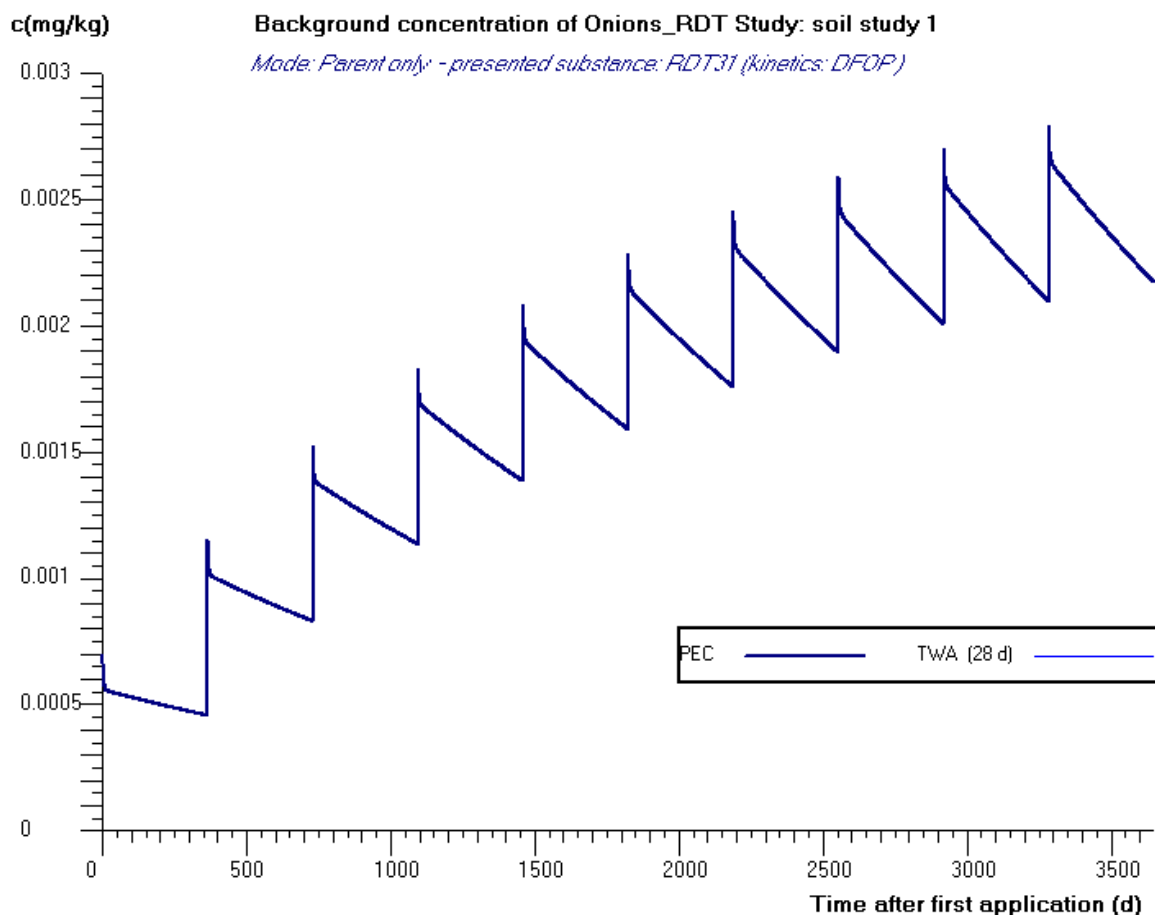
Calculated time dependent total soil concentrations over 5 cm for Onions_RDT(mg/kg)
considering accumulation*

Time(d)	PECact**	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0051	0.0052	0	1
2	0.0050	0.0052	0	2
4	0.0049	0.0051	0	4
7	0.0048	0.0050	0	7
14	0.0047	0.0049	0	14
21	0.0047	0.0048	0	21
28	0.0047	0.0048	0	28
42	0.0047	0.0047	0	42
50	0.0047	0.0047	0	50
100	0.0046	0.0047	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



IN-RAB06, onions, 1 x 3.42 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 09:53:44
Calculation problem: Onions_RAB

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario:	Onions_RAB	
Name of the soil:		Borstel
Soil density (kg/L):		1.5
Soil depth (cm):	5	
Tillage depth (cm)*:	20	
Organic carbon content (%):	1.5	
Field capacity (Vol%):	29.2	
Wilting point (Vol%):	6.4	
Climatic conditions:	20 °C constant	
(* for calculation of background concentrations)		

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	3.420036699
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme:	Parent compound without metabolites
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DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for Onions_RAB:	Single First order (SFO)
DT50 (d):	170.2
Rate constant (1/d):	0.0041
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: Onions_RAB

Calculations over one year

Maximum annual total soil concentration for Onions_RAB over 5 cm(mg/kg): 0.0041 occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for Onions_RAB after one year (mg/kg)

Time(d)	PECact*	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0041	0.0041	0	1
2	0.0041	0.0041	0	2
4	0.0040	0.0041	0	4
7	0.0040	0.0040	0	7
14	0.0039	0.0040	0	14
21	0.0038	0.0039	0	21
28	0.0037	0.0039	0	28
42	0.0035	0.0038	0	42
50	0.0033	0.0037	0	50
100	0.0027	0.0034	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for Onions_RAB over 20 cm(mg/kg):
0.0003**

(** according to the estimation 100% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0003

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for Onions_RAB over 5 cm considering accumulation* (mg/kg)
0.0044

(* a tillage depth of 20 cm was considered for calculating the background concentration)

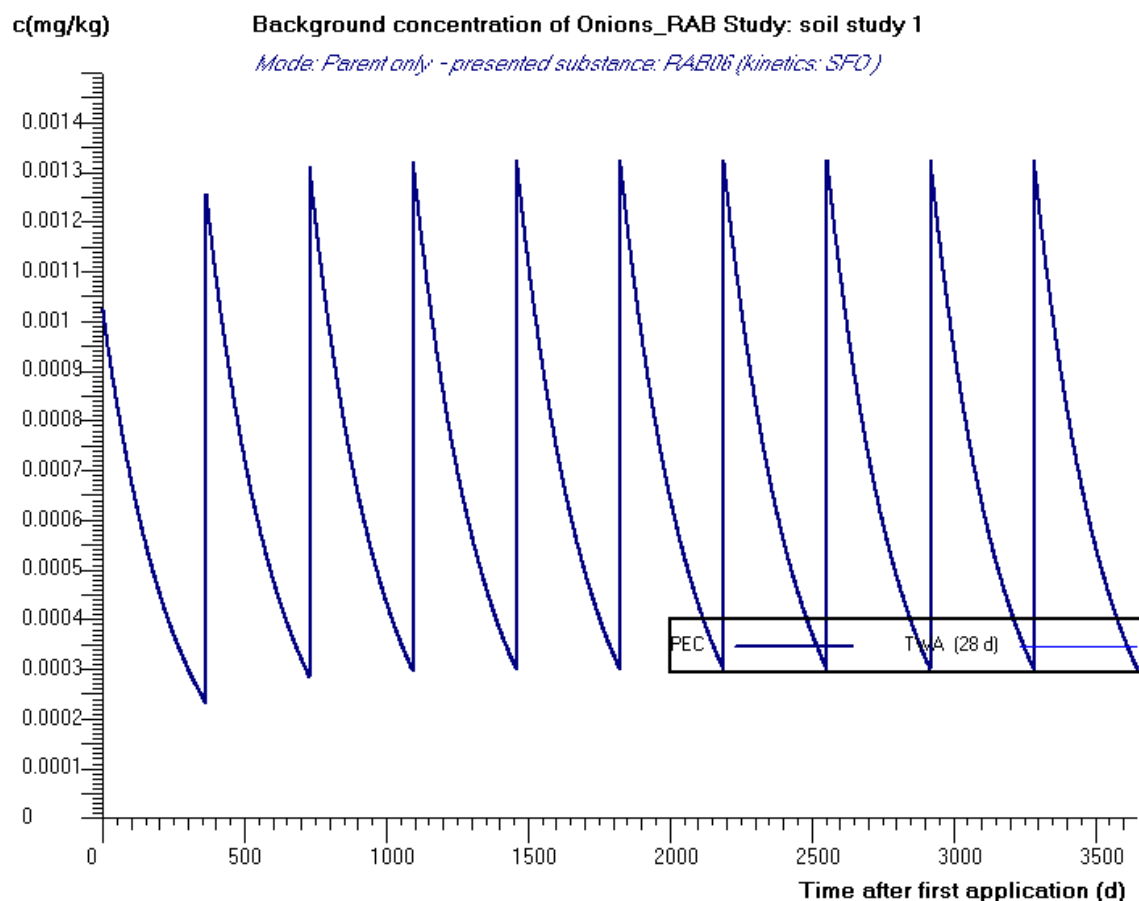
Calculated time dependent total soil concentrations over 5 cm for Onions_RAB(mg/kg) considering accumulation*

Time(d)	PECact**	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0044	0.0044	0	1
2	0.0044	0.0044	0	2
4	0.0043	0.0044	0	4
7	0.0043	0.0043	0	7
14	0.0042	0.0043	0	14
21	0.0041	0.0042	0	21
28	0.0040	0.0042	0	28
42	0.0038	0.0041	0	42
50	0.0036	0.0040	0	50
100	0.0030	0.0037	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



IN-QPS10, onions, 1 x 1.35 g/ha, BBCH 11

ESCAPE Estimation of Soil Concentrations After Pesticide Applications

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 09:55:27
Calculation problem: Onions_QPS

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario: Onions_QPS

Name of the soil:	Borstel
Soil density (kg/L):	1.5
Soil depth (cm):	5
Tillage depth (cm)*:	20
Organic carbon content (%):	1.5
Field capacity (Vol%):	29.2
Wilting point (Vol%):	6.4

Climatic conditions: 20 °C constant
(* for calculation of background concentrations)

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	1.35222894
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme: Parent compound without metabolites

DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for Onions_QPS:	Double First Order in Parallel (DFOP)
DT50 1(d):	0.855
DT50 2(d):	845.3
Rate constant 1 (1/d):	0.8107
Rate constant 2 (1/d):	0.0008
Parameter g:	0.4
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: Onions_QPS

Calculations over one year

Maximum annual total soil concentration for Onions_QPS over 5 cm(mg/kg): 0.0016 occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for Onions_QPS after one year (mg/kg)

Time(d)	PECact*	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0013	0.0014	0	1
2	0.0011	0.0013	0	2
4	0.0010	0.0012	0	4
7	0.0010	0.0011	0	7
14	0.0010	0.0010	0	14
21	0.0010	0.0010	0	21
28	0.0010	0.0010	0	28
42	0.0009	0.0010	0	42
50	0.0009	0.0010	0	50
100	0.0009	0.0009	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for Onions_QPS over 20 cm(mg/kg):
 0.0007**

(** according to the estimation 94% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0007

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for Onions_QPS over 5 cm considering accumulation* (mg/kg)
 0.0023

(* a tillage depth of 20 cm was considered for calculating the background concentration)

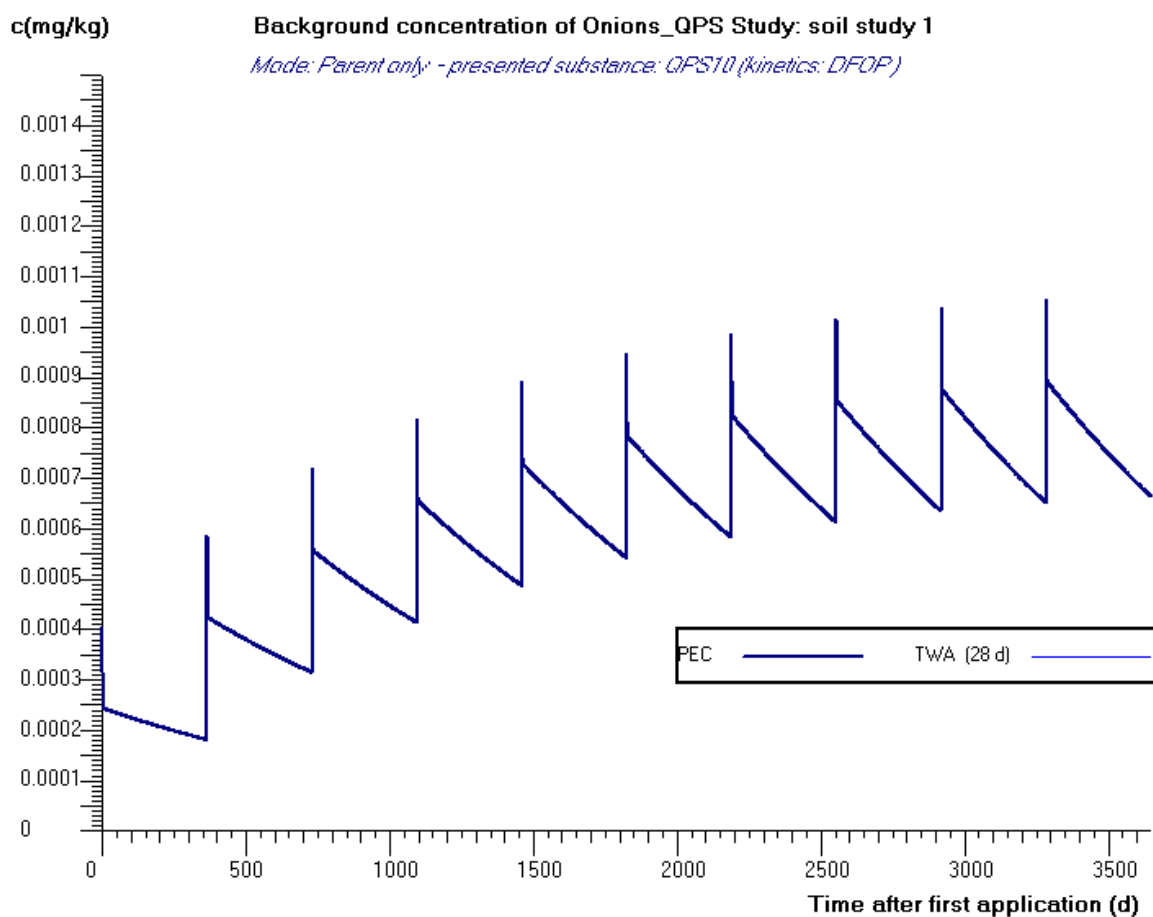
Calculated time dependent total soil concentrations over 5 cm for Onions_QPS(mg/kg)
 considering accumulation*

Time(d)	PECact**	PECtwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0020	0.0021	0	1
2	0.0018	0.0020	0	2
4	0.0017	0.0019	0	4
7	0.0017	0.0018	0	7
14	0.0017	0.0017	0	14
21	0.0017	0.0017	0	21
28	0.0016	0.0017	0	28
42	0.0016	0.0017	0	42
50	0.0016	0.0017	0	50
100	0.0016	0.0016	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



IN-E8S72, onions, 1 x 0.825 g/ha, BBCH 11

ESCAPE **Estimation of Soil Concentrations After Pesticide Applications**

developed by Michael Klein

Program version: 2.0 (26 November 2019)
Date of this simulation: 27/05/2021, 09:56:00
Calculation problem: Onions_E8S

PROGRAM SETTINGS

Calculation mode: Residues from different applications are considered
separately over one year
Application mode: Iteration of annual application pattern over 10 years

SCENARIO DATA USED IN THE CALCULATION

Name of the scenario:	Onions_E8S	
Name of the soil:		Borstel
Soil density (kg/L):		1.5
Soil depth (cm):	5	
Tillage depth (cm)*:	20	
Organic carbon content (%):	1.5	
Field capacity (Vol%):	29.2	
Wilting point (Vol%):	6.4	
Climatic conditions:	20 °C constant	
(* for calculation of background concentrations)		

APPLICATION PATTERN USED IN THE CALCULATION

Crop rotation:	every year
Application date:	1 May
Application rate (g/ha):	0.825130169
Crop interception (%):	10

COMPOUNDS CONSIDERED IN THE CALCULATION

Metabolism scheme:	Parent compound without metabolites
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DEGRADATION KINETICS PARAMETERS CONSIDERED FOR THE CALCULATION

Soil study:	soil study 1
Metabolism scheme:	Parent compound without metabolites
Kinetics for Onions_E8S:	Single First order (SFO)
DT50 (d):	477.4
Rate constant (1/d):	0.0015
Q10-factor:	2.58
Walker-exponent:	0.7
Ref. temperature (°C):	20

RESULTS OF THE CALCULATION

Metabolism scheme: Parent compound without metabolites

RESULTS FOR: Onions_E8S

Calculations over one year

Maximum annual total soil concentration for Onions_E8S over 5 cm(mg/kg): 0.0010 occurring on day 0

Calculated time dependent total soil concentrations over 5 cm for Onions_E8S after one year (mg/kg)

Time(d)	PECact*	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0010	0.0010	0	1
2	0.0010	0.0010	0	2
4	0.0010	0.0010	0	4
7	0.0010	0.0010	0	7
14	0.0010	0.0010	0	14
21	0.0010	0.0010	0	21
28	0.0010	0.0010	0	28
42	0.0009	0.0010	0	42
50	0.0009	0.0010	0	50
100	0.0009	0.0009	0	100

(* PECact values are related to the time after the first application)

Calculation of background concentrations after many years

Final Background concentration in total soil for Onions_E8S over 20 cm(mg/kg):
0.0004**

(** according to the estimation 99% of the final plateau was reached after 10 years without crop rotation)

Reduction factor to account for crop rotation: 1

Final Background concentration in total soil including crop rotation(mg/kg): 0.0004

Calculations of concentrations considering accumulation after many years of application

Maximum total soil concentration for Onions_E8S over 5 cm considering accumulation* (mg/kg)
0.0013

(* a tillage depth of 20 cm was considered for calculating the background concentration)

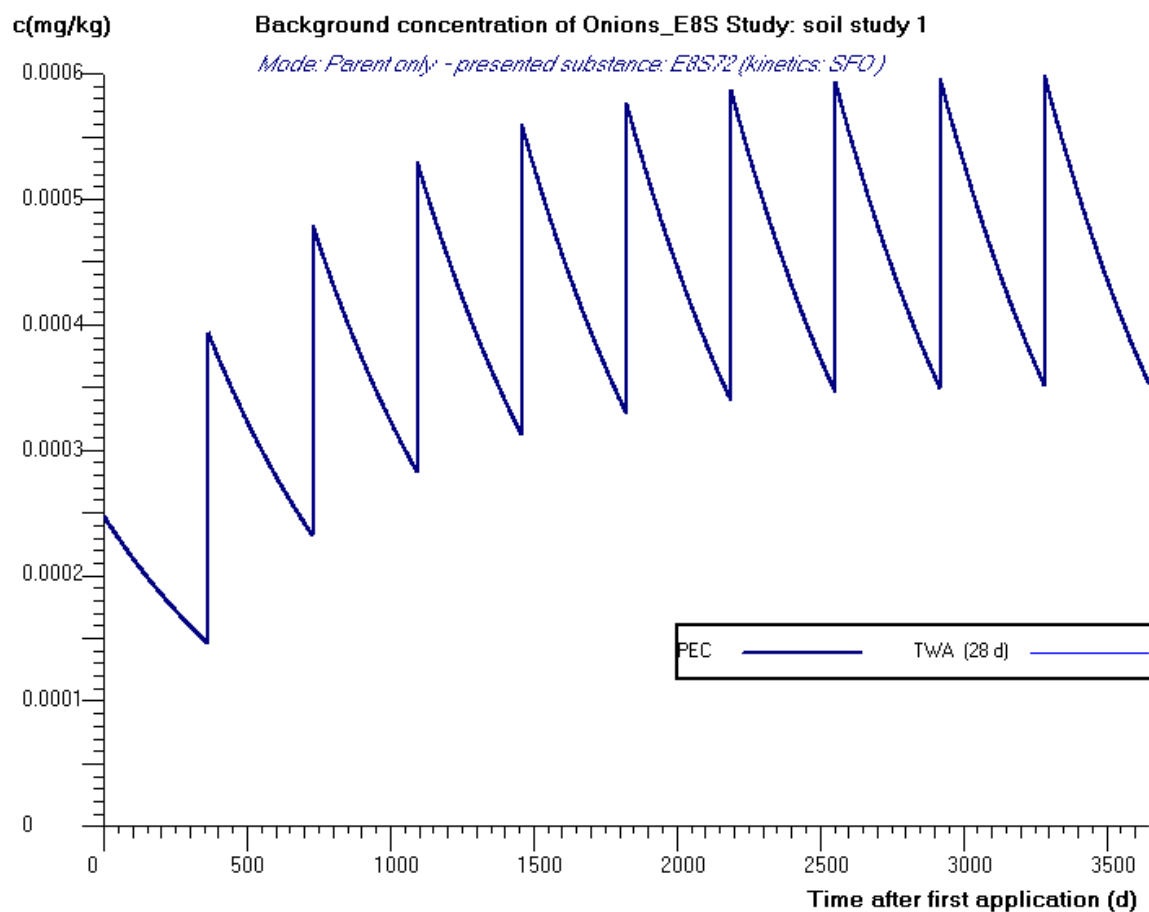
Calculated time dependent total soil concentrations over 5 cm for Onions_E8S(mg/kg)
considering accumulation*

Time(d)	PECact**	PECTwa	Begin TWAframe(d)	End TWAframe(d)
1	0.0013	0.0013	0	1
2	0.0013	0.0013	0	2
4	0.0013	0.0013	0	4
7	0.0013	0.0013	0	7
14	0.0013	0.0013	0	14
21	0.0013	0.0013	0	21
28	0.0013	0.0013	0	28
42	0.0013	0.0013	0	42
50	0.0013	0.0013	0	50
100	0.0012	0.0013	0	100

(* a tillage depth of 20 cm was considered for calculating the background concentration)

(** PECact values are related to the time after the first application)

GRAPHIC REPRESENTATION OF THE CALCULATION



A 3.3 KCP 9.2.4: Langa Peñalba, S., & Robinson, P. 2022, Azoxystrobin PEC_{GW} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for azoxystrobin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{gw} calculations acceptable for the parent and its metabolites.
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Reference:	KCP 9.2.4
Report	Azoxystrobin - Azoxystrobin - A Leaching Assessment for Parent and Metabolites R234886, R402173 and R401553 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops, Report No. 120095-1 (Syngenta File No. VV-961774)
Guideline(s):	European Commission (2014). Assessing potential for movement of active substances and their metabolites to ground water in the EU. Report of the FOCUS ground water work group, EC document reference SANCO/13144/2010 version 3, 613 pp. FOCUS (2000). FOCUS groundwater scenarios in the EU review of active substances. Report of the FOCUS groundwater scenarios workgroup, EC document reference SANCO/321/2000 rev. 2, 202 pp. FOCUS (2014). Generic guidance for Tier 1 FOCUS ground water assessments, version 2.2. May 2014. 66 pp.
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes

A 3.3.1 Materials and methods

This report describes a FOCUS groundwater modelling study that examined the potential for azoxystrobin and its metabolites R234886, R402173 and R401553 to reach groundwater following application to cabbage, tomatoes, onions, and vines. The FOCUS simulation models FOCUS PEARL (v4.4.4), FOCUS PELMO (v5.5.3) and FOCUS MACRO (v5.5.4) were used in the modelling study.

Twofold applications at the rate of 250 g a.s./ha were considered. Applications starting from approximately BBCH 11 were considered for cabbage, tomatoes and onions with an interval of 7 days between applications for cabbage and tomatoes as well as 12 days for onions. For vines, applications starting from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51 or 60) and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown in the table below.

Table A 1: Application patterns of azoxystrobin to various crops used in modelling

Crop	Cabbage			Tomatoes			Onions		Vines ^a		
Application rate (g a.s./ha)	250			250			250		250		
Number of applications / interval (d)	2 / 7			2 / 7			2 / 12		2 / 12		
PHI	7			3			7		14		
BBCH growth stage	11	49		11	51	89	11	49	21	60	89
Crop interception (%) ^b	25 + 25	70 + 70		50 + 50	80 + 80	80 + 80	10 + 10	40 + 40	60 + 60	60 + 60	75 + 75
Frequency of application	Annual										
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4										

^a vines was used as surrogate model crop for hops

^b according to EFSA (2014)

Applications were considered for the FOCUS scenarios defined for each of the modelled FOCUS crops. The dates were selected with the tool AppDate (v3.06) based on the BBCH growth stages given in the recommended GAP. For the late applications, because some of the application dates suggested by the AppDate tool were later than the given pre-harvest interval (PHI), the end of the application window was set to be the harvest date minus the PHI for the affected scenarios. Simulations were carried out using the FOCUS standard crops ‘cabbage’, ‘tomatoes’, ‘onions’ and ‘vines’ in FOCUS PEARL and PELMO. The FOCUS standard crops ‘vegetables, leafy’ (cabbage), ‘vegetables, fruiting’ (tomatoes), ‘vegetables, bulb’ (onions), and ‘vines’ were used in FOCUS MACRO. Simulations were carried out over 26 years, as proposed by FOCUS for pesticides that are applied annually. The first 6 years are intended to be a ‘warm up’ period, thus the following 20 years were taken into account for the assessment of the leaching behaviour. Application dates are presented in the table, below.

Table A 2: Application dates of azoxystrobin to cabbage, tomatoes, onions, and vines used in modelling

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
Cabbage 2 × 250 g a.s./ha BBCH 11 - 49 7 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun 1 st	25-Apr (115)	2-May (122)
		Châteaudun 2 nd	5-Aug (217)	12-Aug (224)
		Hamburg 1 st	25-Apr (115)	2-May (122)
		Hamburg 2 nd	5-Aug (217)	12-Aug (224)
		Jokioinen	1-Jun (152)	8-Jun (159)
		Kremsmünster 1 st	25-Apr (115)	2-May (122)
		Kremsmünster 2 nd	5-Aug (217)	12-Aug (224)
		Porto 1 st	9-Mar (68)	16-Mar (75)
		Porto 2 nd	4-Aug (216)	11-Aug (223)
		Sevilla 1 st	8-Mar (67)	15-Mar (74)
		Sevilla 2 nd	22-Jun (173)	29-Jun (180)
		Thiva	21-Aug (233)	28-Aug (240)
Cabbage	Last application at	Châteaudun 1 st ^a	1-Jul (182)	8-Jul (189)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
2 × 250 g a.s./ha BBCH 11 - 49 7 days interval BBCH 49	BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun 2 nd a	1-Oct (274)	8-Oct (281)
		Hamburg 1 st a	1-Jul (182)	8-Jul (189)
		Hamburg 2 nd a	1-Oct (274)	8-Oct (281)
		Jokioinen ^a	6-Sep (249)	13-Sep (256)
		Kremsmünster 1 st a	1-Jul (182)	8-Jul (189)
		Kremsmünster 2 nd a	1-Oct (274)	8-Oct (281)
		Porto 1 st a	17-Jun (168)	24-Jun (175)
		Porto 2 nd	31-Oct (304)	7-Nov (311)
		Sevilla 1 st a	18-May (138)	25-May (145)
		Sevilla 2 nd a	1-Sep (244)	8-Sep (251)
		Thiva ^a	16-Nov (320)	23-Nov (327)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun	13-May (133)	20-May (140)
		Piacenza	13-May (133)	20-May (140)
		Porto	19-Mar (78)	26-Mar (85)
		Sevilla	17-Apr (107)	24-Apr (114)
		Thiva	13-Apr (103)	20-Apr (110)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 51	First application at BBCH 51 (AppDate 3.06)	Châteaudun	15-Jun (166)	22-Jun (173)
		Piacenza	15-Jun (166)	22-Jun (173)
		Porto	19-May (139)	26-May (146)
		Sevilla	17-May (137)	24-May (144)
		Thiva	15-May (135)	22-May (142)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 89	Last application at BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	15-Aug (227)	22-Aug (234)
		Piacenza ^a	15-Aug (227)	22-Aug (234)
		Porto	21-Aug (233)	28-Aug (240)
		Sevilla ^a	21-Jun (172)	28-Jun (179)
		Thiva	31-Aug (243)	7-Sep (250)
Onions 2 × 250 g a.s./ha BBCH 11 - 49 12 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun	3-May (123)	15-May (135)
		Hamburg	3-May (123)	15-May (135)
		Jokioinen	25-May (145)	6-Jun (157)
		Kremsmünster	3-May (123)	15-May (135)
		Porto	9-Mar (68)	21-Mar (80)
		Thiva	18-Apr (108)	30-Apr (120)
Onions 2 × 250 g a.s./ha BBCH 11 - 49 12 days interval BBCH 49	Last application at BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	13-Aug (225)	25-Aug (237)
		Hamburg ^a	13-Aug (225)	25-Aug (237)
		Jokioinen ^a	27-Jul (208)	8-Aug (220)
		Kremsmünster ^a	13-Aug (225)	25-Aug (237)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
		Porto ^a	12-May (132)	24-May (144)
		Thiva ^a	11-Jun (162)	23-Jun (174)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 21	First application at BBCH 19 ^b (AppDate 3.06)	Châteaudun	8-May (128)	20-May (140)
		Hamburg	24-May (144)	5-Jun (156)
		Kremsmünster	24-May (144)	5-Jun (156)
		Piacenza	8-May (128)	20-May (140)
		Porto	26-Apr (116)	8-May (128)
		Sevilla	24-Apr (114)	6-May (126)
		Thiva	17-Apr (107)	29-Apr (119)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 60	First application at BBCH 60 (AppDate 3.06)	Châteaudun	21-Jun (172)	3-Jul (184)
		Hamburg	20-Jun (171)	2-Jul (183)
		Kremsmünster	20-Jun (171)	2-Jul (183)
		Piacenza	21-Jun (172)	3-Jul (184)
		Porto	15-Jun (166)	27-Jun (178)
		Sevilla	21-May (141)	2-Jun (153)
		Thiva	26-May (146)	7-Jun (158)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 89	Last application at BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	6-Oct (279)	18-Oct (291)
		Hamburg ^a	4-Oct (277)	16-Oct (289)
		Kremsmünster ^a	4-Oct (277)	16-Oct (289)
		Piacenza ^a	6-Oct (279)	18-Oct (291)
		Porto ^a	4-Sep (242)	16-Sep (259)
		Sevilla ^a	4-Nov (308)	16-Nov (320)
		Thiva ^a	24-Sep (267)	6-Oct (279)

Numbers in brackets are corresponding Julian day numbers used for MACRO simulations

^a last application on harvest date minus PHI

^b the growth stage BBCH 21 is not defined in AppDate 3.06, thus BBCH 19 was chosen instead

The input parameters of azoxystrobin and its metabolites R234886, R402173 and R401553 used in the modelling are shown in Table A 3, below. All other input values were set at the default values unless otherwise stated.

A schematic diagram of the modelled route of degradation of azoxystrobin in soil is shown in Figure 1. The degradation mechanism of azoxystrobin in soil occurs via microbial and photolytic processes. Modelling of the three metabolites, which form via the different degradation mechanisms (microbial action and photolytic action) cannot be undertaken in a single simulation. Therefore, calculations were performed separately for the two degradation pathways. The first calculations assumed that azoxystrobin degraded to R234886 with a formation fraction of 0.874 (EFSA, 2010). The second assumed that azoxystrobin degraded to form R401553 and R402173 (subsequently degrading to R401553) with formation fractions of 0.385 for R402173 and 0.392 for R401553 (EFSA, 2010). Added together, the overall formation fraction for the metabolites in total is greater than one, which indicates that this approach is a conservative implementation of the metabolic pathway for azoxystrobin. In addition, the microbial pathway was simulated with two sets of parameters (for alkaline and acidic soils) in order to account for the pH-

dependent degradation and sorption of R234886. Therefore, simulations were performed separately with three model runs for each application scenario:

- **Run 1:** microbial action: azoxystrobin to R234886 (acidic soil parameters).
- **Run 2:** microbial action: azoxystrobin to R234886 (alkaline soil parameters).
- **Run 3:** photolytic action azoxystrobin to R402173 and R401553.

Since the complex degradation scheme of azoxystrobin cannot be implemented in the GUI of MACRO, all metabolites were assumed to form directly from azoxystrobin. For this purpose, the formation fraction of the secondary metabolite (R401553), which is formed from parent and from R402173, was corrected for the formation of preceding metabolite, e.g.:

$$FF_{(tot) P \rightarrow R401553} = FF_{P \rightarrow R402173} \times FF_{R402173 \rightarrow R401553} + FF_{P \rightarrow R401553}$$

With:

$FF_{(tot) P \rightarrow R401553}$ = total formation fraction from parent to secondary metabolite R401553

$FF_{P \rightarrow R402173}$ = formation fraction for parent to primary metabolite R402173

$FF_{R402173 \rightarrow R401553}$ = formation fraction from primary metabolite R402173 to secondary metabolite R401553

$FF_{P \rightarrow R401553}$ = formation fraction for parent to metabolite R401553

Additionally, molar based formation fractions have to be corrected for molar mass differences between metabolite and parent to get conversion fractions for MACRO.

Table A 3: Summary of input parameters for azoxystrobin, R234886, R402173 and R401553 for PECGW calculations

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	389.4	333.3	213.2	Yes / EFSA, 2010
Water solubility (mg/L)	6.0 (20°C)	57 (25°C)	61 (25°C)	560 (25°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1×10^{-10}	0	0	0	Yes / EFSA, 2010
DT ₅₀ in soil (d)	Microbial pathway: 78 ^a (n = 2) Photolytic pathway: 2.55 ^b (n = 10) (geometric mean, field studies normalisation to pF2, 20°C with Q ₁₀ of 2.58)	Acidic soils: 98.6 ^{**} (n = 5) Alkaline soils: 36.7 ^{**} (n = 7) (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58)	4.7 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	1.1 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	Yes / EFSA, 2010 ^{**} Yes / DAR, 2014 ^c

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Transformation rate	Microbial pathway: 0.007767 (to R234886) 0.001120 (to sink) Photolytic pathway: 0.104652 (to R402173) 0.106554 (to R401553) 0.060616 (to sink)	Acidic soils: 0.007030 (to sink) Alkaline soils: 0.018887 (to sink)	0.069020 (to R401553) 0.078458 (to sink)	0.630134 (to sink)	Calculated for PELMO; $(\ln(2) / DT_{50}) \times FF_m$
K_{FOC} / K_{FOM} (mL/g)	423 / 245 ^a (arithmetic mean, n = 6)	Acidic soils: 228.4 / 132.5 ^{**} (arithmetic mean, n = 8) Alkaline soils: 36.7 / 21.3 ^{**} (arithmetic mean, n = 7)	25 / 14.5 ^a (worst case value, n = 6)	188 / 109 ^a (arithmetic mean, n = 6)	Yes / EFSA, 2010 ^{**} Yes/ DAR, 2014 ^c $K_{FOM} = K_{FOC} / 1.724$
1/n	0.86 (arithmetic mean, n = 6)	Acidic soils: 0.78 (arithmetic mean, n = 8) Alkaline soils: 0.83 (arithmetic mean, n = 7)	0.96 (relate to worst case K_{FOC})	0.85 (arithmetic mean, n = 6)	Yes / EFSA, 2010
Plant uptake factor	0 (worst case value)	0 ^a	0 ^a	0 ^a	Yes / DAR, 2014 ^c
Formation fraction	-	0.874 from parent	0.385 from parent	0.392 from parent 0.468 from R402173	Yes / EFSA, 2010
Conversion fraction	-	0.844 from parent	0.318 from parent	0.302 ^d from parent	for MACRO; molar mass (metabolite)/molar mass (parent) × formation fraction

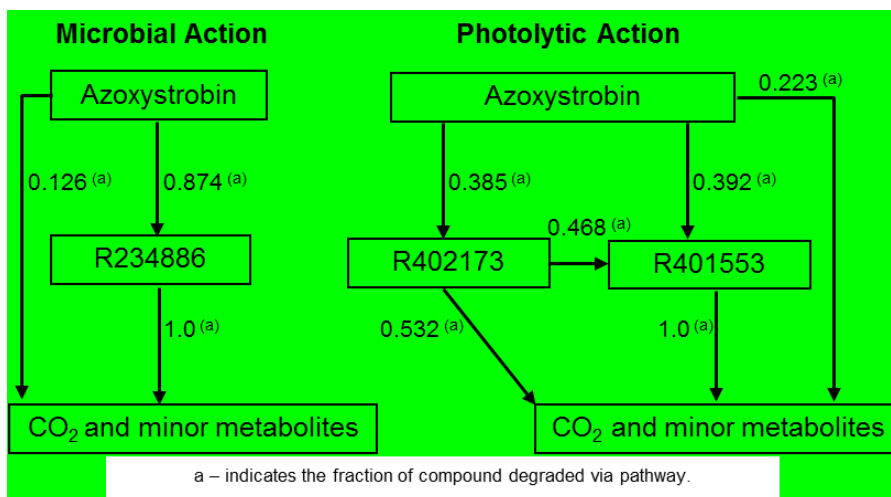
^a calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^b geometric mean, quick phase, field

^c DAR (2014): Azoxystrobin: Addendum – Confirmatory Information. RMS United Kingdom. December 2014.

^d For the secondary metabolite R401553 the formation fraction was multiplied along the pathway; therefore $213.2/403.4 \times ((0.385 \times 0.468) + 0.392)$

Figure A 1: Schematic diagram of the modelled route of degradation of azoxystrobin



A 3.3.2 RESULTS

Predicted environmental concentrations for azoxystrobin and its metabolites R234886, R402173 and R401553 in groundwater (PEC_{GW}) were calculated for the use azoxystrobin on various crops in Europe in accordance with FOCUS guidelines (FOCUS, 2000, 2014, EC 2014).

The 80th percentile (at 1 m soil depth) PEC_{GW} values generated by the FOCUS PEARL, FOCUS PELMO and FOCUS MACRO simulations are given in Table A 4 to Table A 6. The overall maximum 80th percentile PEC_{GW} values are given in Table A 7.

Table A 4: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS PEARL v4.4.4)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy- strobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.55	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.85	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	0.015	4.13	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.021	4.72	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	2.07	< 0.001	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	2.54	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.002	2.83	0.002	< 0.001
	Porto 1 st	< 0.001	< 0.001	1.61	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	2.91	< 0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.218	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.346	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.877	< 0.001	< 0.001
Cabbage 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.360	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.359	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.21	0.033	0.002
	Jokioinen	< 0.001	< 0.001	0.451	0.007	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.747	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
	Kremsmünster 2 nd	< 0.001	< 0.001	0.692	0.006	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.621	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.548	0.045	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.043	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.071	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.049	0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.03	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.40	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.00	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.124	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.280	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.208	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.381	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.300	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.018	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.060	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.248	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.456	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.422	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.027	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.074	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.48	< 0.001	< 0.001
	Hamburg	< 0.001	0.029	5.21	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.33	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.004	3.25	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.66	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.569	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.874	< 0.001	< 0.001
	Hamburg	< 0.001	0.008	3.25	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	1.22	0.006	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.98	0.002	< 0.001
	Porto	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.405	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.36	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	1.93	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.20	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.699	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.611	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Thiva	< 0.001	< 0.001	0.362	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.42	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.01	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.24	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.55	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.888	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 89	Sevilla	< 0.001	< 0.001	0.639	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.381	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.690	0.001	< 0.001
	Hamburg	< 0.001	< 0.001	1.02	0.027	0.001
	Kremsmünster	< 0.001	< 0.001	0.600	0.007	< 0.001
	Piacenza	< 0.001	< 0.001	0.642	0.017	< 0.001
	Porto	< 0.001	< 0.001	0.579	0.004	< 0.001
	Sevilla	< 0.001	< 0.001	0.273	0.005	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
	Thiva	< 0.001	< 0.001	0.253	0.002	< 0.001

Table A 5: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS PELMO v5.5.3)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.29	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.51	0.001	< 0.001
	Hamburg 1 st	< 0.001	0.004	4.47	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.006	5.11	0.013	< 0.001
	Jokioinen	< 0.001	< 0.001	2.09	0.001	< 0.001
	Kremsmünster 1 st	< 0.001	0.001	2.65	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.001	2.90	0.005	< 0.001
	Porto 1 st	< 0.001	0.003	2.40	< 0.001	< 0.001
	Porto 2 nd	< 0.001	0.006	3.63	0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.146	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.243	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.946	< 0.001	< 0.001
Cabbage 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.291	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.285	0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.24	0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.22	0.052	0.001
	Jokioinen	< 0.001	< 0.001	0.446	0.019	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.781	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.719	0.016	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.872	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.796	0.084	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.032	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.044	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.066	0.005	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.685	< 0.001	< 0.001
	Piacenza	< 0.001	0.002	1.72	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.22	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.050	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.216	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.130	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.452	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.366	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.005	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.038	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.155	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.540	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.528	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.007	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.051	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.32	< 0.001	< 0.001
	Hamburg	< 0.001	0.007	5.20	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.22	0.001	< 0.001
	Kremsmünster	< 0.001	0.003	3.35	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Onions 2 × 250 g a.s./ha BBCH 49	Porto	< 0.001	0.002	3.18	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.290	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.714	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	3.37	0.016	< 0.001
	Jokioinen	< 0.001	< 0.001	1.18	0.009	< 0.001
	Kremsmünster	< 0.001	0.001	2.03	0.005	< 0.001
	Porto	< 0.001	0.001	2.04	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.178	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.18	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.13	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.49	0.001	< 0.001
	Piacenza	< 0.001	0.006	1.54	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.984	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.265	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.279	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.19	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Hamburg	< 0.001	0.002	2.24	0.001	< 0.001
	Kremsmünster	< 0.001	0.001	1.53	0.001	< 0.001
	Piacenza	< 0.001	0.006	1.64	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.20	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.258	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.267	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.694	0.002	< 0.001
	Hamburg	< 0.001	0.001	1.11	0.047	0.001
Vines 2 × 250 g a.s./ha BBCH 89	Kremsmünster	< 0.001	< 0.001	0.759	0.014	< 0.001
	Piacenza	< 0.001	0.002	0.820	0.059	0.002
	Porto	< 0.001	< 0.001	0.867	0.007	< 0.001
	Sevilla	< 0.001	< 0.001	0.131	0.011	< 0.001
	Thiva	< 0.001	< 0.001	0.237	0.007	< 0.001

Table A 6: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS MACRO v5.5.4)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	0.002	1.56	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	0.009	2.31	0.002	< 0.001
Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.472	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.447	0.007	< 0.001
Tomatoes ^b 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.680	< 0.001	< 0.001
Tomatoes ^b 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.174	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Tomatoes ^b 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.183	< 0.001	< 0.001
Onions ^c 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.39	< 0.001	< 0.001
Onions ^c 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.891	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	0.485	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	0.524	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.278	0.003	< 0.001

^a vegetables, leafy in MACRO v5.5.4

^b vegetables, fruiting in MACRO v5.5.4

^c vegetables, bulb in MACRO v5.5.4

Table A 7: Summary of maximum PEC_{GW} across all models for azoxystrobin, R234886, R402173 and R401553

Substance		80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Azoxystrobin		< 0.001	Cabbage	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Tomatoes	2 × 250	11 - 89	All models	All scenarios
		< 0.001	Onions	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Vines	2 × 250	21 - 89	All models	All scenarios
R234886	Acidic	0.021	Cabbage	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
		0.002	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		0.029	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		0.006	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
	Alkaline	5.11	Cabbage	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg, 2 nd
		1.72	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		5.21	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		2.24	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Hamburg

Substance	80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
R402173	0.084	Cabbage	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Porto, 2 nd
	0.002	Tomatoes	2 × 250	11 - 89	FOCUS PEARL v4.4.4/ FOCUS PELMO v.5.5.3	Piacenza Porto
	0.016	Onions	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg
	0.059	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
R401553	0.002	Cabbage	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
	< 0.001	Tomatoes	2 × 250	11 - 89	All models	All scenarios
	< 0.001	Onions	2 × 250	11 - 49	All models	All scenarios
	0.002	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza

A 3.4 KCP 9.2.4: Anagu, I. & Langa Peñalba, S., 2021, Azoxystrobin PEC_{GW} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for azoxystrobin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Simulations were performed for azoxystrobin at Tier 2 using PUF=0.5. Thus, the zRMS considers the presented PEC _{gw} calculations acceptable for the parent and its metabolites.
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Reference:	KCP 9.2.4.
Report	Azoxystrobin - A Leaching Assessment for Parent and Metabolites R234886, R402173 and R401553 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops Using EU Agreed Endpoints, Report No. 116223-1 (Syngenta File No. VV-911613)
Guideline(s):	European Commission (2014). Assessing potential for movement of active substances and their metabolites to ground water in the EU. Report of the FOCUS ground water work group, EC document reference SANCO/13144/2010 version 3, 613 pp. FOCUS (2000). FOCUS groundwater scenarios in the EU review of active substances. Report of the FOCUS groundwater scenarios workgroup, EC document reference SANCO/321/2000 rev. 2, 202 pp. FOCUS (2014). Generic guidance for Tier 1 FOCUS ground water assessments, version 2.2. May 2014. 66 pp.
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes/No/Supplementary

A 3.4.1 Materials and methods

This report describes a FOCUS groundwater modelling study that examined the potential for azoxystrobin and its metabolites R234886, R402173 and R401553 to reach groundwater following application to cabbage, tomatoes, onions, and vines. The FOCUS simulation models FOCUS PEARL (v4.4.4), FOCUS PELMO (v5.5.3) and FOCUS MACRO (v5.5.4) were used in the modelling study.

Twofold applications at the rate of 250 g a.s./ha were considered. Applications starting from approximately BBCH 11 were considered for cabbage, tomatoes and onions with an interval of 7 days between applications for cabbage and tomatoes as well as 12 days for onions. For vines, applications starting from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51 or 60) and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown in the table below.

Table A 8: Application patterns of azoxystrobin to various crops used in the modelling

Crop	Cabbage		Tomatoes			Onions		Vines ^a		
Application rate (g a.s./ha)	250		250			250		250		
Number of applications / interval (d)	2 / 7		2 / 7			2 / 12		2 / 12		
PHI	7		3			7		14		
BBCH growth stage	11	49	11	51	89	11	49	21	60	89
Crop interception (%) ^b	25 + 25	70 + 70	50 + 50	80 + 80	80 + 80	10 + 10	40 + 40	60 + 60	60 + 60	75 + 75
Frequency of application	Annual									
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4									

^a vines was used as a surrogate crop for hops

^b according to EFSA (2014)

Applications were considered for the FOCUS scenarios defined for each of the modelled FOCUS crops. The dates were selected with the tool AppDate (v3.06) based on the BBCH growth stages given in the recommended GAP. For the late applications, because some of the application dates suggested by the AppDate tool were later than the given pre-harvest interval (PHI), the end of the application window was set to be the harvest date minus the PHI for the affected scenarios. Simulations were carried out using the FOCUS standard crops ‘cabbage’, ‘tomatoes’, ‘onions’ and ‘vines’ in FOCUS PEARL and PELMO. The FOCUS standard crops ‘vegetables, leafy’ (cabbage), ‘vegetables, fruiting’ (tomatoes), ‘vegetables, bulb’ (onions), and ‘vines’ were used in FOCUS MACRO. Simulations were carried out over 26 years, as proposed by FOCUS for pesticides that are applied annually. The first 6 years are intended to be a ‘warm up’ period, thus the following 20 years were taken into account for the assessment of the leaching behaviour. Application dates are presented in table below.

Table A 9: Application dates of azoxystrobin to cabbage, tomatoes, onions and vines used in modelling

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
Cabbage BBCH 11-49 2 × 250 g a.s./ha 7 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun 1 st	25-Apr (115)	2-May (122)
		Châteaudun 2 nd	5-Aug (217)	12-Aug (224)
		Hamburg 1 st	25-Apr (115)	2-May (122)
		Hamburg 2 nd	5-Aug (217)	12-Aug (224)
		Jokioinen	1-Jun (152)	8-Jun (159)
		Kremsmünster 1 st	25-Apr (115)	2-May (122)
		Kremsmünster 2 nd	5-Aug (217)	12-Aug (224)
		Porto 1 st	9-Mar (68)	16-Mar (75)
		Porto 2 nd	4-Aug (216)	11-Aug (223)
		Sevilla 1 st	8-Mar (67)	15-Mar (74)
		Sevilla 2 nd	22-Jun (173)	29-Jun (180)
		Thiva	21-Aug (233)	28-Aug (240)
		Châteaudun 1 ^{st a}	1-Jul (182)	8-Jul (189)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
Cabbage BBCH 11-49 2 × 250 g a.s./ha 7 days interval BBCH 49	Last application at BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun 2 nd a	1-Oct (274)	8-Oct (281)
		Hamburg 1 st a	1-Jul (182)	8-Jul (189)
		Hamburg 2 nd a	1-Oct (274)	8-Oct (281)
		Jokioinen ^a	6-Sep (249)	13-Sep (256)
		Kremsmünster 1 st a	1-Jul (182)	8-Jul (189)
		Kremsmünster 2 nd a	1-Oct (274)	8-Oct (281)
		Porto 1 st a	17-Jun (168)	24-Jun (175)
		Porto 2 nd	31-Oct (304)	7-Nov (311)
		Sevilla 1 st a	18-May (138)	25-May (145)
		Sevilla 2 nd a	1-Sep (244)	8-Sep (251)
		Thiva ^a	16-Nov (320)	23-Nov (327)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun	13-May (133)	20-May (140)
		Piacenza	13-May (133)	20-May (140)
		Porto	19-Mar (78)	26-Mar (85)
		Sevilla	17-Apr (107)	24-Apr (114)
		Thiva	13-Apr (103)	20-Apr (110)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 51	First application at BBCH 51 (AppDate 3.06)	Châteaudun	15-Jun (166)	22-Jun (173)
		Piacenza	15-Jun (166)	22-Jun (173)
		Porto	19-May (139)	26-May (146)
		Sevilla	17-May (137)	24-May (144)
		Thiva	15-May (135)	22-May (142)
Tomatoes 2 × 250 g a.s./ha BBCH 11 - 89 7 days interval BBCH 89	Last application at BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	15-Aug (227)	22-Aug (234)
		Piacenza ^a	15-Aug (227)	22-Aug (234)
		Porto	21-Aug (233)	28-Aug (240)
		Sevilla ^a	21-Jun (172)	28-Jun (179)
		Thiva	31-Aug (243)	7-Sep (250)
Onions 2 × 250 g a.s./ha BBCH 11 - 49 12 days interval BBCH 11	First application at BBCH 11 (AppDate 3.06)	Châteaudun	3-May (123)	15-May (135)
		Hamburg	3-May (123)	15-May (135)
		Jokioinen	25-May (145)	6-Jun (157)
		Kremsmünster	3-May (123)	15-May (135)
		Porto	9-Mar (68)	21-Mar (80)
		Thiva	18-Apr (108)	30-Apr (120)
Onions 2 × 250 g a.s./ha BBCH 11 - 49 12 days interval BBCH 49	Last application at BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	13-Aug (225)	25-Aug (237)
		Hamburg ^a	13-Aug (225)	25-Aug (237)
		Jokioinen ^a	27-Jul (208)	8-Aug (220)
		Kremsmünster ^a	13-Aug (225)	25-Aug (237)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
		Porto ^a	12-May (132)	24-May (144)
		Thiva ^a	11-Jun (162)	23-Jun (174)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 21	First application at BBCH 19 ^b (AppDate 3.06)	Châteaudun	8-May (128)	20-May (140)
		Hamburg	24-May (144)	5-Jun (156)
		Kremsmünster	24-May (144)	5-Jun (156)
		Piacenza	8-May (128)	20-May (140)
		Porto	26-Apr (116)	8-May (128)
		Sevilla	24-Apr (114)	6-May (126)
		Thiva	17-Apr (107)	29-Apr (119)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 60	First application at BBCH 60 (AppDate 3.06)	Châteaudun	21-Jun (172)	3-Jul (184)
		Hamburg	20-Jun (171)	2-Jul (183)
		Kremsmünster	20-Jun (171)	2-Jul (183)
		Piacenza	21-Jun (172)	3-Jul (184)
		Porto	15-Jun (166)	27-Jun (178)
		Sevilla	21-May (141)	2-Jun (153)
		Thiva	26-May (146)	7-Jun (158)
Vines 2 × 250 g a.s./ha BBCH 21 - 89 12 days interval BBCH 89	Last application at BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	6-Oct (279)	18-Oct (291)
		Hamburg ^a	4-Oct (277)	16-Oct (289)
		Kremsmünster ^a	4-Oct (277)	16-Oct (289)
		Piacenza ^a	6-Oct (279)	18-Oct (291)
		Porto ^a	4-Sep (242)	16-Sep (259)
		Sevilla ^a	4-Nov (308)	16-Nov (320)
		Thiva ^a	24-Sep (267)	6-Oct (279)

Numbers in brackets are corresponding Julian day numbers used for MACRO simulations

^a last application on harvest date minus PHI

^b the growth stage BBCH 21 is not defined in AppDate 3.06, thus BBCH 19 was chosen instead

For cabbage, two potential growing seasons per year are defined in five out of seven FOCUS scenarios. In these scenarios two simulation options were considered:

- I. The first and second possible crop cycles simulated separately i.e. two applications per year
- II. Both possible crop cycles considered within one simulation run, i.e. four applications per year

The input parameters of azoxystrobin and its metabolites R234886, R402173 and R401553 used in the modelling are shown in Table A 10, below. All other input values were set at the default values unless otherwise stated.

A schematic diagram of the modelled route of degradation of azoxystrobin in soil is shown in Figure A 2. The degradation mechanism of azoxystrobin in soil occurs via microbial and photolytic processes. Modelling of the three metabolites, which form via the different degradation mechanisms (microbial action and photolytic action) cannot be undertaken in a single simulation. Therefore, calculations were performed separately for the two degradation pathways. The first calculations assumed that azoxystrobin degraded to R234886 with a formation fraction of 0.874 (EFSA, 2010). The second assumed that azoxystrobin

degraded to form R401553 and R402173 (subsequently degrading to R401553) with formation fractions of 0.385 for R402173 and 0.392 for R401553 (EFSA, 2010). Added together, the overall formation fraction for the metabolites in total is greater than one, which indicates that this approach is a conservative implementation of the metabolic pathway for azoxystrobin. In addition, the microbial pathway was simulated with two sets of parameters (for alkaline and acidic soils) in order to account for the pH-dependent degradation and sorption of R234886. Therefore, simulations were performed separately with three model runs for each application scenario:

- **Run 1:** microbial action: azoxystrobin to R234886 (acidic soil parameters).
- **Run 2:** microbial action: azoxystrobin to R234886 (alkaline soil parameters).
- **Run 3:** photolytic action azoxystrobin to R402173 and R401553.

Since the complex degradation scheme of azoxystrobin cannot be implemented in the GUI of MACRO, all metabolites were assumed to form directly from azoxystrobin. For this purpose, the formation fraction of the secondary metabolite (R401553), which is formed from parent and from R402173, was corrected for the formation of preceding metabolite, e.g.:

$$FF(\text{tot})_{P \rightarrow R401553} = FF_{P \rightarrow R402173} \times FF_{R402173 \rightarrow R401553} + FF_{P \rightarrow R401553}$$

With:

$FF(\text{tot})_{P \rightarrow R401553}$ = total formation fraction from parent to secondary metabolite R401553

$FF_{P \rightarrow R402173}$ = formation fraction for parent to primary metabolite R402173

$FF_{R402173 \rightarrow R401553}$ = formation fraction from primary metabolite R402173 to secondary metabolite R401553

$FF_{P \rightarrow R401553}$ = formation fraction for parent to metabolite R401553

Additionally, molar based formation fractions have to be corrected for molar mass differences between metabolite and parent to get conversion fractions for MACRO.

Table A 10: Summary of input parameters for azoxystrobin, R234886, R402173 and R401553 for PEC_{GW} calculations

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	389.4	333.3	213.2	Yes / EFSA, 2010
Water solubility (mg/L)	6.0 (20°C)	57 (25°C)	61 (25°C)	560 (25°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1 x 10 ^{-10*}	0	0	0	Yes / EFSA, 2010
DT ₅₀ in soil (d)	Microbial pathway: 78 ^{a*} (n = 2) Photolytic pathway: 2.55 ^{b*} (n = 10)	Acidic soils: 98.6 ^{**} (n = 5) Alkaline soils: 36.7 ^{**} (n = 7) (geometric mean, lab studies, normalisation to	4.7 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	1.1 [*] (geometric mean, lab studies, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	[*] Yes / EFSA, 2010 ^{**} Yes / DAR, 2014 ^c

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
	(geometric mean, field studies normalisation to pF2, 20°C with Q ₁₀ of 2.58)	pF2, 20°C with Q ₁₀ of 2.58)			
Transformation rate	Microbial pathway: 0.007767 (to R234886) 0.001120 (to sink) Photolytic pathway: 0.104652 (to R402173) 0.106554 (to R401553) 0.060616 (to sink)	Acidic soils: 0.007030 (to sink) Alkaline soils: 0.018887 (to sink)	0.069020 (to R401553) 0.078458 (to sink)	0.630134 (to sink)	Calculated for PELMO; $(\ln(2) / DT_{50}) \times FF_m$
K _{FOC} / K _{FOM} (mL/g)	423 / 245* (arithmetic mean, n = 6)	Acidic soils: 228.4 / 132.5** (arithmetic mean, n = 8) Alkaline soils: 36.7 / 21.3** (arithmetic mean, n = 7)	25 / 14.5* (worst case, n = 6)	188 / 109* (arithmetic mean, n = 6)	*Yes / EFSA, 2010 **Yes/ DAR, 2014 ^c K _{FOM} = K _{FOC} / 1.724
1/n	0.86 (arithmetic mean, n = 6)	Acidic soils: 0.78 (arithmetic mean, n = 8) Alkaline soils: 0.83 (arithmetic mean, n = 7)	0.96 (relate to worst case K _{FOC})	0.85 (arithmetic mean, n = 6)	Yes / EFSA, 2010
Plant uptake factor	0.5*	0**	0**	0**	*Yes / DAR, 2014 & Weinfurtner, 2013 **Yes / DAR, 2014 ^c
Formation fraction	-	0.874 from parent	0.385 from parent	0.392 from parent 0.468 from R402173	Yes / EFSA, 2010
Conversion fraction	-	0.844 from parent	0.318 from parent	0.302 ^d from parent	for MACRO; molar mass

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance with EU endpoint / Reference
					(metabolite)/molar mass (parent) × formation fraction

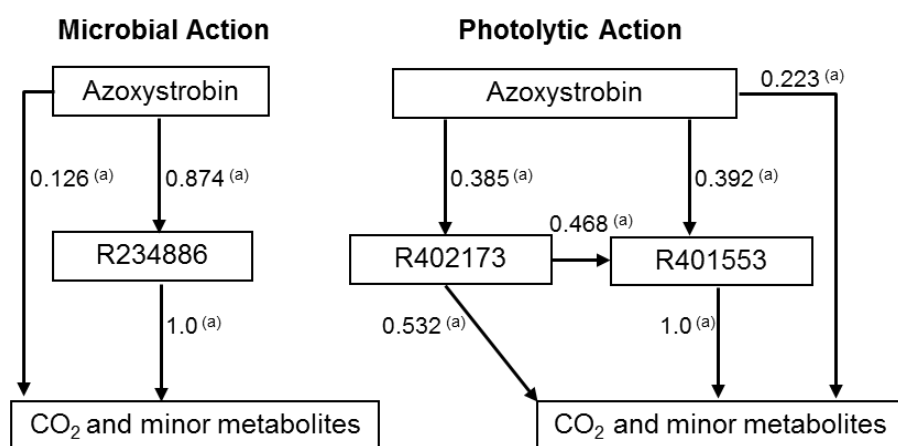
^a calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^b geometric mean, quick phase, field

^c DAR (2014): Azoxystrobin: Addendum – Confirmatory Information. RMS United Kingdom. December 2014.

^d For the secondary metabolite R401553 the formation fraction was multiplied along the pathway; therefore $213.2/403.4 \times ((0.385 \times 0.468)+0.392)$

Figure A 2: Schematic diagram of the modelled route of degradation of azoxystrobin



a – indicates the fraction of compound degraded via pathway.

A 3.4.2 Results and discussions

Predicted environmental concentrations for azoxystrobin and its metabolites R234886, R402173 and R401553 in groundwater (PEC_{GW}) were calculated for the use azoxystrobin on various crops in Europe in accordance with FOCUS guidelines (FOCUS, 2000, 2014, EC 2014).

The 80th percentile (at 1 m soil depth) PEC_{GW} values generated by the FOCUS PEARL, FOCUS PELMO and FOCUS MACRO simulations are given in Table A 11 to Table A 13. The overall maximum 80th percentile PEC_{GW} values are given in Table A 14.

Table A 11: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS PEARL v4.4.4)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy- strobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.50	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.82	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	0.014	4.03	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.020	4.64	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	2.04	< 0.001	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	2.49	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.002	2.79	0.003	< 0.001
	Porto 1 st	< 0.001	< 0.001	1.52	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	2.81	< 0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.190	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.312	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.848	< 0.001	< 0.001
Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.353	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.353	< 0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.21	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.20	0.033	0.002
	Jokioinen	< 0.001	< 0.001	0.446	0.007	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.738	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.683	0.006	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.601	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.533	0.045	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.038	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.070	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.049	0.001	< 0.001
Cabbage ^b 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	0.001	4.94	< 0.001	< 0.001
	Hamburg	< 0.001	0.179	11.6	0.013	< 0.001
	Jokioinen	< 0.001	< 0.001	2.04	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.038	6.76	0.003	< 0.001
	Porto	< 0.001	0.014	5.49	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.886	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.848	< 0.001	< 0.001
Cabbage ^b 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	1.15	< 0.001	< 0.001
	Hamburg	< 0.001	0.007	3.24	0.034	0.002
	Jokioinen	< 0.001	< 0.001	0.446	0.007	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.92	0.006	< 0.001
	Porto	< 0.001	< 0.001	1.56	0.045	< 0.001
	Sevilla	< 0.001	< 0.001	0.188	< 0.001	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Tomatoes 2 × 250 g a.s./ha BBCH 11	Thiva	< 0.001	< 0.001	0.049	0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.00	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.36	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.937	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.116	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.258	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.204	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.376	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.287	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.018	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.057	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.245	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.453	0.002	< 0.001
	Porto	< 0.001	< 0.001	0.415	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.027	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.072	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.43	< 0.001	< 0.001
	Hamburg	< 0.001	0.027	5.09	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.27	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.004	3.20	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.62	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.547	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.864	< 0.001	< 0.001
	Hamburg	< 0.001	0.008	3.21	0.010	< 0.001
	Jokioinen	< 0.001	< 0.001	1.20	0.006	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.96	0.002	< 0.001
	Porto	< 0.001	< 0.001	1.13	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.401	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	1.34	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	1.91	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.20	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	1.21	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.689	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.591	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.353	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	1.40	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.00	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.23	< 0.001	< 0.001
	Piacenza	< 0.001	0.001	1.53	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.877	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.620	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.373	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.683	0.001	< 0.001
	Hamburg	< 0.001	< 0.001	1.02	0.027	0.002
	Kremsmünster	< 0.001	< 0.001	0.598	0.007	< 0.001
	Piacenza	< 0.001	< 0.001	0.637	0.017	< 0.001
	Porto	< 0.001	< 0.001	0.576	0.004	< 0.001
	Sevilla	< 0.001	< 0.001	0.268	0.005	< 0.001
	Thiva	< 0.001	< 0.001	0.250	0.002	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

Table A 12: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS PELMO v5.5.3)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage ^a 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	1.16	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	1.38	0.001	< 0.001
	Hamburg 1 st	< 0.001	0.003	4.03	< 0.001	< 0.001
	Hamburg 2 nd	< 0.001	0.004	4.73	0.013	< 0.001
	Jokioinen	< 0.001	< 0.001	1.94	0.001	< 0.001
	Kremsmünster 1 st	< 0.001	0.001	2.44	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	0.001	2.72	0.005	< 0.001
	Porto 1 st	< 0.001	0.002	2.11	< 0.001	< 0.001
	Porto 2 nd	< 0.001	0.004	3.39	0.001	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.108	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.196	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.858	< 0.001	< 0.001
Cabbage ^a 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.266	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.256	0.001	< 0.001
	Hamburg 1 st	< 0.001	< 0.001	1.13	0.001	< 0.001
	Hamburg 2 nd	< 0.001	< 0.001	1.12	0.052	0.001
	Jokioinen	< 0.001	< 0.001	0.411	0.019	< 0.001
	Kremsmünster 1 st	< 0.001	< 0.001	0.728	< 0.001	< 0.001
	Kremsmünster 2 nd	< 0.001	< 0.001	0.664	0.016	< 0.001
	Porto 1 st	< 0.001	< 0.001	0.802	< 0.001	< 0.001
	Porto 2 nd	< 0.001	< 0.001	0.738	0.084	< 0.001
	Sevilla 1 st	< 0.001	< 0.001	0.026	< 0.001	< 0.001
	Sevilla 2 nd	< 0.001	< 0.001	0.037	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.055	0.005	< 0.001
Cabbage ^b 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	3.73	0.001	< 0.001
	Hamburg	< 0.001	0.065	11.5	0.018	< 0.001
	Jokioinen	< 0.001	< 0.001	1.94	0.001	< 0.001
	Kremsmünster	< 0.001	0.018	6.61	0.005	< 0.001
	Porto	< 0.001	0.047	6.83	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.524	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.857	< 0.001	< 0.001
Cabbage ^b 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.852	0.001	< 0.001
	Hamburg	< 0.001	0.002	3.25	0.054	0.002
	Jokioinen	< 0.001	< 0.001	0.411	0.019	< 0.001
	Kremsmünster	< 0.001	< 0.001	1.88	0.016	< 0.001
	Porto	< 0.001	0.001	1.99	0.084	< 0.001
	Sevilla	< 0.001	< 0.001	0.127	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.055	0.005	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.621	< 0.001	< 0.001
	Piacenza	< 0.001	0.002	1.62	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.05	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.041	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.177	< 0.001	< 0.001
Tomatoes 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.119	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.430	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.331	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.004	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.033	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.140	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	0.501	0.002	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxy- strobin	R234886		R402173	R401553
			Acidic	Alkaline		
Tomatoes 2 × 250 g a.s./ha BBCH 89	Porto	< 0.001	< 0.001	0.491	0.002	< 0.001
	Sevilla	< 0.001	< 0.001	0.006	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.044	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.18	< 0.001	< 0.001
	Hamburg	< 0.001	0.005	4.71	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	2.03	0.001	< 0.001
	Kremsmünster	< 0.001	0.002	3.10	< 0.001	< 0.001
	Porto	< 0.001	0.002	2.80	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.246	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.635	< 0.001	< 0.001
Onions 2 × 250 g a.s./ha BBCH 49	Hamburg	< 0.001	0.002	3.10	0.016	< 0.001
	Jokioinen	< 0.001	< 0.001	1.08	0.009	< 0.001
	Kremsmünster	< 0.001	0.001	1.88	0.005	< 0.001
	Porto	< 0.001	< 0.001	1.82	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.161	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.13	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.04	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Kremsmünster	< 0.001	0.001	1.45	0.001	< 0.001
	Piacenza	< 0.001	0.005	1.49	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	0.927	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.244	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.255	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	2.15	0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Kremsmünster	< 0.001	0.001	1.49	0.001	< 0.001
	Piacenza	< 0.001	0.005	1.60	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	1.14	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	0.239	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	0.245	< 0.001	< 0.001
	Châteaudun	< 0.001	< 0.001	0.657	0.002	< 0.001
	Hamburg	< 0.001	0.001	1.05	0.047	0.001
Vines 2 × 250 g a.s./ha BBCH 89	Kremsmünster	< 0.001	< 0.001	0.723	0.014	< 0.001
	Piacenza	< 0.001	0.002	0.785	0.059	0.002
	Porto	< 0.001	< 0.001	0.827	0.007	< 0.001
	Sevilla	< 0.001	< 0.001	0.114	0.011	< 0.001
	Thiva	< 0.001	< 0.001	0.215	0.007	< 0.001
	Châteaudun	< 0.001	< 0.001	0.657	0.002	< 0.001
	Hamburg	< 0.001	0.001	1.05	0.047	0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

Table A 13: PEC_{GW} for azoxystrobin, R234886, R402173 and R401553 (with FOCUS MACRO v5.5.4)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage ^{a,c} , 2 × 250 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	0.002	1.49	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	0.009	2.28	0.002	< 0.001
Cabbage ^{a,c} , 2 × 250 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	0.467	< 0.001	< 0.001
	Châteaudun 2 nd	< 0.001	< 0.001	0.440	0.007	< 0.001

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Azoxystrobin	R234886		R402173	R401553
			Acidic	Alkaline		
Cabbage ^{b,c} , 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	0.054	5.08	0.002	< 0.001
Cabbage ^{b,c} , 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	0.001	1.30	0.007	< 0.001
Tomatoes ^d , 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	0.634	< 0.001	< 0.001
Tomatoes ^d , 2 × 250 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	0.166	< 0.001	< 0.001
Tomatoes ^d , 3 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.179	< 0.001	< 0.001
Onions ^e , 2 × 250 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	1.30	< 0.001	< 0.001
Onions ^e , 2 × 250 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	0.872	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	0.462	0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	0.501	< 0.001	< 0.001
Vines 2 × 250 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	0.272	0.003	< 0.001

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

^c vegetables, leafy in MACRO v5.5.4

^d vegetables, fruiting in MACRO v5.5.4

^e vegetables, bulb in MACRO v5.5.4

Table A 14: Summary of maximum PEC_{GW} across all models for azoxystrobin, R234886, R402173 and R401553

Substance		80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Azoxystrobin		< 0.001	Cabbage ^{ab}	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Tomatoes	2 × 250	11 - 89	All models	All scenarios
		< 0.001	Onions	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Vines	2 × 250	21 - 89	All models	All scenarios
R234886	Acidic	0.020	Cabbage ^a	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
		0.179	Cabbage ^b	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg

Substance		80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
		0.002	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		0.027	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		0.005	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
	Alkaline	4.73	Cabbage ^a	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg, 2 nd
		11.6	Cabbage ^b	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		1.62	Tomatoes	2 × 250	11 - 89	FOCUS PELMO v5.5.3	Piacenza
		5.09	Onions	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg
		2.15	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Hamburg
R402173		0.084	Cabbage ^a	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Porto, 2 nd
		0.084	Cabbage ^b	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Porto
		0.002	Tomatoes	2 × 250	11 - 89	FOCUS PEARL v4.4.4/FOCUS PELMO v.5.5.3	Piacenza Porto
		0.016	Onions	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Hamburg
		0.059	Vines	2 × 250	21 - 89	FOCUS PELMO v5.5.3	Piacenza
R401553		0.002	Cabbage ^a	2 × 250	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 2 nd
		0.002	Cabbage ^b	2 × 250	11 - 49	FOCUS PEARL v4.4.4/FOCUS PELMO v5.5.3	Hamburg
		< 0.001	Tomatoes	2 × 250	11 - 49	All models	All scenarios
		< 0.001	Onions	2 × 250	21 - 89	All models	All scenarios
		0.002	Vines	2 × 250	11 - 49	FOCUS PELMO v5.5.3	Piacenza

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

A 3.5 KCP 9.2.4: Anagu, I. & Bo, Y., 2021, 2021, Oxathiapiprolin PEC_{GW} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for oxathiapiprolin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{gw} calculations acceptable for the parent and its metabolites.
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Reference:	KCP 9.2.4.
Report	Oxathiapiprolin - A Leaching Assessment for Parent and Metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 Using the PEARL 4.4.4, PELMO 5.5.3 and MACRO 5.5.4 Groundwater Models Following Spray Application to Various Crops Using EU Agreed Endpoints, Report No. 116223-5, (Syngenta File No VV-911806)
Guideline(s):	European Commission (2014). Assessing potential for movement of active substances and their metabolites to ground water in the EU. Report of the FOCUS ground water work group, EC document reference SANCO/13144/2010 version 3, 613 pp. FOCUS (2000). FOCUS groundwater scenarios in the EU review of active substances. Report of the FOCUS groundwater scenarios workgroup, EC document reference SANCO/321/2000 rev. 2, 202 pp. FOCUS (2014). Generic guidance for Tier 1 FOCUS ground water assessments, version 2.2. May 2014. 66 pp.
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes/No/Supplementary

A 3.5.1 Materials and methods

This report describes a FOCUS groundwater modelling study that examined the potential for oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 to reach groundwater following application to cabbage, tomatoes, onions, and vines. The FOCUS simulation models FOCUS PEARL (v4.4.4), FOCUS PELMO (v5.5.3) and MACRO (v5.5.4) were used in the modelling study.

Twofold applications at the rate of 12 g a.s./ha, were considered for all the modelled crops. Applications starting from approximately BBCH 11 were considered for cabbage, tomatoes and onions with an interval of 7 days between applications for cabbage and tomatoes as well as 12 days for onions. For vines, applications starting from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51 or 60) and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown below.

Table A 15: Application patterns of oxathiapiprolin to various crops used in the modelling

Crop	Cabbage	Tomatoes	Onions	Vines ^a
Application rate (g a.s./ha)	12	12	12	12

Number of applications / interval (d)	2 / 7		2 / 7			2 / 12		2 / 12		
PHI	7		3			7		14		
BBCH growth stage	11	49	11	51	89	11	49	21	60	89
Crop interception (%) ^b	25 + 25	70 + 70	50 + 50	80 + 80	80 + 80	10 + 10	40 + 40	60 + 60	60 + 60	75 + 75
Frequency of application	Annual									
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, MACRO v5.5.4									

^a vines was used as a surrogate crop for hops

^b according to EFSA (2014)

Applications were considered for the FOCUS scenarios defined for each of the modelled FOCUS crops. The dates were selected with the tool AppDate (v3.06) based on the BBCH growth stages given in the recommended GAP. For the late applications, because some of the application dates suggested by the AppDate tool were later than the given pre-harvest interval (PHI), the end of the application window was set to be the harvest date minus the PHI for the affected scenarios. Simulations were carried out using the FOCUS standard crops ‘cabbage’, ‘tomatoes’, ‘onions’ and ‘vines’ in FOCUS PEARL and PELMO. The FOCUS standard crops ‘vegetables, leafy’ (cabbage), ‘vegetables, fruiting’ (tomatoes), ‘vegetables, bulb’ (onions), and ‘vines’ were used in FOCUS MACRO. Simulations were carried out over 26 years, as proposed by FOCUS for pesticides that are applied annually. The first 6 years are intended to be a ‘warm up’ period, thus the following 20 years were taken into account for the assessment of the leaching behaviour. Application dates are presented in the table below.

Table A 16: Application dates of oxathiapiprolin to cabbage, tomatoes, onions and vines used in modelling

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
Cabbage BBCH 11-49 2 × 12 g a.s./ha 7 days interval BBCH 11	First application on BBCH 11 (AppDate 3.06)	Châteaudun 1 st	25-Apr (115)	2-May (122)
		Châteaudun 2 nd	5-Aug (217)	12-Aug (224)
		Hamburg 1 st	25-Apr (115)	2-May (122)
		Hamburg 2 nd	5-Aug (217)	12-Aug (224)
		Jokioinen	1-Jun (152)	8-Jun (159)
		Kremsmünster 1 st	25-Apr (115)	2-May (122)
		Kremsmünster 2 nd	5-Aug (217)	12-Aug (224)
		Porto 1 st	9-Mar (68)	16-Mar (75)
		Porto 2 nd	4-Aug (216)	11-Aug (223)
		Sevilla 1 st	8-Mar (67)	15-Mar (74)
		Sevilla 2 nd	22-Jun (173)	29-Jun (180)
		Thiva	21-Aug (233)	28-Aug (240)
Cabbage BBCH 11-49 2 × 12 g a.s./ha 7 days interval BBCH 49	Last application on BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun 1 ^{st a}	1-Jul (182)	8-Jul (189)
		Châteaudun 2 ^{nd a}	1-Oct (274)	8-Oct (281)
		Hamburg 1 ^{st a}	1-Jul (182)	8-Jul (189)
		Hamburg 2 ^{nd a}	1-Oct (274)	8-Oct (281)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
		Jokioinen ^a	6-Sep (249)	13-Sep (256)
		Kremsmünster 1 st ^a	1-Jul (182)	8-Jul (189)
		Kremsmünster 2 nd ^a	1-Oct (274)	8-Oct (281)
		Porto 1 st ^a	17-Jun (168)	24-Jun (175)
		Porto 2 nd	31-Oct (304)	7-Nov (311)
		Sevilla 1 st ^a	18-May (138)	25-May (145)
		Sevilla 2 nd ^a	1-Sep (244)	8-Sep (251)
		Thiva ^a	16-Nov (320)	23-Nov (327)
Tomatoes 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 11	First application on BBCH 11 (AppDate 3.06)	Châteaudun	13-May (133)	20-May (140)
		Piacenza	13-May (133)	20-May (140)
		Porto	19-Mar (78)	26-Mar (85)
		Sevilla	17-Apr (107)	24-Apr (114)
		Thiva	13-Apr (103)	20-Apr (110)
Tomatoes 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 51	First application on BBCH 51 (AppDate 3.06)	Châteaudun	15-Jun (166)	22-Jun (173)
		Piacenza	15-Jun (166)	22-Jun (173)
		Porto	19-May (139)	26-May (146)
		Sevilla	17-May (137)	24-May (144)
		Thiva	15-May (135)	22-May (142)
Tomatoes 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 89	Last application on BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	15-Aug (227)	22-Aug (234)
		Piacenza ^a	15-Aug (227)	22-Aug (234)
		Porto	21-Aug (233)	28-Aug (240)
		Sevilla ^a	21-Jun (172)	28-Jun (179)
		Thiva	31-Aug (243)	7-Sep (250)
Onions 2 × 12 g a.s./ha BBCH 11 - 49 12 days interval BBCH 11	First application on BBCH 11 (AppDate 3.06)	Châteaudun	3-May (123)	15-May (135)
		Hamburg	3-May (123)	15-May (135)
		Jokioinen	25-May (145)	6-Jun (157)
		Kremsmünster	3-May (123)	15-May (135)
		Porto	9-Mar (68)	21-Mar (80)
		Thiva	18-Apr (108)	30-Apr (120)
Onions 2 × 12 g a.s./ha BBCH 11 - 49 12 days interval BBCH 49	Last application on BBCH 49, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	13-Aug (225)	25-Aug (237)
		Hamburg ^a	13-Aug (225)	25-Aug (237)
		Jokioinen ^a	27-Jul (208)	8-Aug (220)
		Kremsmünster ^a	13-Aug (225)	25-Aug (237)
		Porto ^a	12-May (132)	24-May (144)
		Thiva ^a	11-Jun (162)	23-Jun (174)
		Châteaudun	8-May (128)	20-May (140)

Crop	Rationale	Scenario	Application dates (absolute)	
			1 st application	2 nd application
Vines 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 21	First application on BBCH 19 ^b (AppDate 3.06)	Hamburg	24-May (144)	5-Jun (156)
		Kremsmünster	24-May (144)	5-Jun (156)
		Piacenza	8-May (128)	20-May (140)
		Porto	26-Apr (116)	8-May (128)
		Sevilla	24-Apr (114)	6-May (126)
		Thiva	17-Apr (107)	29-Apr (119)
Vines 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 60	First application on BBCH 60 (AppDate 3.06)	Châteaudun	21-Jun (172)	3-Jul (184)
		Hamburg	20-Jun (171)	2-Jul (183)
		Kremsmünster	20-Jun (171)	2-Jul (183)
		Piacenza	21-Jun (172)	3-Jul (184)
		Porto	15-Jun (166)	27-Jun (178)
		Sevilla	21-May (141)	2-Jun (153)
		Thiva	26-May (146)	7-Jun (158)
Vines 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 89	Last application on BBCH 89, except when conflicting with the PHI (AppDate 3.06)	Châteaudun ^a	6-Oct (279)	18-Oct (291)
		Hamburg ^a	4-Oct (277)	16-Oct (289)
		Kremsmünster ^a	4-Oct (277)	16-Oct (289)
		Piacenza ^a	6-Oct (279)	18-Oct (291)
		Porto ^a	4-Sep (242)	16-Sep (259)
		Sevilla ^a	4-Nov (308)	16-Nov (320)
		Thiva ^a	24-Sep (267)	6-Oct (279)

Numbers in brackets are corresponding Julian day numbers used for MACRO simulations

^a last application on harvest date minus PHI

^b the growth stage BBCH 21 is not defined in AppDate 3.06, thus BBCH 19 was chosen instead

For cabbage, two potential growing seasons per year are defined in five out of seven FOCUS scenarios. In these scenarios two simulation options were considered:

- I. The first and second possible crop cycles simulated separately i.e. two applications per year
- II. Both possible crop cycles considered within one simulation run, i.e. four applications per year

The input parameters of oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 used in modelling are shown in Table A 17 and Table A 18, below. All other input values were set at the default values unless otherwise stated. A schematic diagram of the modelled route of degradation of oxathiapiprolin in soil is shown in Figure A 3.

Modelling of the four metabolites cannot be undertaken in a single simulation when using the FOCUS PELMO model. Therefore, calculations were performed separately for two degradation pathways (A and B). The degradation scheme used in FOCUS PELMO is presented in Figure A 4.

Since the complex degradation scheme of oxathiapiprolin cannot be implemented in the GUI of MACRO, all metabolites were assumed to form directly from oxathiapiprolin.

For this purpose, the formation fractions of the secondary metabolites (IN-E8S72 and IN-QPS10), which are formed from the parent and from the metabolites IN-RDT31 and IN-RAB06, respectively, were corrected for the formation of preceding metabolites, e.g.:

$$FF_{\text{(tot)}}_{P \rightarrow \text{IN-E8S72}} = FF_{P \rightarrow \text{IN-E8S72}} + (FF_{P \rightarrow \text{IN-RDT31}} \times FF_{\text{IN-RDT31} \rightarrow \text{IN-E8S72}})$$

With:

$FF_{\text{(tot)}}_{P \rightarrow \text{IN-E8S72}}$ = total formation fraction from parent to secondary metabolite IN-E8S72
 $FF_{P \rightarrow \text{IN-E8S72}}$ = formation fraction from parent to secondary metabolite IN-E8S72
 $FF_{P \rightarrow \text{IN-RDT31}}$ = formation fraction from parent to primary metabolite IN-RDT31
 $FF_{\text{IN-RDT31} \rightarrow \text{IN-E8S72}}$ = formation fraction from primary metabolite IN-RDT31 to secondary metabolite IN-RDT31

Additionally, molar based formation fractions have to be corrected for molar mass differences between metabolite and parent to get conversion fractions for MACRO.

Table A 17: Summary of input parameters for oxathiapiprolin, IN-RDT31, and IN-RAB06, for PEC_{GW} calculations

Compound	Oxathiapiprolin	IN-RDT31	IN-RAB06	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	539.53*	555.53**	569.51**	Yes / EFSA, 2016
Water solubility (mg/L)	0.1844* (20°C)	0.1844** (20°C)	0.1844** (20°C)	*Yes / EFSA, 2016 **Parent data used for metabolite
Saturated vapour pressure (Pa)	1.141E-06* (20°C)	0** (20°C)	0** (20°C)	*Yes / EFSA, 2016 **worst case
DT ₅₀ in soil (d)	121.2 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	160 (geometric mean lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 6)	60.5 (geometric mean field and lab, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 12)	Yes / EFSA, 2016
Transformation rate	Pathway A: 0.004003 to IN-RDT31 0.001716 to IN-E8S72 Pathway B: 0.002288 to IN-RAB06 0.003431 to IN-QPS10	Pathway A: 0.001733 to IN-E8S72 0.002599 to sink	Pathway B: 0.011457 to IN- QPS10	Calculated for PELMO; (ln(2) / DT ₅₀) * FF _m
K _{FOC} / K _{FOM} (mL/g)	6242.6 / 3621 (arithmetic mean, n = 5)	1168.4 / 677.7 (arithmetic mean, n = 5)	495.6 / 287.5 (arithmetic mean, n = 5)	Yes / EFSA, 2016
1/n	0.97 (arithmetic mean, n = 5)	0.87 (arithmetic mean, n = 5)	0.89 (arithmetic mean, n = 5)	Yes / EFSA, 2016

Compound	Oxathiapiprolin	IN-RDT31	IN-RAB06	Value in accordance with EU endpoint / Reference
Plant uptake factor	0	0	0	Worst-case assumption
Formation fraction	-	0.7 from parent	0.4 from parent	Yes / EFSA, 2016
Conversion fraction	-	0.721 from parent	0.422 from parent	Calculated for MACRO; molar mass (metabolite) / molar mass (parent) x formation fraction

Table A 18: Summary of input parameters for IN-QPS10, and IN-E8S72, for PEC_{GW} calculations

Compound	IN-QPS10	IN-E8S72	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	349.41	180.09	Yes / DAR, 2015
Water solubility (mg/L)	0.1844** (20°C)	0.1844** (20°C)	**Parent data used for metabolite
Saturated vapour pressure (Pa)	0 (20°C)	0 (20°C)	worst case
DT ₅₀ in soil (d)	564.9 (geometric mean lab, acidic, normalisation to pF2, 20 °C with Q ₁₀ of 2.58, n = 2)	310.2 (geometric mean lab, normalisation to or pF2, 20 °C with Q ₁₀ of 2.58, n = 5)	Yes / EFSA, 2016
Transformation rate	Pathway B: 0.001227 to sink	Pathway A: 0.002235 to sink	Calculated for PELMO; (ln(2) / DT ₅₀) * FFm
K _{FOC} / K _{FOM} (mL/g)	4880.2 / 2830.7 (arithmetic mean, n = 5)	7.33 / 4.25 (arithmetic mean, n = 5)	Yes / EFSA, 2016
1/n	0.92 (arithmetic mean, n = 5)	1 (arithmetic mean, n = 5)	Yes / EFSA, 2016
Plant uptake factor	0	0	Worst-case assumption
Formation fraction	0.6 from parent 1.0 from IN-RAB06	0.3 from parent 0.4 from IN-RDT31	Yes / EFSA, 2016
Conversion fraction	0.648 ^a from parent	0.194 ^b from parent	Calculated for MACRO; molar mass (metabolite) / molar mass (parent) x formation fraction

^a for the secondary metabolite IN-QPS10 the formation fraction was multiplied along the pathway; therefore $349.41/539.53 \times ((0.4 \times 1.0)+0.6)$

^b for the secondary metabolite IN-E8S72 the formation fraction was multiplied along the pathway; therefore $180.09/539.53 \times ((0.7 \times 0.4)+0.3)$

Figure A 3: Schematic diagram of the modelled route of degradation of oxathiapiprolin

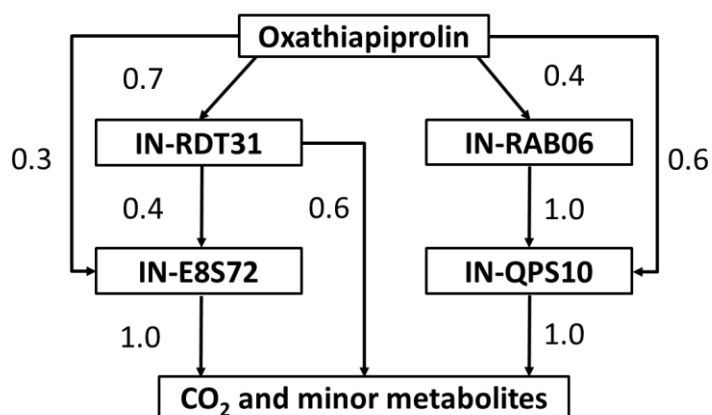
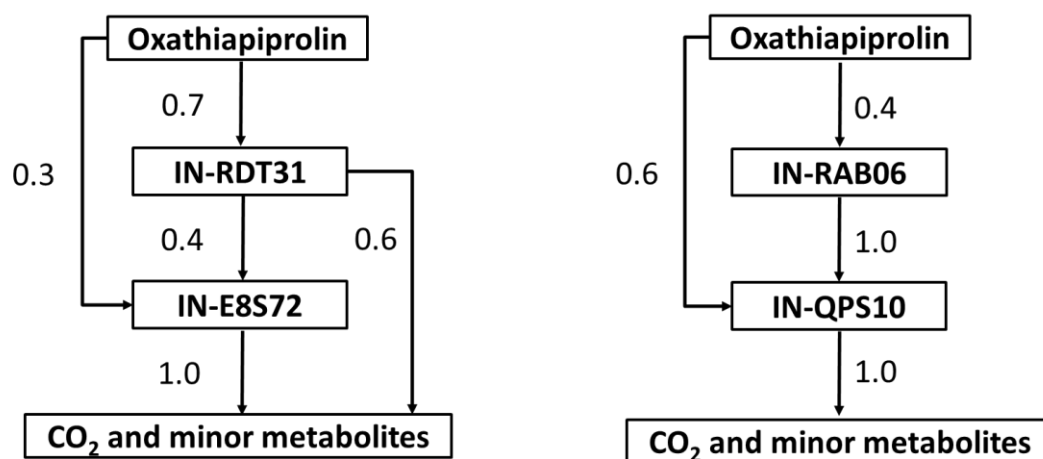


Figure A 4: Simulation pathways in groundwater for use in FOCUS OELMO model



Pathway A

Pathway B

A 3.5.2 Results and discussions

Predicted environmental concentrations for oxathiapiprolin and its metabolites IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 in groundwater (PEC_{GW}) were calculated for the use oxathiapiprolin on cabbage, tomatoes, onions, and vines in Europe in accordance with FOCUS guidelines (FOCUS, 2000, 2014, European Commission, 2014).

The 80th percentile (at 1 m soil depth) PEC_{GW} values generated by the FOCUS PEARL, FOCUS PELMO and MACRO simulations are given in Table A 19, Table A 20 and Table A 21. The overall maximum 80th percentile PEC_{GW} values are given in Table A 22.

Table A 19: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 (with FOCUS PEARL v4.4.4)

Crop	Scenario	80 th Percentile PEC_{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Cabbage ^a 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.33
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.32
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.54
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.55
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.44
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.888
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.878
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.607
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.602
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.51
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.53
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.05
Cabbage ^a 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.527
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.534
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.620
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.618
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.569
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.350
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.357
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.241
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.234
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.610
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.598
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.406
Cabbage ^b 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	2.65
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	3.09
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.44
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.76
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	1.21
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	3.04
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.05
Cabbage ^b 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.06
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.24
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.569
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.702
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.476
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.406
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.10

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Tomatoes 2 × 12 g a.s./ha BBCH 11	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.997
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.488
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.10
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.43
Tomatoes 2 × 12 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.434
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.401
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.196
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.439
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.571
Tomatoes 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.441
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.408
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.193
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.439
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.562
Onions 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.83
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.71
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.39
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.01
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.734
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.93
Onions 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.21
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.14
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.916
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.672
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.485
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.30
Vines 2 × 12 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.678
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.581
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.711
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.294
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.615
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.19
Vines 2 × 12 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.672
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.582
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.727
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.297
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.614
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.18
Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.423
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.362
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.231
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.451
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.184
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.381
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.728

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

Table A 20: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 (with FOCUS PELMO v5.5.3)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Cabbage ^a 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.22
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.19
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.18
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.29
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.963
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.953
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.473
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.467
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	1.16
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.924
Cabbage ^a 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.456
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.475
	Hamburg 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.466
	Hamburg 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.489
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.521
	Kremsmünster 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.380
	Kremsmünster 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.381
	Porto 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.164
	Porto 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.184
	Sevilla 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.394
	Sevilla 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.353
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.374
Cabbage ^b 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	2.42
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	2.36
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.29
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.92
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.940
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	2.36
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.923
Cabbage ^b 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.931
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.956
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.521
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.760
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.349
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.741
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.374
Tomatoes 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.995
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.689
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.415
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.20
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.967
Tomatoes 2 × 12 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.394
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.276
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.169
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.426
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.384
Tomatoes 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.375
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.249
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.152

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Onions 2 × 12 g a.s./ha BBCH 11	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.241
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.326
	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.54
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	1.34
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	1.36
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	1.06
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.747
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.31
Onions 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.961
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.899
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001	0.909
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.701
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.484
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.798
Vines 2 × 12 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.645
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.654
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.424
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.414
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.326
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.05
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.20
Vines 2 × 12 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.632
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.652
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.422
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.413
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.326
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	1.03
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	1.19
Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.392
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001	0.423
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001	0.265
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001	0.257
	Porto	< 0.001	< 0.001	< 0.001	< 0.001	0.193
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001	0.622
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001	0.693

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

Table A 21: PEC_{GW} for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72 (with FOCUS MACRO v5.5.4)

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Cabbage ^{a,c} , 2 × 12 g a.s./ha BBCH 11	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.931
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.933
Cabbage ^{a,c} , 2 × 12 g a.s./ha BBCH 49	Châteaudun 1 st	< 0.001	< 0.001	< 0.001	< 0.001	0.373
	Châteaudun 2 nd	< 0.001	< 0.001	< 0.001	< 0.001	0.372

Crop	Scenario	80 th Percentile PEC _{GW} at 1 m Soil Depth (µg/L)				
		Oxathiapiprolin	IN-RDT31	IN-RAB06	IN-QPS10	IN-E8S72
Cabbage ^{b,c} , 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.86
Cabbage ^{b,c} , 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.744
Tomatoes ^d , 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.809
Tomatoes ^d , 2 × 12 g a.s./ha BBCH 51	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.322
Tomatoes ^d , 3 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.325
Onions ^e , 2 × 12 g a.s./ha BBCH 11	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	1.38
Onions ^e , 2 × 12 g a.s./ha BBCH 49	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.918
Vines 2 × 12 g a.s./ha BBCH 21	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.745
Vines 2 × 12 g a.s./ha BBCH 60	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.666
Vines 2 × 12 g a.s./ha BBCH 89	Châteaudun	< 0.001	< 0.001	< 0.001	< 0.001	0.480

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

^c vegetables, leafy in the MACRO GUI

^d vegetables, fruiting in the MACRO GUI

^e vegetables, bulb in the MACRO GUI

Table A 22: Summary of maximum PEC_{GW} across all models for oxathiapiprolin, IN-RDT31, IN-RAB06, IN-QPS10 and IN-E8S72

Substance	80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
Oxathiapiprolin	< 0.001	Cabbage	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines	2 × 12	21 - 89	All models	All scenarios
IN-RDT31	< 0.001	Cabbage	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines	2 × 12	21 - 89	All models	All scenarios
IN-RAB06	< 0.001	Cabbage	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Tomatoes	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines	2 × 12	21 - 89	All models	All scenarios
IN-QPS10	< 0.001	Cabbage	2 × 12	11 - 49	All models	All scenarios

Substance	80 th Percentile PEC _{GW} (µg/L)	Crop	Application rate (g a.s./ha)	BBCH code	Model and Version Number	Scenario
IN-E8S72	< 0.001	Tomatoes	2 × 12	11 - 89	All models	All scenarios
	< 0.001	Onions	2 × 12	11 - 49	All models	All scenarios
	< 0.001	Vines	2 × 12	21 - 89	All models	All scenarios
	1.54	Cabbage	2 × 12 ^a	11 - 49	FOCUS PEARL v4.4.4	Hamburg, 1 st season
	3.09	Cabbage	2 × 12 ^b	11 - 49	FOCUS PEARL v4.4.4	Hamburg
	1.43	Tomatoes	2 × 12	11 - 89	FOCUS PEARL v4.4.4	Thiva
	1.93	Onions	2 × 12	11 - 49	FOCUS PEARL v4.4.4	Thiva
	1.20	Vines	2 × 12	21 - 89	FOCUS PELMO v5.5.3	Thiva

^a the first and second possible crop cycles simulated separately i.e. two applications per year

^b both possible crop cycles considered within one simulation run, i.e. four applications per year

A 3.6 KCP 9.2.5: Azoxystrobin - FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed}

Comments of zRMS:	All input parameters for azoxystrobin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{sw} calculations acceptable for the parent and its metabolites.
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Results below outline detailed FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for all crops and all uses outlined in the GAP

Table A 23: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for azoxystrobin following application to vegetables, leafy, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	55.6	231
Step 2			
Northern Europe	Mar-May	9.36	38.6
Northern Europe	Jun-Sep	9.36	38.6
Northern Europe	Oct-Feb	20.9	87.4
Southern Europe	Mar-May	17.1	71.1
Southern Europe	Jun-Sep	13.2	54.9
Southern Europe	Oct-Feb	17.1	71.1

Table A 24: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for azoxystrobin following application to vegetables, leafy, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	111	462
Step 2			
Northern Europe	Mar-May	17.8	73.8
Northern Europe	Jun-Sep	17.8	73.8
Northern Europe	Oct-Feb	40.3	168
Southern Europe	Mar-May	32.8	137
Southern Europe	Jun-Sep	25.3	105
Southern Europe	Oct-Feb	32.8	137

Table A 25: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for azoxystrobin following application to vegetables, fruiting, BBCH 11-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	55.6	231
Step 2			

Northern Europe	Mar-May	9.36	38.6
Northern Europe	Jun-Sep	9.36	38.6
Southern Europe	Mar-May	17.1	71.2
Southern Europe	Jun-Sep	13.2	54.9

Table A 26: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting, BBCH 11-89 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	111	462
Step 2			
Northern Europe	Mar-May	17.8	73.8
Northern Europe	Jun-Sep	17.8	73.8
Southern Europe	Mar-May	32.8	137
Southern Europe	Jun-Sep	25.3	105

Table A 27: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	55.6	231
Step 2			
Northern Europe	Mar-May	10.9	45.1
Northern Europe	Jun-Sep	10.9	45.1
Northern Europe	Oct-Feb	24.8	104
Southern Europe	Mar-May	20.2	84.2
Southern Europe	Jun-Sep	15.5	64.6
Southern Europe	Oct-Feb	20.2	84.2

Table A 28: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	111	462
Step 2			
Northern Europe	Mar-May	20.4	84.7
Northern Europe	Jun-Sep	20.4	84.7
Northern Europe	Oct-Feb	46.8	196

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Southern Europe	Mar-May	38.0	159
Southern Europe	Jun-Sep	29.2	122
Southern Europe	Oct-Feb	38.0	159

Table A 29: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for azoxystrobin following application to hops, BBCH 21-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	69.4	268
Step 2			
Northern Europe	Mar-May	16.7	64.5
Northern Europe	Jun-Sep	16.7	64.5
Northern Europe	Oct-Feb	24.4	97.0
Southern Europe	Mar-May	21.8	86.2
Southern Europe	Jun-Sep	19.3	75.3
Southern Europe	Oct-Feb	21.8	86.2

Table A 30: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for azoxystrobin following application to hops, BBCH 21-89 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	139	536
Step 2			
Northern Europe	Mar-May	30.5	118
Northern Europe	Jun-Sep	30.5	118
Northern Europe	Oct-Feb	45.2	180
Southern Europe	Mar-May	40.3	159
Southern Europe	Jun-Sep	35.4	139
Southern Europe	Oct-Feb	40.3	159

Table A 31: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for R234886 (acidic soils) following application to vegetables, leafy, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	29.3	66.7
Step 2			
Northern Europe	Mar-May	4.54	10.3

Northern Europe	Jun-Sep	4.54	10.3
Northern Europe	Oct-Feb	10.9	24.7
Southern Europe	Mar-May	8.74	19.9
Southern Europe	Jun-Sep	6.64	15.1
Southern Europe	Oct-Feb	8.74	19.9

Table A 32: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to vegetables, leafy, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	58.6	133
Step 2			
Northern Europe	Mar-May	8.78	19.9
Northern Europe	Jun-Sep	8.78	19.9
Northern Europe	Oct-Feb	21.1	48.0
Southern Europe	Mar-May	17.0	38.6
Southern Europe	Jun-Sep	12.9	29.3
Southern Europe	Oct-Feb	17.0	38.6

Table A 33: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to vegetables, fruiting, BBCH 11-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	29.3	66.7
Step 2			
Northern Europe	Mar-May	4.54	10.3
Northern Europe	Jun-Sep	4.54	10.3
Southern Europe	Mar-May	8.74	19.9
Southern Europe	Jun-Sep	6.64	15.1

Table A 34: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to vegetables, fruiting, BBCH 11-89 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	58.6	133
Step 2			
Northern Europe	Mar-May	8.78	19.9
Northern Europe	Jun-Sep	8.78	19.9

Southern Europe	Mar-May	17.0	38.6
Southern Europe	Jun-Sep	12.9	29.3

Table A 35: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to vegetables, bulb, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	29.3	66.7
Step 2			
Northern Europe	Mar-May	5.38	12.2
Northern Europe	Jun-Sep	5.38	12.2
Northern Europe	Oct-Feb	13.0	29.5
Southern Europe	Mar-May	10.4	23.7
Southern Europe	Jun-Sep	7.90	18.0
Southern Europe	Oct-Feb	10.4	23.7

Table A 36: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to vegetables, bulb, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	58.6	133
Step 2			
Northern Europe	Mar-May	10.2	23.3
Northern Europe	Jun-Sep	10.2	23.3
Northern Europe	Oct-Feb	24.7	56.3
Southern Europe	Mar-May	19.9	45.3
Southern Europe	Jun-Sep	15.1	34.3
Southern Europe	Oct-Feb	19.9	45.3

Table A 37: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to hops, BBCH 21-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	31.7	70.9
Step 2			
Northern Europe	Mar-May	5.14	11.3
Northern Europe	Jun-Sep	5.14	11.3
Northern Europe	Oct-Feb	9.34	20.9
Southern Europe	Mar-May	7.94	17.7

Southern Europe	Jun-Sep	6.54	14.5
Southern Europe	Oct-Feb	7.94	17.7

Table A 38: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (acidic soils) following application to hops, BBCH 21-89 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	63.5	142
Step 2			
Northern Europe	Mar-May	9.62	21.2
Northern Europe	Jun-Sep	9.62	21.2
Northern Europe	Oct-Feb	17.7	39.6
Southern Europe	Mar-May	15.0	33.4
Southern Europe	Jun-Sep	12.3	27.3
Southern Europe	Oct-Feb	15.0	33.4

TableA 39: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, leafy, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	36.4	13.3
Step 2			
Northern Europe	Mar-May	5.47	2.00
Northern Europe	Jun-Sep	5.47	2.00
Northern Europe	Oct-Feb	13.1	4.80
Southern Europe	Mar-May	10.6	3.87
Southern Europe	Jun-Sep	8.01	2.94
Southern Europe	Oct-Feb	10.6	3.87

Table A 40: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, leafy, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	72.7	26.7
Step 2			
Northern Europe	Mar-May	10.3	3.79
Northern Europe	Jun-Sep	10.3	3.79

Northern Europe	Oct-Feb	24.8	9.11
Southern Europe	Mar-May	20.0	7.33
Southern Europe	Jun-Sep	15.2	5.56
Southern Europe	Oct-Feb	20.0	7.33

Table A 41: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, fruiting, BBCH 11-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	36.4	13.3
Step 2			
Northern Europe	Mar-May	5.47	2.00
Northern Europe	Jun-Sep	5.47	2.00
Southern Europe	Mar-May	10.6	3.87
Southern Europe	Jun-Sep	8.01	2.94

Table A 42: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, fruiting, BBCH 11-89 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	72.7	26.7
Step 2			
Northern Europe	Mar-May	10.3	3.79
Northern Europe	Jun-Sep	10.3	3.79
Southern Europe	Mar-May	20.0	7.33
Southern Europe	Jun-Sep	15.2	5.56

Table A 43: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, bulb, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	36.4	13.3
Step 2			
Northern Europe	Mar-May	6.49	2.38
Northern Europe	Jun-Sep	6.49	2.38
Northern Europe	Oct-Feb	15.6	5.73
Southern Europe	Mar-May	12.6	4.61
Southern Europe	Jun-Sep	9.53	3.49
Southern Europe	Oct-Feb	12.6	4.61

Table A 44: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to vegetables, bulb, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	72.7	26.7
Step 2			
Northern Europe	Mar-May	11.9	4.36
Northern Europe	Jun-Sep	11.9	4.36
Northern Europe	Oct-Feb	28.7	10.5
Southern Europe	Mar-May	23.1	8.46
Southern Europe	Jun-Sep	17.5	6.41
Southern Europe	Oct-Feb	23.1	8.46

Table A 45: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to hops, BBCH 21-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	38.8	14.2
Step 2			
Northern Europe	Mar-May	6.11	2.22
Northern Europe	Jun-Sep	6.11	2.22
Northern Europe	Oct-Feb	11.2	4.09
Southern Europe	Mar-May	9.49	3.47
Southern Europe	Jun-Sep	7.80	2.85
Southern Europe	Oct-Feb	9.49	3.47

Table A 46: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R234886 (alkaline soils) following application to hops, BBCH 21-89 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	77.6	28.3
Step 2			
Northern Europe	Mar-May	11.2	4.08
Northern Europe	Jun-Sep	11.2	4.08
Northern Europe	Oct-Feb	20.5	7.50
Southern Europe	Mar-May	17.4	6.36
Southern Europe	Jun-Sep	14.3	5.22

Southern Europe	Oct-Feb	17.4	6.36
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Table A 47: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, leafy, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	13.0	21.2
Step 2			
Northern Europe	Mar-May	1.22	1.99
Northern Europe	Jun-Sep	1.22	1.99
Northern Europe	Oct-Feb	2.98	4.86
Southern Europe	Mar-May	2.39	3.90
Southern Europe	Jun-Sep	1.81	2.94
Southern Europe	Oct-Feb	2.39	3.90

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 48: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, leafy, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	25.9	42.3
Step 2			
Northern Europe	Mar-May	1.81	2.94
Northern Europe	Jun-Sep	1.81	2.94
Northern Europe	Oct-Feb	4.40	7.16
Southern Europe	Mar-May	3.53	5.76
Southern Europe	Jun-Sep	2.67	4.35
Southern Europe	Oct-Feb	3.53	5.76

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 49: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, fruiting, BBCH 11-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	13.0	21.2
Step 2			
Northern Europe	Mar-May	1.22	1.99

Northern Europe	Jun-Sep	1.22	1.99
Southern Europe	Mar-May	2.39	3.90
Southern Europe	Jun-Sep	1.81	2.94

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 50: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, fruiting, BBCH 11-89 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	25.9	42.3
Step 2			
Northern Europe	Mar-May	1.81	2.94
Northern Europe	Jun-Sep	1.81	2.94
Southern Europe	Mar-May	3.53	5.76
Southern Europe	Jun-Sep	2.67	4.35

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 51: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, bulb, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^a
Step 1			
-	-	13.0	21.2
Step 2			
Northern Europe	Mar-May	1.45	2.37
Northern Europe	Jun-Sep	1.45	2.37
Northern Europe	Oct-Feb	3.57	5.81
Southern Europe	Mar-May	2.86	4.66
Southern Europe	Jun-Sep	2.16	3.52
Southern Europe	Oct-Feb	2.86	4.66

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 52: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to vegetables, bulb, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	25.9	42.3

Step 2			
Northern Europe	Mar-May	1.93	3.14
Northern Europe	Jun-Sep	1.93	3.14
Northern Europe	Oct-Feb	4.70	7.67
Southern Europe	Mar-May	3.78	6.16
Southern Europe	Jun-Sep	2.85	4.65
Southern Europe	Oct-Feb	3.78	6.16

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 53: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to hops, BBCH 21-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	13.2	21.6
Step 2			
Northern Europe	Mar-May	1.09	1.78
Northern Europe	Jun-Sep	1.09	1.78
Northern Europe	Oct-Feb	2.27	3.69
Southern Europe	Mar-May	1.88	3.05
Southern Europe	Jun-Sep	1.49	2.42
Southern Europe	Oct-Feb	1.88	3.05

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 54: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R402173 following application to hops, BBCH 21-89 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L) ^a	Max PEC _{sed} (µg/kg) ^b
Step 1			
-	-	26.5	43.2
Step 2			
Northern Europe	Mar-May	1.60	2.59
Northern Europe	Jun-Sep	1.60	2.59
Northern Europe	Oct-Feb	3.14	5.11
Southern Europe	Mar-May	2.63	4.27
Southern Europe	Jun-Sep	2.11	3.43
Southern Europe	Oct-Feb	2.63	4.27

^a worst case for PEC_{SW} using K_{FOC} 25 mL/kg

^b worst case for PEC_{SED} using K_{FOC} 200 mL/kg

Table A 55: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, leafy, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	9.23	17.3
Step 2			
Northern Europe	Mar-May	0.618	1.15
Northern Europe	Jun-Sep	0.618	1.15
Northern Europe	Oct-Feb	1.41	2.63
Southern Europe	Mar-May	1.14	2.14
Southern Europe	Jun-Sep	0.881	1.64
Southern Europe	Oct-Feb	1.14	2.14

Table A 56: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, leafy, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May	1.12	2.08
Northern Europe	Jun-Sep	1.12	2.08
Northern Europe	Oct-Feb	2.55	4.76
Southern Europe	Mar-May	2.07	3.87
Southern Europe	Jun-Sep	1.59	2.97
Southern Europe	Oct-Feb	2.07	3.87

Table A 57: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, fruiting, BBCH 11-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	9.23	17.3
Step 2			
Northern Europe	Mar-May	0.618	1.15
Northern Europe	Jun-Sep	0.618	1.15
Southern Europe	Mar-May	1.14	2.14
Southern Europe	Jun-Sep	0.881	1.64

Table A 58: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, fruiting, BBCH 11-89 (2 × 250 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May	1.12	2.08
Northern Europe	Jun-Sep	1.12	2.08
Southern Europe	Mar-May	2.07	3.87
Southern Europe	Jun-Sep	1.59	2.97

Table A 59: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, bulb, BBCH 11-49 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	9.23	17.3
Step 2			
Northern Europe	Mar-May	0.724	1.35
Northern Europe	Jun-Sep	0.724	1.35
Northern Europe	Oct-Feb	1.67	3.13
Southern Europe	Mar-May	1.36	2.53
Southern Europe	Jun-Sep	1.04	1.94
Southern Europe	Oct-Feb	1.36	2.53

Table A 60: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to vegetables, bulb, BBCH 11-49 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	18.5	34.6
Step 2			
Northern Europe	Mar-May	1.28	2.39
Northern Europe	Jun-Sep	1.28	2.39
Northern Europe	Oct-Feb	2.96	5.55
Southern Europe	Mar-May	2.40	4.50
Southern Europe	Jun-Sep	1.84	3.44
Southern Europe	Oct-Feb	2.40	4.50

Table A 61: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to hops, BBCH 21-89 (1 × 250 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	9.88	18.3
Step 2			
Northern Europe	Mar-May	0.998	1.79
Northern Europe	Jun-Sep	0.998	1.79
Northern Europe	Oct-Feb	1.52	2.78
Southern Europe	Mar-May	1.35	2.45
Southern Europe	Jun-Sep	1.17	2.12
Southern Europe	Oct-Feb	1.35	2.45

Table A 62: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for R401553 following application to hops, BBCH 21-89 (2 × 250 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	Max PEC _{sed} (µg/kg)
Step 1			
-	-	19.8	36.6
Step 2			
Northern Europe	Mar-May	1.81	3.24
Northern Europe	Jun-Sep	1.81	3.24
Northern Europe	Oct-Feb	2.74	5.00
Southern Europe	Mar-May	2.43	4.41
Southern Europe	Jun-Sep	2.12	3.83
Southern Europe	Oct-Feb	2.43	4.41

A 3.7 KCP 9.2.5: Langa Peñalba, S., & Robinson, P. 2022, Azoxystrobin PEC_{sw} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for azoxystrobin were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{sw} calculations acceptable for the active substance.
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Reference:	KCP 9.2.5
Report	Azoxystrobin - A European Environmental Fate Assessment Using the FOCUS Surface Water Models at Steps 3 to 4 Following Spray Application to Various Crops Report No. 120095-3, (Syngenta File No VV-961781)
Guideline(s):	EFSA (2014). EFSA Guidance Document on clustering and ranking of emissions of active substances of plant protection products and transformation products of these active substances from protected crops (greenhouses and crops grown under cover) to relevant environmental compartments. EFSA Journal 2014; 12(3):3615, 43 pp. FOCUS (2001). FOCUS Surface Water Scenarios in the EU Evaluation Process under 91/414/EEC. Report of the FOCUS Working Group on Surface Water Scenarios, EC Document Reference SANCO/4802/2001 rev. 2. FOCUS (2007). Landscape and mitigation factors in aquatic ecological risk assessment. Volume 1. Extended summary and recommendations, the final report of the FOCUS working group on landscape and mitigation factors in ecological risk assessment, EC document reference SANCO/10422/2005, version 2.0, September 2007. FOCUS (2015). Generic Guidance for FOCUS Surface Water Scenarios, version 1.4.
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes

A 3.7.1 Materials and methods

This report describes a FOCUS modelling study that examined the potential for azoxystrobin to reach surface water following field (foliar) and greenhouse applications to vegetables (leafy and fruiting) and field applications to vegetables (bulb) and hops. The FOCUS tool SWASH (v 5.3), including the operational models FOCUS-MACRO (v 5.5.4), FOCUS-PRZM (v 4.3.1) and FOCUS-TOXSWA (v 5.5.3), were used in the modelling study for Step 3 simulations. The ECPA tool SWAN (v 5.0.0) was used to implement mitigation options at Step 4.

Twofold applications at the rate of 250 g a.s./ha, were considered. Applications starting from approximately BBCH 11 were considered for vegetables with an interval of 7 days between applications for vegetables (leafy and fruiting), as well as 12 days for vegetables (bulb). For hops, applications from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the

wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51) and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown below.

Table A 63: Input parameters related to application for PEC_{SW/SED} calculations

Crop	Vegetables, leafy	Vegetables, fruiting	Vegetables, bulb	Hops
Application rate (g a.s./ha)	250	250	250	250
Number of applications/interval (d)	2 / 7	2 / 7	2 / 12	2 / 12
BBCH growth stage	11 – 49	11 – 89	11 – 89	21 – 89
Application method	Ground spray	Ground spray	Ground spray	Airblast
CAM (Chemical application method)	2 (application foliar linear)			
Soil depth (cm)	4 (default)			
Models used for calculation	FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v5.0.0			

Ground spray application (foliar spray) was considered as the application method in the simulations for vegetables (leafy, fruiting and bulb), while air blast was considered as the application method in the simulations for hops. Crop interception at Step 3 was calculated internally by the model on the basis of the maximum interception capacity and the actual leaf area index.

An application window has to be specified from which the Pesticide Application Timer (PAT), internal to the model, determines actual application dates which were set generically for all scenarios. The application dates for the early and intermediate applications were selected with the tool AppDate (v3.06) based on BBCH growth stages given in the recommended GAP. For the late applications, the end of the application window was set to the harvest date. Simulations were carried out using the FOCUS standard crops ‘vegetables, leafy’, ‘vegetables, fruiting’, ‘vegetables, bulb’ and ‘hops’. Application windows are presented in the table, below.

Table A 64: FOCUS Step 3 Scenario related input parameters for PEC_{SW/SED} calculations for the application of azoxystrobin to vegetables, leafy, vegetables, fruiting, hops and vegetables, bulb

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Vegetables, leafy, BBCH 11 – 49 2 × 250 g a.s./ha; 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D3	30-Apr (120)	30-May (150)	30-Apr (120)	6-Jun (157)
		D3	10-Aug (222)	9-Sep (252)	10-Aug (222)	16-Sep (259)
		D4	18-May (138)	17-Jun (168)	18-May (138)	24-Jun (175)
		D6	21-Aug (233)	20-Sep (263)	21-Aug (233)	27-Sep (270)
		R1	25-Apr (115)	25-May (145)	25-Apr (115)	1-Jun (152)
		R1	5-Aug (217)	4-Sep (247)	5-Aug (217)	11-Sep (254)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	15-Apr (105)
		R2	4-Aug (216)	3-Sep (246)	4-Aug (216)	10-Sep (253)
		R3	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R3	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
		R4	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R4	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
Vegetables, leafy, BBCH 11 – 49 2 × 250 g a.s./ha; 7 days interval, BBCH 49	End of window at harvest	D3	20-Jun (171)	20-Jul (201)	13-Jun (164)	20-Jul (201)
		D3	20-Sep (263)	20-Oct (293)	13-Sep (256)	20-Oct (293)
		D4	27-Aug (239)	26-Sep (269)	20-Aug (232)	26-Sep (269)
		D6	31-Oct (304)	30-Nov (334)	24-Oct (297)	30-Nov (334)
		R1	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
		R1	15-Sep (258)	15-Oct (288)	8-Sep (251)	15-Oct (288)
		R2	1-Jun (152)	1-Jul (182)	25-May (145)	1-Jul (182)
		R2	16-Oct (289)	15-Nov (319)	9-Oct (282)	15-Nov (319)
		R3	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R3	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
		R4	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R4	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
Vegetables, fruiting, BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D6	13-Apr (103)	13-May (133)	13-Apr (103)	20-May (140)
		R2	19-Mar (78)	18-Apr (108)	19-Mar (78)	25-Apr (115)
		R3	13-May (133)	12-Jun (163)	13-May (133)	19-Jun (170)
		R4	23-Apr (113)	23-May (143)	23-Apr (113)	30-May (150)
		D6	15-May (135)	14-Jun (165)	15-May (135)	21-Jun (172)
		R2	19-May (139)	18-Jun (169)	19-May (139)	25-Jun (176)

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Vegetables, fruiting, BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 51	Start of window at BBCH 51 (AppDate 3.06)	R3	15-Jun (166)	15-Jul (196)	15-Jun (166)	22-Jul (203)
		R4	26-May (146)	25-Jun (176)	26-May (146)	2-Jul (183)
Vegetables, fruiting, BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 89	End of window at harvest	D6	11-Jul (192)	10-Aug (222)	4-Jul (185)	10-Aug (222)
		R2	1-Aug (213)	31-Aug (243)	25-Jul (206)	31-Aug (243)
		R3	26-Jul (207)	25-Aug (237)	19-Jul (200)	25-Aug (237)
		R4	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
Vegetables, bulb, BBCH 11 - 49 2 × 250 g a.s./ha; 12 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D3	3-May (123)	2-Jun (153)	3-May (123)	14-Jun (165)
		D4	2-May (122)	1-Jun (152)	2-May (122)	13-Jun (164)
		D6	16-May (136)	15-Jun (166)	16-May (136)	27-Jun (178)
		D6	4-Nov (308)	4-Dec (338)	4-Nov (308)	16-Dec (350)
		R1	28-Apr (118)	28-May (148)	28-Apr (118)	9-Jun (160)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R3	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R4	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
Vegetables, bulb, BBCH 11 - 49 2 × 250 g a.s./ha; 12 days interval, BBCH 49	End of window at harvest	D3	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)
		D4	14-Aug (226)	13-Sep (256)	2-Aug (214)	13-Sep (256)
		D6	1-Jul (182)	31-Jul (212)	19-Jun (170)	31-Jul (212)
		D6	11-Mar (70)	10-Apr (100)	27-Feb (58)	10-Apr (100)
		R1	26-Jul (207)	25-Aug (237)	14-Jul (195)	25-Aug (237)
		R2	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R3	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R4	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 21	Start of window at BBCH 21 (AppDate 3.06)	R1	15-May (135)	14-Jun (165)	15-May (135)	26-Jun (177)
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 51	Start of window at BBCH 51 (AppDate 3.06)	R1	7-Jul (188)	6-Aug (218)	7-Jul (188)	18-Aug (230)

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 89	End of window at harvest	R1	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)

Numbers in brackets are the corresponding 'Julian Day' numbers

Due to the statistical nature of the drift implementation at Step 3 (FOCUS, 2001, 2015), the drift loading to the water body for a single application is higher than the loading from an individual event from a multiple application pattern; this can result in higher global maximum PEC_{sw} values for the single application. Therefore all values are presented, but where the single application results in a higher maximum PEC, this is highlighted in the summary tables.

Step 4 calculations were carried out considering the following mitigation methods:

- spray drift reduction by non-sprayed buffer strips of 10 m, 15 m and 20 m for hops only
- spray drift reduction by 50%, 75% and 90% drift reduction nozzles for hops only
- runoff reduction using vegetated buffer strips of 10 m and 20 m using runoff and erosion reduction values as given by the FOCUS Working Group on Landscape and Mitigation Factors (2007) of 60/85% for 10 m and 80/95% for 20 m, for vegetables (leafy, fruiting, bulb).
- Runoff reduction considering 5 m VFSmod for vegetables (leafy, fruiting, bulb).

In order to simulate conditions in greenhouses, drift entries to surface water were amended with a drift rate of 0.1% of the dose rate at Step 3 (EFSA, 2014). As entry via runoff is not expected to occur in greenhouses, only the FOCUS D scenarios were considered.

The input parameters for azoxystrobin used in the modelling are shown in Table 3. In accordance with FOCUS guidance (FOCUS 2015), since the K_{FOC} value of azoxystrobin is between 100 – 2000 mL/g calculations were run twice with two different parameter sets for degradation in water and sediment. In Option 1 the measured whole system DT₅₀ was used to describe the degradation in sediment together with the default value of 1000 days for water. In Option 2 these DT₅₀ values were reversed.

Table A 65: Input parameters related to active substance azoxystrobin for PEC_{SW/SED} calculations

Compound	Azoxystrobin	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	Yes / EFSA, 2010
Water solubility (mg/L)	6.0 (20°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1×10^{-10} (20 °C)	Yes / EFSA, 2010
K _{FOC} / K _{FOM} (mL/g)	423 / 245 (arithmetic mean, n = 6)	Yes / EFSA, 2010 K _{FOM} = K _{FOC} /1.724
Freundlich Exponent 1/n	0.86 (arithmetic mean, n = 6)	Yes / EFSA, 2010
Plant Uptake	0 (worst case value)	FOCUS default
DT _{50,soil} (d)	78 ^a (geometric mean field , n = 13)	Yes / EFSA, 2010
DT _{50,water} (d)	Option 1: 1000 ^{a,b} Option 2: 205 ^{a,b} (geometric mean, total system, n = 2)	FOCUS default **Yes / EFSA, 2010
DT _{50,sed} (d)	Option 1: 205 ^{a,b} (geometric mean, total system, n = 2) Option 2: 1000 ^{a,b}	Yes / EFSA, 2010 **FOCUS default

^a calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^b for compounds with K_{oc} between 100 and 2000 mL/g , the FOCUS kinetics advice regarding running simulations with both combinations for ascribing the whole system DT₅₀ and default and selecting the results that give the highest concentrations for the risk assessment was followed.

A 3.7.2 RESULTS

Predicted environmental concentrations in surface water (PEC_{SW}) and sediment (PEC_{SED}) were calculated for the use of azoxystrobin on vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops in Europe in accordance with FOCUS guidelines.

The results are presented in the tables below in the following order:

Field uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Option 1 and Option 2

FOCUS Application dates and global maximum timing

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over Option 1 and Option 2

FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables,

leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over single and multiple applications

FOCUS Step 4 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Option 1 and Option 2

FOCUS Step 4 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over Option 1 and Option 2

FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over single and multiple applications

Greenhouse uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy and vegetables, fruiting, Option 1 and Option 2 – 0.1% drift

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy and vegetables, fruiting, – Maximum over Option 1 and Option 2 – 0.1% drift

Field uses:

Table A 66: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1.58	Drift	0.795	1.58	Drift	0.795
	D3	ditch 2 nd	1.59	Drift	0.851	1.59	Drift	0.851
	D4	pond	0.658	Drainage	4.29	0.651	Drainage	4.33
	D4	stream	1.26	Drift	1.66	1.26	Drift	1.70
	D6	ditch	2.58	Drainage	2.50	2.58	Drainage	2.64
	R1	pond 1 st	0.224	Runoff	1.54	0.221	Runoff	1.55
	R1	pond 2 nd	0.206	Runoff	1.61	0.200	Runoff	1.61
	R1	stream 1 st	2.29	Runoff	0.880	2.29	Runoff	0.885
	R1	stream 2 nd	1.87	Runoff	0.965	1.87	Runoff	0.967
	R2	stream 1 st	1.38	Drift	2.20	1.38	Drift	2.20
	R2	stream 2 nd	1.40	Drift	1.53	1.40	Drift	1.55
	R3	stream 1 st	3.37	Runoff	1.22	3.37	Runoff	1.22
	R3	stream 2 nd	3.36	Runoff	2.53	3.36	Runoff	2.54
	R4	stream 1 st	1.77	Runoff	0.847	1.77	Runoff	0.848
	R4	stream 2 nd	5.39	Runoff	2.63	5.39	Runoff	2.63
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1.39	Drift	0.931	1.39	Drift	0.935
	D3	ditch 2 nd	1.39	Drift	0.957	1.39	Drift	0.962
	D4	pond	1.38	Drainage	8.41	1.36	Drainage	8.50
	D4	stream	1.33	Drainage	3.27	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.28	5.66	Drainage	5.58
	R1	pond 1 st	0.450	Runoff	2.76	0.446	Runoff	2.79
	R1	pond 2 nd	0.412	Runoff	3.11	0.401	Runoff	3.11
	R1	stream 1 st	4.91	Runoff	1.80	4.91	Runoff	1.81
	R1	stream 2 nd	4.26	Runoff	2.18	4.26	Runoff	2.19
	R2	stream 1 st	2.51	Runoff	5.17	2.51	Runoff	5.18
	R2	stream 2 nd	1.28	Runoff	2.82	1.28	Runoff	2.83
	R3	stream 1 st	4.35	Runoff	2.68	4.35	Runoff	2.69
	R3	stream 2 nd	5.77	Runoff	4.84	5.77	Runoff	4.89
	R4	stream 1 st	6.45	Runoff	3.13	6.45	Runoff	3.13
	R4	stream 2 nd	8.52	Runoff	4.79	8.52	Runoff	4.82

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1.59	Drift	0.808	1.59	Drift	0.808
	D3	ditch 2 nd	1.58	Drift	0.593	1.58	Drift	0.593
	D4	pond	0.398	Drainage	2.76	0.393	Drainage	2.77
	D4	stream	1.13	Drift	0.965	1.13	Drift	0.975
	D6	ditch	5.12	Drainage	5.64	5.12	Drainage	5.96
	R1	pond 1 st	0.608	Runoff	3.36	0.598	Runoff	3.29
	R1	pond 2 nd	0.296	Runoff	1.88	0.292	Runoff	1.89
	R1	stream 1 st	2.31	Runoff	2.85	2.31	Runoff	2.86
	R1	stream 2 nd	1.43	Runoff	0.577	1.43	Runoff	0.586
	R2	stream 1 st	1.40	Drift	2.28	1.40	Drift	2.43
	R2	stream 2 nd	1.39	Drift	3.29	1.39	Drift	3.31
	R3	stream 1 st	2.58	Runoff	2.47	2.58	Runoff	2.54
	R3	stream 2 nd	2.50	Runoff	2.39	2.50	Runoff	2.49
	R4	stream 1 st	3.24	Runoff	2.33	3.24	Runoff	2.35
	R4	stream 2 nd	3.39	Runoff	2.30	3.39	Runoff	2.30
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1.39	Drift	0.930	1.39	Drift	0.935
	D3	ditch 2 nd	1.38	Drift	0.718	1.38	Drift	0.720
	D4	pond	1.40	Drainage	8.37	1.39	Drainage	8.40
	D4	stream	1.68	Drainage	3.29	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	13.4	12.0	Drainage	14.1
	R1	pond 1 st	0.897	Runoff	5.50	0.887	Runoff	5.40
	R1	pond 2 nd	0.721	Runoff	4.22	0.713	Runoff	4.23
	R1	stream 1 st	4.88	Runoff	4.90	4.88	Runoff	4.93
	R1	stream 2 nd	3.76	Runoff	1.47	3.76	Runoff	1.48
	R2	stream 1 st	1.74	Runoff	4.53	1.74	Runoff	4.54
	R2	stream 2 nd	1.41	Runoff	4.85	1.41	Runoff	4.92
	R3	stream 1 st	4.38	Runoff	2.96	4.38	Runoff	3.05
	R3	stream 2 nd	5.58	Runoff	7.80	5.58	Runoff	7.88
	R4	stream 1 st	7.15	Runoff	3.94	7.15	Runoff	3.95
	R4	stream 2 nd	6.92	Runoff	4.74	6.92	Runoff	4.76

Table A 67: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56	Drift	0.432	1.56	Drift	0.440
	R2	stream	1.38	Drift	2.16	1.38	Drift	2.16
	R3	stream	3.99	Runoff	1.56	3.99	Runoff	1.56
	R4	stream	5.71	Runoff	2.84	5.71	Runoff	2.84
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1.37	Drift	0.798	1.37	Drift	0.866
	R2	stream	1.72	Runoff	2.16	1.72	Runoff	2.21
	R3	stream	4.22	Runoff	2.75	4.22	Runoff	2.78
	R4	stream	8.52	Runoff	4.65	8.52	Runoff	4.66
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1.58	Drift	0.583	1.58	Drift	0.596
	R2	stream	1.40	Drift	1.85	1.40	Drift	1.85
	R3	stream	2.27	Runoff	1.96	2.27	Runoff	1.97
	R4	stream	2.98	Runoff	1.44	2.98	Runoff	1.44
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1.38	Drift	1.10	1.38	Drift	1.19
	R2	stream	1.90	Runoff	3.90	1.90	Runoff	3.91
	R3	stream	5.55	Runoff	4.41	5.55	Runoff	4.42
	R4	stream	7.40	Runoff	3.53	7.40	Runoff	3.54
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.96	Drainage	1.53	1.96	Drainage	1.64
	R2	stream	1.40	Drift	2.81	1.40	Drift	2.89
	R3	stream	2.59	Runoff	2.63	2.59	Runoff	2.74
	R4	stream	3.73	Runoff	2.11	3.73	Runoff	2.13
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.67	Drainage	3.10	3.67	Drainage	3.33
	R2	stream	1.21	Drift	5.35	1.21	Drift	5.52
	R3	stream	5.49	Runoff	5.66	5.49	Runoff	5.72
	R4	stream	6.62	Runoff	3.82	6.62	Runoff	3.84

Table A 68: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58	Drift	0.799	1.58	Drift	0.799
	D4	pond	0.622	Drainage	4.06	0.615	Drainage	4.10
	D4	stream	1.22	Drift	1.56	1.22	Drift	1.60
	D6	ditch 1 st	1.60	Drift	1.31	1.60	Drift	1.33
	D6	ditch 2 nd	4.57	Drainage	3.97	4.57	Drainage	4.48
	R1	pond	0.217	Runoff	1.28	0.215	Runoff	1.29
	R1	stream	2.24	Runoff	0.959	2.24	Runoff	0.961
	R2	stream	1.38	Drift	2.20	1.38	Drift	2.20
	R3	stream	3.39	Runoff	1.21	3.39	Runoff	1.21
	R4	stream	5.69	Runoff	2.75	5.69	Runoff	2.75
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.916	1.39	Drift	0.921
	D4	pond	1.31	Drainage	8.06	1.30	Drainage	8.14
	D4	stream	1.26	Drainage	3.11	1.26	Drainage	3.18
	D6	ditch 1 st	2.37	Drainage	2.32	2.37	Drainage	2.58
	D6	ditch 2 nd	12.7	Drainage	13.0	12.7	Drainage	14.1
	R1	pond	0.493	Runoff	2.68	0.488	Runoff	2.69
	R1	stream	5.52	Runoff	2.22	5.52	Runoff	2.23
	R2	stream	2.42	Runoff	3.94	2.42	Runoff	3.96
	R3	stream	4.48	Runoff	2.70	4.48	Runoff	2.71
	R4	stream	6.23	Runoff	3.50	6.23	Runoff	3.51
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.809	1.59	Drift	0.809
	D4	pond	0.494	Drainage	3.33	0.488	Drainage	3.35
	D4	stream	1.13	Drift	1.18	1.13	Drift	1.19
	D6	ditch 1 st	1.60	Drift	2.34	1.60	Drift	2.37
	D6	ditch 2 nd	1.61	Drift	1.56	1.61	Drift	1.57
	R1	pond	0.120	Runoff	0.921	0.117	Runoff	0.923
	R1	stream	1.04	Runoff	0.375	1.04	Runoff	0.377
	R2	stream	1.40	Drift	2.85	1.40	Drift	2.86
	R3	stream	3.31	Runoff	1.36	3.31	Runoff	1.37
	R4	stream	4.45	Runoff	2.52	4.45	Runoff	2.53

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.916	1.39	Drift	0.921
	D4	pond	1.36	Drainage	8.32	1.34	Drainage	8.37
	D4	stream	1.61	Drainage	3.13	1.61	Drainage	3.17
	D6	ditch 1 st	1.73	Drainage	3.39	1.73	Drainage	3.50
	D6	ditch 2 nd	1.46	Drift	1.97	1.46	Drift	2.18
	R1	pond	0.284	Runoff	1.99	0.278	Runoff	1.99
	R1	stream	2.86	Runoff	1.000	2.86	Runoff	1.00
	R2	stream	1.87	Runoff	4.04	1.87	Runoff	4.06
	R3	stream	5.07	Runoff	2.18	5.07	Runoff	2.18
	R4	stream	6.45	Runoff	3.90	6.45	Runoff	3.92

Table A 69: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Hops, 1 × 250 g a.s./ha, BBCH 21	R1	pond	0.657	Drift	2.65	0.657	Drift	2.62
	R1	stream	9.44	Drift	1.25	9.44	Drift	1.25
Hops, 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72	0.841	Drift	3.72
	R1	stream	7.82	Drift	1.08	7.82	Drift	1.08
Hops, 1 × 250 g a.s./ha, BBCH 51	R1	pond	0.657	Drift	2.70	0.657	Drift	2.64
	R1	stream	9.21	Drift	0.722	9.21	Drift	0.722
Hops, 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81	0.817	Drift	3.71
	R1	stream	7.81	Drift	0.755	7.81	Drift	0.759
Hops, 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.657	Drift	2.82	0.657	Drift	2.76
	R1	stream	9.46	Drift	1.33	9.46	Drift	1.33
Hops, 2 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89	0.796	Drift	3.79
	R1	stream	8.03	Drift	1.22	8.03	Drift	1.22

Table A 70: FOCUS Application dates and global maximum timing for vegetables, leafy

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	4-May-92	-	4-May-92	4-May-92
	D3	ditch 2 nd	18-Aug-92	-	18-Aug-92	18-Aug-92
	D4	pond	18-May-85	-	30-Dec-85	29-Dec-85
	D4	stream	18-May-85	-	18-May-85	18-May-85
	D6	ditch	25-Aug-86	-	29-Oct-86	29-Oct-86
	R1	pond 1 st	26-Apr-84	-	30-May-84	30-May-84
	R1	pond 2 nd	20-Aug-78	-	31-Dec-78	31-Dec-78
	R1	stream 1 st	26-Apr-84	-	20-May-84	20-May-84
	R1	stream 2 nd	20-Aug-78	-	17-Sep-78	17-Sep-78
	R2	stream 1 st	22-Mar-77	-	22-Mar-77	22-Mar-77
	R2	stream 2 nd	5-Aug-89	-	5-Aug-89	5-Aug-89
	R3	stream 1 st	10-Mar-80	-	22-Mar-80	22-Mar-80
	R3	stream 2 nd	25-Jun-75	-	1-Jul-75	1-Jul-75
	R4	stream 1 st	8-Mar-84	-	12-Apr-84	12-Apr-84
	R4	stream 2 nd	23-Jun-85	-	28-Jun-85	28-Jun-85
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	4-May-92	14-May-92	14-May-92	14-May-92
	D3	ditch 2 nd	18-Aug-92	26-Aug-92	26-Aug-92	26-Aug-92
	D4	pond	18-May-85	29-May-85	29-Dec-85	29-Dec-85
	D4	stream	18-May-85	29-May-85	7-Dec-85	7-Dec-85
	D6	ditch	25-Aug-86	1-Sep-86	29-Oct-86	29-Oct-86
	R1	pond 1 st	26-Apr-84	3-May-84	30-May-84	30-May-84
	R1	pond 2 nd	20-Aug-78	2-Sep-78	31-Dec-78	31-Dec-78
	R1	stream 1 st	26-Apr-84	3-May-84	20-May-84	20-May-84
	R1	stream 2 nd	20-Aug-78	2-Sep-78	17-Sep-78	17-Sep-78
	R2	stream 1 st	21-Mar-77	30-Mar-77	3-Apr-77	3-Apr-77
	R2	stream 2 nd	5-Aug-89	12-Aug-89	22-Oct-89	22-Oct-89
	R3	stream 1 st	10-Mar-80	28-Mar-80	20-Apr-80	20-Apr-80
	R3	stream 2 nd	25-Jun-75	6-Jul-75	10-Jul-75	10-Jul-75
	R4	stream 1 st	8-Mar-84	3-Apr-84	12-Apr-84	12-Apr-84
	R4	stream 2 nd	23-Jun-85	30-Jun-85	5-Jul-85	5-Jul-85

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	25-Jun-92	-	25-Jun-92	25-Jun-92
	D3	ditch 2 nd	19-Sep-92	-	19-Sep-92	19-Sep-92
	D4	pond	27-Aug-85	-	31-Dec-85	31-Dec-85
	D4	stream	27-Aug-85	-	27-Aug-85	27-Aug-85
	D6	ditch	31-Oct-86	-	23-Dec-86	23-Dec-86
	R1	pond 1 st	29-Jun-78	-	18-Jul-78	18-Jul-78
	R1	pond 2 nd	19-Sep-78	-	31-Dec-78	31-Dec-78
	R1	stream 1 st	29-Jun-78	-	9-Jul-78	9-Jul-78
	R1	stream 2 nd	19-Sep-78	-	25-Oct-78	25-Oct-78
	R2	stream 1 st	4-Jun-89	-	4-Jun-89	4-Jun-89
	R2	stream 2 nd	24-Oct-77	-	24-Oct-77	24-Oct-77
	R3	stream 1 st	18-May-80	-	23-May-80	23-May-80
	R3	stream 2 nd	28-Aug-75	-	2-Sep-75	2-Sep-75
	R4	stream 1 st	4-May-84	-	10-May-84	10-May-84
	R4	stream 2 nd	19-Aug-85	-	24-Aug-85	24-Aug-85
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	14-Jun-92	25-Jun-92	25-Jun-92	25-Jun-92
	D3	ditch 2 nd	17-Sep-92	24-Sep-92	24-Sep-92	24-Sep-92
	D4	pond	27-Aug-85	10-Sep-85	31-Dec-85	31-Dec-85
	D4	stream	27-Aug-85	10-Sep-85	7-Dec-85	7-Dec-85
	D6	ditch	25-Oct-86	1-Nov-86	5-Nov-86	5-Nov-86
	R1	pond 1 st	29-Jun-78	11-Jul-78	18-Jul-78	18-Jul-78
	R1	pond 2 nd	19-Sep-78	6-Oct-78	31-Dec-78	31-Dec-78
	R1	stream 1 st	29-Jun-78	11-Jul-78	18-Jul-78	18-Jul-78
	R1	stream 2 nd	19-Sep-78	6-Oct-78	25-Oct-78	25-Oct-78
	R2	stream 1 st	25-May-77	3-Jun-77	10-Jun-77	10-Jun-77
	R2	stream 2 nd	11-Oct-77	24-Oct-77	6-Nov-77	6-Nov-77
	R3	stream 1 st	25-Apr-80	18-May-80	23-May-80	23-May-80
	R3	stream 2 nd	12-Aug-75	19-Aug-75	23-Aug-75	23-Aug-75
	R4	stream 1 st	25-Apr-84	4-May-84	10-May-84	10-May-84
	R4	stream 2 nd	12-Aug-85	19-Aug-85	24-Aug-85	24-Aug-85

Table A 71: FOCUS Application dates and global maximum timing for vegetables, fruiting

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	23-Apr-86	↓	23-Apr-86	23-Apr-86
	R2	stream	22-Mar-77	↓	22-Mar-77	22-Mar-77
	R3	stream	18-May-80	↓	23-May-80	23-May-80
	R4	stream	23-Apr-84	↓	28-Apr-84	28-Apr-84
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	23-Apr-86	7-May-86	7-May-86	7-May-86
	R2	stream	22-Mar-77	22-Apr-77	5-May-77	5-May-77
	R3	stream	18-May-80	01-Jun-80	22-Jun-80	22-Jun-80
	R4	stream	23-Apr-84	4-May-84	9-May-84	9-May-84
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	19-May-86	↓	19-May-86	19-May-86
	R2	stream	20-May-77	↓	20-May-77	20-May-77
	R3	stream	18-Jun-75	↓	29-Jun-75	29-Jun-75
	R4	stream	27-May-84	↓	14-Jun-84	14-Jun-84
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	19-May-86	31-May-86	19-May-86	19-May-86
	R2	stream	20-May-77	27-May-77	10-Jun-77	10-Jun-77
	R3	stream	18-Jun-75	25-Jun-75	29-Jun-75	29-Jun-75
	R4	stream	27-May-84	6-Jun-84	14-Jun-84	14-Jun-84
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	17-Jul-86	↓	30-Oct-86	30-Oct-86
	R2	stream	5-Aug-89	↓	5-Aug-89	5-Aug-89
	R3	stream	30-Jul-75	↓	5-Aug-75	5-Aug-75
	R4	stream	23-Jun-85	↓	28-Jun-85	28-Jun-85
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	6-Jul-86	17-Jul-86	30-Oct-86	30-Oct-86
	R2	stream	5-Aug-89	12-Aug-89	12-Aug-89	12-Aug-89
	R3	stream	24-Jul-75	31-Jul-75	5-Aug-75	5-Aug-75
	R4	stream	12-Jun-85	23-Jun-85	28-Jun-85	28-Jun-85

Table A 72: FOCUS Application dates and global maximum timing for vegetables, bulb

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	4-May-92	-	4-May-92	4-May-92
	D4	pond	12-May-85	-	29-Dec-85	29-Dec-85
	D4	stream	12-May-85	-	12-May-85	12-May-85
	D6	ditch 1 st	16-May-86	-	16-May-86	16-May-86
	D6	ditch 2 nd	6-Nov-86	-	19-Jan-87	19-Jan-87
	R1	pond	28-Apr-84	-	30-May-84	30-May-84
	R1	stream	28-Apr-84	-	20-May-84	20-May-84
	R2	stream	22-Mar-77	-	22-Mar-77	22-Mar-77
	R3	stream	10-Mar-80	-	22-Mar-80	22-Mar-80
	R4	stream	9-Mar-84	-	14-Mar-84	14-Mar-84
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	4-May-92	16-May-92	16-May-92	16-May-92
	D4	pond	12-May-85	24-May-85	29-Dec-85	29-Dec-85
	D4	stream	12-May-85	24-May-85	7-Dec-85	7-Dec-85
	D6	ditch 1 st	16-May-86	28-May-86	5-Nov-86	5-Nov-86
	D6	ditch 2 nd	1-Dec-86	13-Dec-86	25-Dec-86	25-Dec-86
	R1	pond	28-Apr-84	10-May-84	30-May-84	30-May-84
	R1	stream	28-Apr-84	10-May-84	20-May-84	20-May-84
	R2	stream	14-Mar-77	26-Mar-77	3-Apr-77	3-Apr-77
	R3	stream	10-Mar-80	28-Mar-80	20-Apr-80	20-Apr-80
	R4	stream	9-Mar-84	3-Apr-84	11-Apr-84	11-Apr-84
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	4-Aug-92	-	4-Aug-92	4-Aug-92
	D4	pond	27-Aug-85	-	30-Dec-85	30-Dec-85
	D4	stream	27-Aug-85	-	27-Aug-85	27-Aug-85
	D6	ditch 1 st	1-Jul-86	-	1-Jul-86	1-Jul-86
	D6	ditch 2 nd	14-Mar-86	-	14-Mar-86	14-Mar-86
	R1	pond	28-Jul-78	-	31-Dec-78	31-Dec-78
	R1	stream	28-Jul-78	-	29-Sep-78	29-Sep-78
	R2	stream	7-May-77	-	7-May-77	7-May-77
	R3	stream	18-May-80	-	23-May-80	23-May-80
	R4	stream	7-May-84	-	12-May-84	12-May-84
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	24-Jul-92	5-Aug-92	5-Aug-92	5-Aug-92
	D4	pond	27-Aug-85	10-Sep-85	30-Dec-85	30-Dec-85
	D4	stream	27-Aug-85	10-Sep-85	7-Dec-85	7-Dec-85
	D6	ditch 1 st	19-Jun-86	1-Jul-86	5-Nov-86	5-Nov-86

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
	D6	ditch 2 nd	27-Feb-86	14-Mar-86	27-Feb-86	27-Feb-86
	R1	pond	28-Jul-78	20-Aug-78	31-Dec-78	31-Dec-78
	R1	stream	28-Jul-78	20-Aug-78	29-Sep-78	29-Sep-78
	R2	stream	22-Apr-77	7-May-77	13-May-77	13-May-77
	R3	stream	22-Apr-80	18-May-80	23-May-80	23-May-80
	R4	stream	20-Apr-84	7-May-84	12-May-84	12-May-84

Table A 73: FOCUS Application dates and global maximum timing for hops

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Hops, 1 × 250 g a.s./ha, BBCH 21	R1	pond	13-Jun-84	-	13-Jun-84	13-Jun-84
	R1	stream	13-Jun-84	-	13-Jun-84	13-Jun-84
Hops, 2 × 250 g a.s./ha, BBCH 21	R1	pond	15-May-84	31-May-84	31-May-84	31-May-84
	R1	stream	15-May-84	31-May-84	31-May-84	31-May-84
Hops, 1 × 250 g a.s./ha, BBCH 51	R1	pond	11-Jul-78	-	11-Jul-78	11-Jul-78
	R1	stream	11-Jul-78	-	11-Jul-78	11-Jul-78
Hops, 2 × 250 g a.s./ha, BBCH 51	R1	pond	11-Jul-78	28-Jul-78	28-Jul-78	28-Jul-78
	R1	stream	11-Jul-78	28-Jul-78	28-Jul-78	28-Jul-78
Hops, 1 × 250 g a.s./ha, BBCH 89	R1	pond	20-Aug-78	-	20-Aug-78	20-Aug-78
	R1	stream	20-Aug-78	-	20-Aug-78	20-Aug-78
Hops, 2 × 250 g a.s./ha, BBCH 89	R1	pond	28-Jul-78	20-Aug-78	20-Aug-78	20-Aug-78
	R1	stream	28-Jul-78	20-Aug-78	20-Aug-78	20-Aug-78

Table A 74: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1.58	Drift	0.795
	D3	ditch 2 nd	1.59	Drift	0.851
	D4	pond	0.658	Drainage	4.33
	D4	stream	1.26	Drift	1.70
	D6	ditch	2.58	Drainage	2.64
	R1	pond 1 st	0.224	Runoff	1.55
	R1	pond 2 nd	0.206	Runoff	1.61
	R1	stream 1 st	2.29	Runoff	0.885
	R1	stream 2 nd	1.87	Runoff	0.967
	R2	stream 1 st	1.38	Drift	2.20
	R2	stream 2 nd	1.40	Drift	1.55
	R3	stream 1 st	3.37	Runoff	1.22
	R3	stream 2 nd	3.36	Runoff	2.54
	R4	stream 1 st	1.77	Runoff	0.848
	R4	stream 2 nd	5.39	Runoff	2.63
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1.39	Drift	0.935
	D3	ditch 2 nd	1.39	Drift	0.962
	D4	pond	1.38	Drainage	8.50
	D4	stream	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.58
	R1	pond 1 st	0.450	Runoff	2.79
	R1	pond 2 nd	0.412	Runoff	3.11
	R1	stream 1 st	4.91	Runoff	1.81
	R1	stream 2 nd	4.26	Runoff	2.19
	R2	stream 1 st	2.51	Runoff	5.18
	R2	stream 2 nd	1.28	Runoff	2.83
	R3	stream 1 st	4.35	Runoff	2.69
	R3	stream 2 nd	5.77	Runoff	4.89
	R4	stream 1 st	6.45	Runoff	3.13
	R4	stream 2 nd	8.52	Runoff	4.82
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1.59	Drift	0.808
	D3	ditch 2 nd	1.58	Drift	0.593
	D4	pond	0.398	Drainage	2.77
	D4	stream	1.13	Drift	0.975
	D6	ditch	5.12	Drainage	5.96

Application scenario	Scenario	Water body	PEC _{sw} (µg/L) ^a	Dominant Route of Entry	PEC _{sed} (µg/kg) ^a
	R1	pond 1 st	0.608	Runoff	3.36
	R1	pond 2 nd	0.296	Runoff	1.89
	R1	stream 1 st	2.31	Runoff	2.86
	R1	stream 2 nd	1.43	Runoff	0.586
	R2	stream 1 st	1.40	Drift	2.43
	R2	stream 2 nd	1.39	Drift	3.31
	R3	stream 1 st	2.58	Runoff	2.54
	R3	stream 2 nd	2.50	Runoff	2.49
	R4	stream 1 st	3.24	Runoff	2.35
	R4	stream 2 nd	3.39	Runoff	2.30
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1.39	Drift	0.935
	D3	ditch 2 nd	1.38	Drift	0.720
	D4	pond	1.40	Drainage	8.40
	D4	stream	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	14.1
	R1	pond 1 st	0.897	Runoff	5.50
	R1	pond 2 nd	0.721	Runoff	4.23
	R1	stream 1 st	4.88	Runoff	4.93
	R1	stream 2 nd	3.76	Runoff	1.48
	R2	stream 1 st	1.74	Runoff	4.54
	R2	stream 2 nd	1.41	Runoff	4.92
	R3	stream 1 st	4.38	Runoff	3.05
	R3	stream 2 nd	5.58	Runoff	7.88
	R4	stream 1 st	7.15	Runoff	3.95
	R4	stream 2 nd	6.92	Runoff	4.76

^a maximum over option 1 and 2

Table A 75: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56	Drift	0.440
	R2	stream	1.38	Drift	2.16
	R3	stream	3.99	Runoff	1.56
	R4	stream	5.71	Runoff	2.84
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1.37	Drift	0.866
	R2	stream	1.72	Runoff	2.21
	R3	stream	4.22	Runoff	2.78
	R4	stream	8.52	Runoff	4.66
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1.58	Drift	0.596
	R2	stream	1.40	Drift	1.85
	R3	stream	2.27	Runoff	1.97
	R4	stream	2.98	Runoff	1.44
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1.38	Drift	1.19
	R2	stream	1.90	Runoff	3.91
	R3	stream	5.55	Runoff	4.42
	R4	stream	7.40	Runoff	3.54
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.96	Drainage	1.64
	R2	stream	1.40	Drift	2.89
	R3	stream	2.59	Runoff	2.74
	R4	stream	3.73	Runoff	2.13
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.67	Drainage	3.33
	R2	stream	1.21	Drift	5.52
	R3	stream	5.49	Runoff	5.72
	R4	stream	6.62	Runoff	3.84

^a maximum over option 1 and 2

Table A 76: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58	Drift	0.799
	D4	pond	0.622	Drainage	4.10
	D4	stream	1.22	Drift	1.60
	D6	ditch 1 st	1.60	Drift	1.33
	D6	ditch 2 nd	4.57	Drainage	4.48
	R1	pond	0.217	Runoff	1.29
	R1	stream	2.24	Runoff	0.961
	R2	stream	1.38	Drift	2.20
	R3	stream	3.39	Runoff	1.21
	R4	stream	5.69	Runoff	2.75
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.921
	D4	pond	1.31	Drainage	8.14
	D4	stream	1.26	Drainage	3.18
	D6	ditch 1 st	2.37	Drainage	2.58
	D6	ditch 2 nd	12.7	Drainage	14.1
	R1	pond	0.493	Runoff	2.69
	R1	stream	5.52	Runoff	2.23
	R2	stream	2.42	Runoff	3.96
	R3	stream	4.48	Runoff	2.71
	R4	stream	6.23	Runoff	3.51
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.809
	D4	pond	0.494	Drainage	3.35
	D4	stream	1.13	Drift	1.19
	D6	ditch 1 st	1.60	Drift	2.37
	D6	ditch 2 nd	1.61	Drift	1.57
	R1	pond	0.120	Runoff	0.923
	R1	stream	1.04	Runoff	0.377
	R2	stream	1.40	Drift	2.86
	R3	stream	3.31	Runoff	1.37
	R4	stream	4.45	Runoff	2.53
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.921
	D4	pond	1.36	Drainage	8.37
	D4	stream	1.61	Drainage	3.17
	D6	ditch 1 st	1.73	Drainage	3.50
	D6	ditch 2 nd	1.46	Drift	2.18

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
	R1	pond	0.284	Runoff	1.99
	R1	stream	2.86	Runoff	1.00
	R2	stream	1.87	Runoff	4.06
	R3	stream	5.07	Runoff	2.18
	R4	stream	6.45	Runoff	3.92

^a maximum over option 1 and 2

Table A 77: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Hops, 1 × 250 g a.s./ha, BBCH 21	R1	pond	0.657	Drift	2.65
	R1	stream	9.44	Drift	1.25
Hops, 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	7.82	Drift	1.08
Hops, 1 × 250 g a.s./ha, BBCH 51	R1	pond	0.657	Drift	2.70
	R1	stream	9.21	Drift	0.722
Hops, 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	7.81	Drift	0.759
Hops, 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.657	Drift	2.82
	R1	stream	9.46	Drift	1.33
Hops, 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	8.03	Drift	1.22

^a maximum over option 1 and 2

Table A 78: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1.58*	Drift	0.935
	D3	ditch 2 nd	1.59*	Drift	0.962
	D4	pond	1.38	Drainage	8.50
	D4	stream	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.58
	R1	pond 1 st	0.450	Runoff	2.79

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
	R1	pond 2 nd	0.412	Runoff	3.11
	R1	stream 1 st	4.91	Runoff	1.81
	R1	stream 2 nd	4.26	Runoff	2.19
	R2	stream 1 st	2.51	Runoff	5.18
	R2	stream 2 nd	1.40*	Drift	2.83
	R3	stream 1 st	4.35	Runoff	2.69
	R3	stream 2 nd	5.77	Runoff	4.89
	R4	stream 1 st	6.45	Runoff	3.13
	R4	stream 2 nd	8.52	Runoff	4.82
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1.59*	Drift	0.935
	D3	ditch 2 nd	1.58*	Drift	0.720
	D4	pond	1.40	Drainage	8.40
	D4	stream	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	14.1
	R1	pond 1 st	0.897	Runoff	5.50
	R1	pond 2 nd	0.721	Runoff	4.23
	R1	stream 1 st	4.88	Runoff	4.93
	R1	stream 2 nd	3.76	Runoff	1.48
	R2	stream 1 st	1.74	Runoff	4.54
	R2	stream 2 nd	1.41	Runoff	4.92
	R3	stream 1 st	4.38	Runoff	3.05
	R3	stream 2 nd	5.58	Runoff	7.88
	R4	stream 1 st	7.15	Runoff	3.95
	R4	stream 2 nd	6.92	Runoff	4.76

^a values resulting from single applications are marked *

Table A 79: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56*	Drift	0.866
	R2	stream	1.72	Runoff	2.21
	R3	stream	4.22	Runoff	2.78
	R4	stream	8.52	Runoff	4.66
Vegetables, fruiting, 2 × 250 g a.s./ha,	D6	ditch	1.58*	Drift	1.19
	R2	stream	1.90	Runoff	3.91

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
BBCH 51	R3	stream	5.55	Runoff	4.42
	R4	stream	7.40	Runoff	3.54
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.67	Drainage	3.33
	R2	stream	1.40*	Drift	5.52
	R3	stream	5.49	Runoff	5.72
	R4	stream	6.62	Runoff	3.84

^a values resulting from single applications are marked *

Table A 80: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58*	Drift	0.921
	D4	pond	1.31	Drainage	8.14
	D4	stream	1.26	Drainage	3.18
	D6	ditch 1 st	2.37	Drainage	2.58
	D6	ditch 2 nd	12.7	Drainage	14.1
	R1	pond	0.493	Runoff	2.69
	R1	stream	5.52	Runoff	2.23
	R2	stream	2.42	Runoff	3.96
	R3	stream	4.48	Runoff	2.71
	R4	stream	6.23	Runoff	3.51
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59*	Drift	0.921
	D4	pond	1.36	Drainage	8.37
	D4	stream	1.61	Drainage	3.17
	D6	ditch 1 st	1.73	Drainage	3.5
	D6	ditch 2 nd	1.61*	Drift	2.18
	R1	pond	0.284	Runoff	1.99
	R1	stream	2.86	Runoff	1.00
	R2	stream	1.87	Runoff	4.06
	R3	stream	5.07	Runoff	2.18
	R4	stream	6.45	Runoff	3.92

^a values resulting from single applications are marked *

Table A 81: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Hops 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	9.44*	Drift	1.25*
Hops 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	9.21*	Drift	0.759
Hops 2 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	9.46*	Drift	1.33*

^a values resulting from single applications are marked *

Table A 82: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Option 1

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a			18 – 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.111	Runoff	0.073	Runoff
	R1	pond 2 nd	0.096	Runoff	0.062	Runoff
	R1	stream 1 st	1.04	Drift	1.04	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.38	Drift	1.38	Drift
	R2	stream 2 nd	1.40	Drift	1.40	Drift
	R3	stream 1 st	1.52	Runoff	1.47	Drift
	R3	stream 2 nd	1.53	Runoff	1.47	Drift
	R4	stream 1 st	1.04	Drift	1.04	Drift
	R4	stream 2 nd	2.45	Runoff	1.28	Runoff
Vegetables, leafy, 2 × 250 g a.s./ha,	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a		18 – 20 ^b		
No spray buffer (m)		0		0		
Nozzle reduction (%)		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
BBCH 11	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.217	Runoff	0.139	Runoff
	R1	pond 2 nd	0.191	Runoff	0.121	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.94	Runoff	1.02	Runoff
	R2	stream 1 st	1.19	Drift	1.19	Drift
	R2	stream 2 nd	1.21	Drift	1.21	Drift
	R3	stream 1 st	1.99	Runoff	1.27	Drift
	R3	stream 2 nd	2.63	Runoff	1.38	Runoff
	R4	stream 1 st	2.93	Runoff	1.54	Runoff
	R4	stream 2 nd	3.87	Runoff	2.03	Runoff
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.272	Runoff	0.157	Runoff
	R1	pond 2 nd	0.136	Runoff	0.079	Runoff
	R1	stream 1 st	1.05	Runoff	1.05	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.40	Drift	1.40	Drift
	R2	stream 2 nd	1.39	Drift	1.39	Drift
	R3	stream 1 st	1.48	Drift	1.48	Drift
	R3	stream 2 nd	1.47	Drift	1.47	Drift
	R4	stream 1 st	1.47	Runoff	1.02	Drift
	R4	stream 2 nd	1.54	Runoff	1.05	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a			18 – 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.407	Runoff	0.240	Runoff
	R1	pond 2 nd	0.323	Runoff	0.182	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.71	Runoff	0.906	Drift
	R2	stream 1 st	1.21	Drift	1.21	Drift
	R2	stream 2 nd	1.20	Drift	1.20	Drift
	R3	stream 1 st	1.99	Runoff	1.28	Drift
	R3	stream 2 nd	2.54	Runoff	1.33	Runoff
	R4	stream 1 st	3.24	Runoff	1.70	Runoff
	R4	stream 2 nd	3.15	Runoff	1.65	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 83: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Option 2

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a			18 – 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.110	Runoff	0.072	Runoff
	R1	pond 2 nd	0.093	Runoff	0.060	Runoff

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
	R1	stream 1 st	1.04	Drift	1.04	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.38	Drift	1.38	Drift
	R2	stream 2 nd	1.40	Drift	1.40	Drift
	R3	stream 1 st	1.52	Runoff	1.47	Drift
	R3	stream 2 nd	1.53	Runoff	1.47	Drift
	R4	stream 1 st	1.04	Drift	1.04	Drift
	R4	stream 2 nd	2.45	Runoff	1.28	Runoff
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.214	Runoff	0.136	Runoff
	R1	pond 2 nd	0.185	Runoff	0.119	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.94	Runoff	1.02	Runoff
	R2	stream 1 st	1.19	Drift	1.19	Drift
	R2	stream 2 nd	1.21	Drift	1.21	Drift
	R3	stream 1 st	1.99	Runoff	1.27	Drift
	R3	stream 2 nd	2.63	Runoff	1.38	Runoff
	R4	stream 1 st	2.93	Runoff	1.54	Runoff
	R4	stream 2 nd	3.87	Runoff	2.03	Runoff
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.267	Runoff	0.154	Runoff
	R1	pond 2 nd	0.134	Runoff	0.077	Runoff
	R1	stream 1 st	1.05	Runoff	1.05	Drift

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.40	Drift	1.40	Drift
	R2	stream 2 nd	1.39	Drift	1.39	Drift
	R3	stream 1 st	1.48	Drift	1.48	Drift
	R3	stream 2 nd	1.47	Drift	1.47	Drift
	R4	stream 1 st	1.47	Runoff	1.02	Drift
	R4	stream 2 nd	1.54	Runoff	1.05	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	↓	↓	↓	↓
	D3	ditch 2 nd	↓	↓	↓	↓
	D4	pond	↓	↓	↓	↓
	D4	stream	↓	↓	↓	↓
	D6	ditch	↓	↓	↓	↓
	R1	pond 1 st	0.402	Runoff	0.237	Runoff
	R1	pond 2 nd	0.319	Runoff	0.178	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.71	Runoff	0.906	Drift
	R2	stream 1 st	1.21	Drift	1.21	Drift
	R2	stream 2 nd	1.20	Drift	1.20	Drift
	R3	stream 1 st	1.99	Runoff	1.28	Drift
	R3	stream 2 nd	2.54	Runoff	1.33	Runoff
	R4	stream 1 st	3.24	Runoff	1.70	Runoff
	R4	stream 2 nd	3.15	Runoff	1.65	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 84: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49

Mitigation options						
Vegetative strip (m)		5 VFS mod				
No spray buffer (m)		0				
Nozzle reduction (%)		0				
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	!	!	!	!
	D3	ditch 2 nd	!	!	!	!
	D4	pond	!	!	!	!
	D4	stream	!	!	!	!
	D6	ditch	!	!	!	!
	R1	pond 1 st	0.055	Drift	0.055	Drift
	R1	pond 2 nd	0.055	Drift	0.055	Drift
	R1	stream 1 st	1.04	Drift	1.04	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.38	Drift	1.38	Drift
	R2	stream 2 nd	1.40	Drift	1.40	Drift
	R3	stream 1 st	1.47	Drift	1.47	Drift
	R3	stream 2 nd	1.47	Drift	1.47	Drift
	R4	stream 1 st	1.04	Drift	1.04	Drift
	R4	stream 2 nd	1.04	Drift	1.04	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	!	!	!	!
	D3	ditch 2 nd	!	!	!	!
	D4	pond	!	!	!	!
	D4	stream	!	!	!	!
	D6	ditch	!	!	!	!
	R1	pond 1 st	0.083	Drift	0.083	Drift
	R1	pond 2 nd	0.088	Runoff	0.085	Runoff
	R1	stream 1 st	0.903	Drift	0.903	Drift
	R1	stream 2 nd	0.906	Drift	0.906	Drift
	R2	stream 1 st	1.19	Drift	1.19	Drift
	R2	stream 2 nd	1.21	Drift	1.21	Drift
	R3	stream 1 st	1.61	Runoff	1.61	Runoff
	R3	stream 2 nd	1.28	Drift	1.28	Drift

Mitigation options						
Vegetative strip (m)		5 VFS mod				
No spray buffer (m)		0				
Nozzle reduction (%)		0				
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	R4	stream 1 st	0.904	Drift	0.904	Drift
	R4	stream 2 nd	0.897	Drift	0.897	Drift
	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.172	Runoff	0.171	Runoff
	R1	pond 2 nd	0.075	Runoff	0.074	Runoff
	R1	stream 1 st	1.05	Drift	1.05	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.40	Drift	1.40	Drift
	R2	stream 2 nd	1.39	Drift	1.39	Drift
	R3	stream 1 st	1.48	Drift	1.48	Drift
	R3	stream 2 nd	1.47	Drift	1.47	Drift
	R4	stream 1 st	1.02	Drift	1.02	Drift
	R4	stream 2 nd	1.05	Drift	1.05	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.234	Runoff	0.231	Runoff
	R1	pond 2 nd	0.171	Runoff	0.169	Runoff
	R1	stream 1 st	0.906	Drift	0.906	Drift
	R1	stream 2 nd	0.906	Drift	0.906	Drift
	R2	stream 1 st	1.21	Drift	1.21	Drift
	R2	stream 2 nd	1.20	Drift	1.20	Drift
	R3	stream 1 st	1.28	Drift	1.28	Drift

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
	R3	stream 2 nd	1.45	Runoff	1.45	Runoff
	R4	stream 1 st	0.904	Drift	0.904	Drift
	R4	stream 2 nd	0.906	Drift	0.906	Drift

Table A 85: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Option 1

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)			10 – 12 ^a		18 - 20 ^b	
No spray buffer (m)			0		0	
Nozzle reduction (%)			0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-	-	-
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.80	Runoff	1.47	Drift
	R4	stream	2.60	Runoff	1.36	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-	-	-
	R2	stream	1.20	Drift	1.20	Drift
	R3	stream	1.92	Runoff	1.28	Drift
	R4	stream	3.86	Runoff	2.02	Runoff
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-	-	-
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.36	Runoff	1.02	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-	-	-
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.53	Runoff	1.33	Runoff
	R4	stream	3.37	Runoff	1.76	Runoff

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a		18 - 20 ^b		
No spray buffer (m)		0		0		
Nozzle reduction (%)		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-	-	-
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.70	Runoff	1.05	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-	-	-
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.50	Runoff	1.31	Runoff
	R4	stream	3.01	Runoff	1.58	Runoff

^a equivalent to 60% runoff mitigation
^b equivalent to 80% runoff mitigation

Table A 86: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Option 2

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1	1	1	1
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.80	Runoff	1.47	Drift
	R4	stream	2.60	Runoff	1.36	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1	1	1	1
	R2	stream	1.20	Drift	1.20	Drift
	R3	stream	1.92	Runoff	1.28	Drift
	R4	stream	3.86	Runoff	2.02	Runoff
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1	1	1	1
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.36	Runoff	1.02	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1	1	1	1
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.53	Runoff	1.33	Runoff
	R4	stream	3.37	Runoff	1.76	Runoff
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1	1	1	1
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.70	Runoff	1.05	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	1	1	1	1
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.50	Runoff	1.31	Runoff
	R4	stream	3.01	Runoff	1.58	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 87: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 89

Mitigation options						
Vegetative strip (m)		5 VFS mod				
No spray buffer (m)		0				
Nozzle reduction (%)		0				
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.04	Drift	1.04	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.20	Drift	1.20	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.903	Drift	0.903	Drift
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.02	Drift	1.02	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.906	Drift	0.906	Drift
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.05	Drift	1.05	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.906	Drift	0.906	Drift

Table A 88: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Option 1

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch 1 st	–	–	–	–
	D6	ditch 2 nd	–	–	–	–
	R1	pond	0.109	Runoff	0.072	Runoff
	R1	stream	1.04	Drift	1.04	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.53	Runoff	1.47	Drift
	R4	stream	2.58	Runoff	1.35	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch 1 st	–	–	–	–
	D6	ditch 2 nd	–	–	–	–
	R1	pond	0.236	Runoff	0.149	Runoff
	R1	stream	2.50	Runoff	1.31	Runoff
	R2	stream	1.50	Drift	1.35	Drift
	R3	stream	2.05	Runoff	1.27	Drift
	R4	stream	2.83	Runoff	1.48	Runoff
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch 1 st	–	–	–	–
	D6	ditch 2 nd	–	–	–	–
	R1	pond	0.058	Runoff	0.055	Drift
	R1	stream	1.03	Drift	1.03	Drift
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.50	Runoff	1.47	Drift

Mitigation options						
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	R4	stream	2.01	Runoff	1.05	Runoff
	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.134	Runoff	0.080	Runoff
	R1	stream	1.29	Runoff	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.29	Runoff	1.28	Drift
	R4	stream	2.92	Runoff	1.52	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 89: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Option 2

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.107	Runoff	0.071	Runoff
	R1	stream	1.04	Drift	1.04	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.53	Runoff	1.47	Drift
	R4	stream	2.58	Runoff	1.35	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.233	Runoff	0.147	Runoff
	R1	stream	2.50	Runoff	1.31	Runoff
	R2	stream	1.50	Drift	1.35	Drift
	R3	stream	2.05	Runoff	1.27	Drift
	R4	stream	2.83	Runoff	1.48	Runoff
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.056	Runoff	0.055	Drift
	R1	stream	1.03	Drift	1.03	Drift
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.50	Runoff	1.47	Drift

Mitigation options						
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)						
Vegetative strip (m)		10 – 12 ^a		18 - 20 ^b		
No spray buffer (m)		0		0		
Nozzle reduction (%)		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R4	stream	2.01	Runoff	1.05	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.130	Runoff	0.077	Runoff
	R1	stream	1.29	Runoff	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.29	Runoff	1.28	Drift
	R4	stream	2.92	Runoff	1.52	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 90: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█		█	
	R1	pond	0.055	Drift	0.055	Drift
	R1	stream	1.04	Drift	1.04	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.03	Drift	1.03	Drift
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.081	Drift	0.080	Drift
	R1	stream	0.902	Drift	0.902	Drift
	R2	stream	1.19	Drift	1.19	Drift
	R3	stream	1.60	Runoff	1.60	Runoff
	R4	stream	0.897	Drift	0.897	Drift
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.055	Drift	0.055	Drift
	R1	stream	1.03	Drift	1.03	Drift
	R2	stream	1.40	Drift	1.40	Drift

Mitigation options						
Vegetative strip (m)		5 VFS mod				
No spray buffer (m)		0				
Nozzle reduction (%)		0				
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.01	Drift	1.01	Drift
	D3	ditch	!	!	!	!
	D4	pond	!	!	!	!
	D4	stream	!	!	!	!
	D6	ditch 1 st	!	!	!	!
	D6	ditch 2 nd	!	!	!	!
	R1	pond	0.077	Drift	0.075	Drift
	R1	stream	0.906	Drift	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.897	Drift	0.897	Drift

Table A 91: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to hops, BBCH 21 – 89 – Option 1

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		0		0		0		0		0		0		0		0
No spray buffer (m)		10		10		10		15		15		15		15		20
Nozzle reduction (%)		0		75		90		0		50		75		75		0
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops, 1 × 250 g a.s./ha; BBCH 21	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.02	Drift	1.00	Drift	0.693	Runoff	2.65	Drift	1.33	Drift	0.693	Runoff	1.21	Drift
Hops, 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.525	Drift	0.143	Drift	0.066	Drift	0.295	Drift	0.155	Drift	0.085	Drift	0.171	Drift
	R1	stream	2.81	Drift	1.25	Runoff	1.25	Runoff	1.72	Drift	1.25	Runoff	1.25	Runoff	1.25	Runoff
Hops, 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	3.92	Drift	0.979	Drift	0.572	Runoff	2.59	Drift	1.29	Drift	0.646	Drift	1.18	Drift
Hops, 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.508	Drift	0.128	Drift	0.052	Drift	0.279	Drift	0.140	Drift	0.071	Drift	0.156	Drift
	R1	stream	2.81	Drift	0.703	Drift	0.572	Runoff	1.72	Drift	0.860	Drift	0.572	Runoff	0.785	Drift
Hops, 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.03	Drift	1.01	Drift	0.403	Drift	2.66	Drift	1.33	Drift	0.664	Drift	1.21	Drift

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Hops, 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.496	Drift	0.123	Drift	0.049	Drift	0.271	Drift	0.135	Drift	0.067	Drift	0.150	Drift
	R1	stream	2.89	Drift	0.723	Drift	0.289	Drift	1.77	Drift	0.884	Drift	0.442	Drift	0.807	Drift

Table A 92: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to hops, BBCH 21 – 89 – Option 2

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)			0		0		0		0		0		0		0	
No spray buffer (m)			10		10		10		15		15		15		20	
Nozzle reduction (%)			0		75		90		0		50		75		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops, 1 × 250 g a.s./ha; BBCH 21	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.02	Drift	1.00	Drift	0.693	Runoff	2.65	Drift	1.33	Drift	0.693	Runoff	1.21	Drift
Hops, 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.521	Drift	0.142	Drift	0.066	Drift	0.292	Drift	0.154	Drift	0.085	Drift	0.169	Drift
	R1	stream	2.81	Drift	1.24	Runoff	1.24	Runoff	1.72	Drift	1.24	Runoff	1.24	Runoff	1.24	Runoff
Hops, 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	3.92	Drift	0.979	Drift	0.572	Runoff	2.59	Drift	1.29	Drift	0.646	Drift	1.18	Drift

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Hops, 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.501	Drift	0.126	Drift	0.052	Drift	0.275	Drift	0.138	Drift	0.070	Drift	0.154	Drift
	R1	stream	2.81	Drift	0.703	Drift	0.572	Runoff	1.72	Drift	0.860	Drift	0.572	Runoff	0.785	Drift
Hops, 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.03	Drift	1.01	Drift	0.403	Drift	2.66	Drift	1.33	Drift	0.664	Drift	1.21	Drift
Hops, 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.487	Drift	0.121	Drift	0.048	Drift	0.267	Drift	0.133	Drift	0.066	Drift	0.148	Drift
	R1	stream	2.89	Drift	0.723	Drift	0.289	Drift	1.77	Drift	0.884	Drift	0.442	Drift	0.807	Drift

Table A 93: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options						
Vegetative strip (m)		10 – 12 ^a		18 - 20 ^b		
No spray buffer (m)		0		0		
Nozzle reduction (%)		0		0		
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.111	Runoff	0.073	Runoff
	R1	pond 2 nd	0.096	Runoff	0.062	Runoff
	R1	stream 1 st	1.04	Drift	1.04	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.38	Drift	1.38	Drift
	R2	stream 2 nd	1.40	Drift	1.40	Drift
	R3	stream 1 st	1.52	Runoff	1.47	Drift
	R3	stream 2 nd	1.53	Runoff	1.47	Drift
	R4	stream 1 st	1.04	Drift	1.04	Drift
	R4	stream 2 nd	2.45	Runoff	1.28	Runoff
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.217	Runoff	0.139	Runoff
	R1	pond 2 nd	0.191	Runoff	0.121	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.94	Runoff	1.02	Runoff
	R2	stream 1 st	1.19	Drift	1.19	Drift
	R2	stream 2 nd	1.21	Drift	1.21	Drift
	R3	stream 1 st	1.99	Runoff	1.27	Drift
	R3	stream 2 nd	2.63	Runoff	1.38	Runoff
	R4	stream 1 st	2.93	Runoff	1.54	Runoff
	R4	stream 2 nd	3.87	Runoff	2.03	Runoff

Mitigation options						
Vegetative strip (m)			10 – 12 ^a		18 - 20 ^b	
No spray buffer (m)			0		0	
Nozzle reduction (%)			0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.272	Runoff	0.157	Runoff
	R1	pond 2 nd	0.136	Runoff	0.079	Runoff
	R1	stream 1 st	1.05	Runoff	1.05	Drift
	R1	stream 2 nd	1.05	Drift	1.05	Drift
	R2	stream 1 st	1.40	Drift	1.40	Drift
	R2	stream 2 nd	1.39	Drift	1.39	Drift
	R3	stream 1 st	1.48	Drift	1.48	Drift
	R3	stream 2 nd	1.47	Drift	1.47	Drift
	R4	stream 1 st	1.47	Runoff	1.02	Drift
	R4	stream 2 nd	1.54	Runoff	1.05	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	–	–	–	–
	D3	ditch 2 nd	–	–	–	–
	D4	pond	–	–	–	–
	D4	stream	–	–	–	–
	D6	ditch	–	–	–	–
	R1	pond 1 st	0.407	Runoff	0.240	Runoff
	R1	pond 2 nd	0.323	Runoff	0.182	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.71	Runoff	0.906	Drift
	R2	stream 1 st	1.21	Drift	1.21	Drift
	R2	stream 2 nd	1.20	Drift	1.20	Drift
	R3	stream 1 st	1.99	Runoff	1.28	Drift
	R3	stream 2 nd	2.54	Runoff	1.33	Runoff
	R4	stream 1 st	3.24	Runoff	1.70	Runoff
	R4	stream 2 nd	3.15	Runoff	1.65	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 94: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	–	–
	D3	ditch 2 nd	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch	–	–
	R1	pond 1 st	0.055	Drift
	R1	pond 2 nd	0.055	Drift
	R1	stream 1 st	1.04	Drift
	R1	stream 2 nd	1.05	Drift
	R2	stream 1 st	1.38	Drift
	R2	stream 2 nd	1.40	Drift
	R3	stream 1 st	1.47	Drift
	R3	stream 2 nd	1.47	Drift
	R4	stream 1 st	1.04	Drift
	R4	stream 2 nd	1.04	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	–	–
	D3	ditch 2 nd	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch	–	–
	R1	pond 1 st	0.083	Drift
	R1	pond 2 nd	0.088	Runoff
	R1	stream 1 st	0.903	Drift
	R1	stream 2 nd	0.906	Drift
	R2	stream 1 st	1.19	Drift
	R2	stream 2 nd	1.21	Drift
	R3	stream 1 st	1.61	Runoff
	R3	stream 2 nd	1.28	Drift
	R4	stream 1 st	0.904	Drift
	R4	stream 2 nd	0.897	Drift
Vegetables, leafy,	D3	ditch 1 st	–	–

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
1 × 250 g a.s./ha, BBCH 49	D3	ditch 2 nd	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch	–	–
	R1	pond 1 st	0.172	Runoff
	R1	pond 2 nd	0.075	Runoff
	R1	stream 1 st	1.05	Drift
	R1	stream 2 nd	1.05	Drift
	R2	stream 1 st	1.40	Drift
	R2	stream 2 nd	1.39	Drift
	R3	stream 1 st	1.48	Drift
	R3	stream 2 nd	1.47	Drift
	R4	stream 1 st	1.02	Drift
	R4	stream 2 nd	1.05	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	–	–
	D3	ditch 2 nd	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch	–	–
	R1	pond 1 st	0.234	Runoff
	R1	pond 2 nd	0.171	Runoff
	R1	stream 1 st	0.906	Drift
	R1	stream 2 nd	0.906	Drift
	R2	stream 1 st	1.21	Drift
	R2	stream 2 nd	1.20	Drift
	R3	stream 1 st	1.28	Drift
	R3	stream 2 nd	1.45	Runoff
	R4	stream 1 st	0.904	Drift
	R4	stream 2 nd	0.906	Drift

Table A 95: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Maximum over Option 1 and Option 2

Mitigation options						
		Vegetative strip (m)	10 – 12 ^a		18 - 20 ^b	
		No spray buffer (m)	0		0	
		Nozzle reduction (%)	0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.80	Runoff	1.47	Drift
	R4	stream	2.60	Runoff	1.36	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.20	Drift	1.20	Drift
	R3	stream	1.92	Runoff	1.28	Drift
	R4	stream	3.86	Runoff	2.02	Runoff
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.36	Runoff	1.02	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.53	Runoff	1.33	Runoff
	R4	stream	3.37	Runoff	1.76	Runoff
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.70	Runoff	1.05	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.50	Runoff	1.31	Runoff
	R4	stream	3.01	Runoff	1.58	Runoff

^a equivalent to 60% runoff mitigation
^b equivalent to 80% runoff mitigation

Table A 96: FOCUS Step 4 PEC_{sw} azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1	1
	R2	stream	1.38	Drift
	R3	stream	1.47	Drift
	R4	stream	1.04	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1	1
	R2	stream	1.20	Drift
	R3	stream	1.28	Drift
	R4	stream	0.903	Drift
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1	1
	R2	stream	1.40	Drift
	R3	stream	1.48	Drift
	R4	stream	1.02	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1	1
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.906	Drift
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1	1
	R2	stream	1.40	Drift
	R3	stream	1.48	Drift
	R4	stream	1.05	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	1	1
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.906	Drift

Table A 97: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.109	Runoff	0.072	Runoff
	R1	stream	1.04	Drift	1.04	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.53	Runoff	1.47	Drift
	R4	stream	2.58	Runoff	1.35	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.236	Runoff	0.149	Runoff
	R1	stream	2.50	Runoff	1.31	Runoff
	R2	stream	1.50	Drift	1.35	Drift
	R3	stream	2.05	Runoff	1.27	Drift
	R4	stream	2.83	Runoff	1.48	Runoff
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.058	Runoff	0.055	Drift
	R1	stream	1.03	Drift	1.03	Drift
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.50	Runoff	1.47	Drift
	R4	stream	2.01	Runoff	1.05	Runoff
Vegetables, bulb,	D3	ditch	█	█	█	█

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
2 × 250 g a.s./ha, BBCH 49	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.134	Runoff	0.080	Runoff
	R1	stream	1.29	Runoff	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	2.29	Runoff	1.28	Drift
	R4	stream	2.92	Runoff	1.52	Runoff

^a equivalent to 60% runoff mitigation
^b equivalent to 80% runoff mitigation

Table A 98: FOCUS Step 4 PEC_{sw} azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█
	D4	pond	█	█
	D4	stream	█	█
	D6	ditch 1 st	█	█
	D6	ditch 2 nd	█	
	R1	pond	0.055	Drift
	R1	stream	1.04	Drift
	R2	stream	1.38	Drift
	R3	stream	1.47	Drift
	R4	stream	1.03	Drift
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█
	D4	pond	█	█
	D4	stream	█	█
	D6	ditch 1 st	█	█

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
	D6	ditch 2 nd	–	–
	R1	pond	0.081	Drift
	R1	stream	0.902	Drift
	R2	stream	1.19	Drift
	R3	stream	1.60	Runoff
	R4	stream	0.897	Drift
Vegetables, bulb, 1 × 250 g a.s./ha, BBCH 49	D3	ditch	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch 1 st	–	–
	D6	ditch 2 nd	–	–
	R1	pond	0.055	Drift
	R1	stream	1.03	Drift
	R2	stream	1.40	Drift
	R3	stream	1.47	Drift
	R4	stream	1.01	Drift
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	–	–
	D4	pond	–	–
	D4	stream	–	–
	D6	ditch 1 st	–	–
	D6	ditch 2 nd	–	–
	R1	pond	0.077	Drift
	R1	stream	0.906	Drift
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.897	Drift

Table A 99: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to hops, BBCH 21 – 89 – Maximum over Option 1 and Option 2

Mitigation options																
Vegetative strip (m)			0		0		0		0		0		0		0	
No spray buffer (m)			10		10		10		15		15		15		20	
Nozzle reduction (%)			0		75		90		0		50		75		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops, 1 × 250 g a.s./ha; BBCH 21	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.02	Drift	1.00	Drift	0.693	Runoff	2.65	Drift	1.33	Drift	0.693	Runoff	1.21	Drift
Hops, 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.525	Drift	0.143	Drift	0.066	Drift	0.295	Drift	0.155	Drift	0.085	Drift	0.171	Drift
	R1	stream	2.81	Drift	1.25	Runoff	1.25	Runoff	1.72	Drift	1.25	Runoff	1.25	Runoff	1.25	Runoff
Hops, 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	3.92	Drift	0.979	Drift	0.572	Runoff	2.59	Drift	1.29	Drift	0.646	Drift	1.18	Drift
Hops, 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.508	Drift	0.128	Drift	0.052	Drift	0.279	Drift	0.140	Drift	0.071	Drift	0.156	Drift
	R1	stream	2.81	Drift	0.703	Drift	0.572	Runoff	1.72	Drift	0.860	Drift	0.572	Runoff	0.785	Drift
Hops, 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.421	Drift	0.105	Drift	0.042	Drift	0.236	Drift	0.118	Drift	0.059	Drift	0.131	Drift
	R1	stream	4.03	Drift	1.01	Drift	0.403	Drift	2.66	Drift	1.33	Drift	0.664	Drift	1.21	Drift

Mitigation options																
Hops, 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.496	Drift	0.123	Drift	0.049	Drift	0.271	Drift	0.135	Drift	0.067	Drift	0.150	Drift
	R1	stream	2.89	Drift	0.723	Drift	0.289	Drift	1.77	Drift	0.884	Drift	0.442	Drift	0.807	Drift

Table A 100: FOCUS Step 4 Global Maximum PEC_{SW} for azoxystrobin following application to vegetables, leafy – Maximum over single and multiple applications

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.217	Runoff	0.139	Runoff
	R1	pond 2 nd	0.191	Runoff	0.121	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.94	Runoff	1.05*	Drift
	R2	stream 1 st	1.38*	Drift	1.38*	Drift
	R2	stream 2 nd	1.40*	Drift	1.40*	Drift
	R3	stream 1 st	1.99	Runoff	1.47*	Drift
	R3	stream 2 nd	2.63	Runoff	1.47*	Drift
	R4	stream 1 st	2.93	Runoff	1.54	Runoff
	R4	stream 2 nd	3.87	Runoff	2.03	Runoff
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	█	█	█	█
	D3	ditch 2 nd	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch	█	█	█	█
	R1	pond 1 st	0.407	Runoff	0.240	Runoff
	R1	pond 2 nd	0.323	Runoff	0.182	Runoff
	R1	stream 1 st	2.22	Runoff	1.16	Runoff
	R1	stream 2 nd	1.71	Runoff	1.05*	Drift
	R2	stream 1 st	1.40*	Drift	1.40*	Drift
	R2	stream 2 nd	1.39*	Drift	1.39*	Drift
	R3	stream 1 st	1.99	Runoff	1.48*	Drift
	R3	stream 2 nd	2.54	Runoff	1.47*	Drift
	R4	stream 1 st	3.24	Runoff	1.70	Runoff

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R4	stream 2 nd	3.15	Runoff	1.65	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 101: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	1	1
	D3	ditch 2 nd	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	R1	pond 1 st	0.083	Drift
	R1	pond 2 nd	0.088	Runoff
	R1	stream 1 st	1.04*	Drift
	R1	stream 2 nd	1.05*	Drift
	R2	stream 1 st	1.38*	Drift
	R2	stream 2 nd	1.40*	Drift
	R3	stream 1 st	1.61	Runoff
	R3	stream 2 nd	1.47*	Drift
	R4	stream 1 st	1.04*	Drift
	R4	stream 2 nd	1.04*	Drift
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	1	1
	D3	ditch 2 nd	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	R1	pond 1 st	0.234	Runoff

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	pond 2 nd	0.171	Runoff
	R1	stream 1 st	1.05*	Drift
	R1	stream 2 nd	1.05*	Drift
	R2	stream 1 st	1.40*	Drift
	R2	stream 2 nd	1.39*	Drift
	R3	stream 1 st	1.48*	Drift
	R3	stream 2 nd	1.47*	Drift
	R4	stream 1 st	1.02*	Drift
	R4	stream 2 nd	1.05*	Drift

Table A 102: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, fruiting – Maximum over single and multiple applications

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	!	!	!	!
	R2	stream	1.38*	Drift	1.38*	Drift
	R3	stream	1.92	Runoff	1.47*	Drift
	R4	stream	3.86	Runoff	2.02	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	!	!	!	!
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.53	Runoff	1.48*	Drift
	R4	stream	3.37	Runoff	1.76	Runoff
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	!	!	!	!
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.50	Runoff	1.48*	Drift
	R4	stream	3.01	Runoff	1.58	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 103: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	–	–
	R2	stream	1.38*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.04*	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	–	–
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.02*	Drift
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	–	–
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.05*	Drift

Table A 104: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, bulb – Maximum over single and multiple applications

Mitigation options						
Vegetative strip (m)		10 – 12 ^a			18 - 20 ^b	
No spray buffer (m)		0			0	
Nozzle reduction (%)		0			0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.236	Runoff	0.149	Runoff
	R1	stream	2.50	Runoff	1.31	Runoff
	R2	stream	1.50	Drift	1.38*	Drift
	R3	stream	2.05	Runoff	1.47*	Drift
	R4	stream	2.83	Runoff	1.48	Runoff
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	█	█	█	█
	D4	pond	█	█	█	█
	D4	stream	█	█	█	█
	D6	ditch 1 st	█	█	█	█
	D6	ditch 2 nd	█	█	█	█
	R1	pond	0.134	Runoff	0.080	Runoff
	R1	stream	1.29	Runoff	1.03*	Drift
	R2	stream	1.40*	Drift	1.40*	Drift
	R3	stream	2.29	Runoff	1.47*	Drift
	R4	stream	2.92	Runoff	1.52	Runoff

^a equivalent to 60% runoff mitigation

^b equivalent to 80% runoff mitigation

Table A 105: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	D6 2 nd	ditch	1	1
	R1	pond	0.081	Drift
	R1	stream	1.04*	Drift
	R2	stream	1.38*	Drift
	R3	stream	1.60	Runoff
	R4	stream	1.03*	Drift
Vegetables, bulb, 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1	1
	D4	pond	1	1
	D4	stream	1	1
	D6	ditch	1	1
	D6 2 nd	ditch	1	1
	R1	pond	0.077	Drift
	R1	stream	1.03*	Drift
	R2	stream	1.40*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.01*	Drift

Table A 106: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to hops – Maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			0		0		0		0		0		0		0	
No spray buffer (m)			10		10		10		15		15		15		20	
Nozzle reduction (%)			0		75		90		0		50		75		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops, 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.525	Drift	0.143	Drift	0.066	Drift	0.295	Drift	0.155	Drift	0.085	Drift	0.171	Drift
	R1	stream	4.02*	Drift	1.25	Runoff	1.25	Runoff	2.65*	Drift	1.33*	Drift	1.25	Runoff	1.25	Runoff
Hops, 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.508	Drift	0.128	Drift	0.052	Drift	0.279	Drift	0.140	Drift	0.071	Drift	0.156	Drift
	R1	stream	3.92*	Drift	0.979*	Drift	0.572*	Runoff	2.59*	Drift	1.29*	Drift	0.646*	Drift	1.18*	Drift
Hops, 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.496	Drift	0.123	Drift	0.049	Drift	0.271	Drift	0.135	Drift	0.067	Drift	0.150	Drift
	R1	stream	4.03*	Drift	1.01*	Drift	0.403*	Drift	2.66*	Drift	1.33*	Drift	0.664*	Drift	1.21*	Drift

Greenhouse uses

Table A 107: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – 0.1% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	0.082	Drift	0.047	0.082	Drift	0.047
	D3	ditch 2 nd	0.082	Drift	0.050	0.082	Drift	0.050
	D4	pond	0.655	Drainage	4.21	0.648	Drainage	4.25
	D4	stream	0.644	Drainage	1.66	0.644	Drainage	1.69
	D6	ditch	2.58	Drainage	2.48	2.58	Drainage	2.62
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	0.082	Drift	0.064	0.082	Drift	0.064
	D3	ditch 2 nd	0.082	Drift	0.066	0.082	Drift	0.066
	D4	pond	1.37	Drainage	8.32	1.36	Drainage	8.40
	D4	stream	1.33	Drainage	3.26	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.24	5.66	Drainage	5.53
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	0.082	Drift	0.048	0.082	Drift	0.048
	D3	ditch 2 nd	0.082	Drift	0.034	0.082	Drift	0.034
	D4	pond	0.390	Drainage	2.66	0.386	Drainage	2.68
	D4	stream	0.612	Drainage	0.964	0.612	Drainage	0.974
	D6	ditch	5.12	Drainage	5.63	5.12	Drainage	5.95
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	0.082	Drift	0.064	0.082	Drift	0.064
	D3	ditch 2 nd	0.082	Drift	0.048	0.082	Drift	0.049
	D4	pond	1.39	Drainage	8.25	1.38	Drainage	8.27
	D4	stream	1.68	Drainage	3.29	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	13.3	12.0	Drainage	14.1

Table A 108: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – 0.1% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.349	Drainage	0.376	0.349	Drainage	0.403
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.717	Drainage	0.780	0.717	Drainage	0.834
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.442	Drainage	0.485	0.442	Drainage	0.518
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.971	Drainage	1.08	0.971	Drainage	1.14
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.96	Drainage	1.51	1.96	Drainage	1.61
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.67	Drainage	3.06	3.67	Drainage	3.28

Table A 109: FOCUS Step 3 Summary Table, Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy - maximum over option 1 and option 2 – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	0.082	Drift	0.047
	D3	ditch 2 nd	0.082	Drift	0.050
	D4	pond	0.655	Drainage	4.25
	D4	stream	0.644	Drainage	1.69
	D6	ditch	2.58	Drainage	2.62
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 11	D3	ditch 1 st	0.082	Drift	0.064
	D3	ditch 2 nd	0.082	Drift	0.066
	D4	pond	1.37	Drainage	8.40
	D4	stream	1.33	Drainage	3.33
	D6	ditch	5.66	Drainage	5.53
Vegetables, leafy, 1 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	0.082	Drift	0.048
	D3	ditch 2 nd	0.082	Drift	0.034
	D4	pond	0.390	Drainage	2.68
	D4	stream	0.612	Drainage	0.974
	D6	ditch	5.12	Drainage	5.95
Vegetables, leafy, 2 × 250 g a.s./ha, BBCH 49	D3	ditch 1 st	0.082	Drift	0.064
	D3	ditch 2 nd	0.082	Drift	0.049
	D4	pond	1.39	Drainage	8.27
	D4	stream	1.68	Drainage	3.32
	D6	ditch	12.0	Drainage	14.1

^a maximum over option 1 and 2

Table A 110: FOCUS Step 3 Summary Table, Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over option 1 and option 2 – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.349	Drainage	0.403
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.717	Drainage	0.834
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.442	Drainage	0.518
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.971	Drainage	1.14
Vegetables, fruiting, 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.96	Drainage	1.61
Vegetables, fruiting, 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.67	Drainage	3.28

^a maximum over option 1 and 2

A 3.8 KCP 9.2.5: Anagu, I. & Langa Peñalba, 2021, Azoxystrobin PEC_{SW} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for azoxystrobin were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Simulations were performed for azoxystrobin at Tier 2 using PUF=0.5. In zRMS opinion, PEC _{SW} values calculated with PUF=0 should be used in the RA for aquatic organisms.
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Reference: KCP 9.2.5.

Report Azoxystrobin - A European Environmental Fate Assessment Using the FOCUS Surface Water Models at Steps 3 to 4 Following Spray Application to Various Crops Using Arithmetic Mean Sorption Endpoints
Report No. 116223-3, (Syngenta File No VV-911782)

Guideline(s): EFSA (2014). EFSA Guidance Document on clustering and ranking of emissions of active substances of plant protection products and transformation products of these active substances from protected crops (greenhouses and crops grown under cover) to relevant environmental compartments. EFSA Journal 2014; 12(3):3615, 43 pp.

FOCUS (2001). FOCUS Surface Water Scenarios in the EU Evaluation Process under 91/414/EEC. Report of the FOCUS Working Group on

Surface Water Scenarios, EC Document Reference SANCO/4802/2001 rev. 2.

FOCUS (2007). Landscape and mitigation factors in aquatic ecological risk assessment. Volume 1. Extended summary and recommendations, the final report of the FOCUS working group on landscape and mitigation factors in ecological risk assessment, EC document reference SANCO/10422/2005, version 2.0, September 2007.

FOCUS (2015). Generic Guidance for FOCUS Surface Water Scenarios, version 1.4.

Deviations:	No
GLP:	Not applicable
Acceptability:	Yes/No/Supplementary

A 3.8.1 Materials and methods

This report describes a FOCUS modelling study that examined the potential for azoxystrobin to reach surface water following field (foliar) and greenhouse applications to vegetables (leafy, fruiting and bulb) and hops. The FOCUS tool SWASH (v 5.3), including the operational models FOCUS-MACRO (v 5.5.4), FOCUS-PRZM (v 4.3.1) and FOCUS-TOXSWA (v 5.5.3), were used in the modelling study for Step 3 simulations. The ECPA tool SWAN (v 5.0.0) was used to implement mitigation options at Step 4.

Twofold applications at the rate of 250 g a.s./ha, were considered. Applications starting from approximately BBCH 11 were considered for vegetables with an interval of 7 days between applications for vegetables, leafy and fruiting as well as 12 days for vegetables, bulb. For hops, applications from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51) and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown below.

Table A 111: Input parameters related to application for PEC_{SW/SED} calculations

Crop	Vegetables, leafy	Vegetables, fruiting	Vegetables, bulb	Hops
Application rate (g a.s./ha)	250	250	250	250
Number of applications/interval (d)	2 / 7	2 / 7	2 / 12	2 / 12
BBCH growth stage	11 – 49	11 – 89	11 – 89	21 – 89
Application method	Ground spray	Ground spray	Ground spray	Airblast
CAM (Chemical application method)	2 (application foliar linear)			
Soil depth (cm)	4 (default)			
Models used for calculation	FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v5.0.0			

Ground spray application (foliar spray) was considered as the application method in the simulations for vegetables (leafy, fruiting and bulb) while air blast was considered as the application method in the simulations for hops. Crop interception at Step 3 is calculated internally by the model on the basis of the maximum interception capacity and the actual leaf area index.

An application window has to be specified from which the Pesticide Application Timer (PAT), internal to the model, determines actual application dates which were set generically for all scenarios. The application dates for the early and intermediate applications were selected with the tool AppDate (v3.06) based on BBCH growth stages given in the recommended GAP. For the late applications, the end of the application window was set to the harvest date. Simulations were carried out using the FOCUS standard crops ‘vegetables, leafy’, ‘vegetables, fruiting’, ‘vegetables, bulb’ and ‘hops’. Application windows are presented in Table A 112, below.

Table A 112: FOCUS Step 3 Scenario related input parameters for PEC_{SW/SED} calculations for the application of azoxystrobin to vegetables, leafy, vegetables, fruiting, hops and vegetables, bulb

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Vegetables, leafy, BBCH 11 – 49 2 × 250 g a.s./ha; 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D3	30-Apr (120)	30-May (150)	30-Apr (120)	6-Jun (157)
		D3	10-Aug (222)	9-Sep (252)	10-Aug (222)	16-Sep (259)
		D4	18-May (138)	17-Jun (168)	18-May (138)	24-Jun (175)
		D6	21-Aug (233)	20-Sep (263)	21-Aug (233)	27-Sep (270)
		R1	25-Apr (115)	25-May (145)	25-Apr (115)	1-Jun (152)
		R1	5-Aug (217)	4-Sep (247)	5-Aug (217)	11-Sep (254)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	15-Apr (105)
		R2	4-Aug (216)	3-Sep (246)	4-Aug (216)	10-Sep (253)
		R3	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R3	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
		R4	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R4	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
Vegetables, leafy, BBCH 11 – 49 2 × 250 g a.s./ha; 7 days interval, BBCH 49	End of window at harvest	D3	20-Jun (171)	20-Jul (201)	13-Jun (164)	20-Jul (201)
		D3	20-Sep (263)	20-Oct (293)	13-Sep (256)	20-Oct (293)
		D4	27-Aug (239)	26-Sep (269)	20-Aug (232)	26-Sep (269)
		D6	31-Oct (304)	30-Nov (334)	24-Oct (297)	30-Nov (334)
		R1	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
		R1	15-Sep (258)	15-Oct (288)	8-Sep (251)	15-Oct (288)
		R2	1-Jun (152)	1-Jul (182)	25-May (145)	1-Jul (182)
		R2	16-Oct (289)	15-Nov (319)	9-Oct (282)	15-Nov (319)
		R3	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R3	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
		R4	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R4	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
Vegetables, fruiting, BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D6	13-Apr (103)	13-May (133)	13-Apr (103)	20-May (140)
		R2	19-Mar (78)	18-Apr (108)	19-Mar (78)	25-Apr (115)
		R3	13-May (133)	12-Jun (163)	13-May (133)	19-Jun (170)
		R4	23-Apr (113)	23-May (143)	23-Apr (113)	30-May (150)
Vegetables, fruiting,	Start of window at	D6	15-May (135)	14-Jun (165)	15-May (135)	21-Jun (172)
		R2	19-May (139)	18-Jun (169)	19-May (139)	25-Jun (176)

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 51	BBCH 51 (AppDate 3.06)	R3	15-Jun (166)	15-Jul (196)	15-Jun (166)	22-Jul (203)
		R4	26-May (146)	25-Jun (176)	26-May (146)	2-Jul (183)
Vegetables, fruiting, BBCH 11 – 89 2 × 250 g a.s./ha; 7 days interval, BBCH 89	End of window at harvest	D6	11-Jul (192)	10-Aug (222)	4-Jul (185)	10-Aug (222)
		R2	1-Aug (213)	31-Aug (243)	25-Jul (206)	31-Aug (243)
		R3	26-Jul (207)	25-Aug (237)	19-Jul (200)	25-Aug (237)
		R4	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
Vegetables, bulb, BBCH 11 - 49 2 × 250 g a.s./ha; 12 days interval, BBCH 11	Start of window at BBCH 11 (AppDate 3.06)	D3	3-May (123)	2-Jun (153)	3-May (123)	14-Jun (165)
		D4	2-May (122)	1-Jun (152)	2-May (122)	13-Jun (164)
		D6	16-May (136)	15-Jun (166)	16-May (136)	27-Jun (178)
		D6	4-Nov (308)	4-Dec (338)	4-Nov (308)	16-Dec (350)
		R1	28-Apr (118)	28-May (148)	28-Apr (118)	9-Jun (160)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R3	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R4	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
Vegetables, bulb, BBCH 11 - 49 2 × 250 g a.s./ha; 12 days interval, BBCH 49	End of window at harvest	D3	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)
		D4	14-Aug (226)	13-Sep (256)	2-Aug (214)	13-Sep (256)
		D6	1-Jul (182)	31-Jul (212)	19-Jun (170)	31-Jul (212)
		D6	11-Mar (70)	10-Apr (100)	27-Feb (58)	10-Apr (100)
		R1	26-Jul (207)	25-Aug (237)	14-Jul (195)	25-Aug (237)
		R2	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R3	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R4	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 21	Start of window at BBCH 21 (AppDate 3.06)	R1	15-May (135)	14-Jun (165)	15-May (135)	26-Jun (177)
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 51	Start of window at BBCH 51 (AppDate 3.06)	R1	7-Jul (188)	6-Aug (218)	7-Jul (188)	18-Aug (230)

Crop	Rationale	Scenario	Azoxystrobin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Hops BBCH 21 - 89 2 × 250 g a.s./ha; 12 days interval, BBCH 89	End of window at harvest	R1	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)

Numbers in brackets are the corresponding 'Julian Day' numbers

Step 4 calculations were carried out for all the scenarios with the following mitigation methods:

- spray drift reduction by 50%, 75% and 90% drift reduction nozzles for hops only
- spray drift reduction by non-sprayed buffer strips of 10 m, 20 m and runoff reduction using vegetated buffer strips of 10 m and 20 m using runoff and erosion reduction values as given by the FOCUS Working Group on Landscape and Mitigation Factors (2007)
- runoff/erosion reduction of 60/85% for 10 m, and 80/95% for 20 m
- runoff reduction considering 5 m and 15 vegetated filter strip (Austrian-specific reduction measures (BAES, 2020)) in combination with spray drift reduction considering a non-sprayed buffer strip of 5 m and 15 m respectively
- Runoff reduction considering 5 m VFSmod

In order to simulate conditions in greenhouses, drift entries to surface water were amended with drift rates of 0.1% and 0.2% of the dose rate at Step 3 (EFSA, 2014). As entry via runoff is not expected to occur in greenhouses, only the FOCUS D scenarios were considered.

The input parameters for azoxystrobin used in the modelling are shown in Table A 113. In accordance with FOCUS guidance (FOCUS 2015), since the K_{FOC} value of azoxystrobin is between 100 – 2000 mL/g calculations were run twice with two different parameter sets for degradation in water and sediment. In Option 1 the measured whole system DT_{50} was used to describe the degradation in sediment together with the default value of 1000 days for water. In Option 2 these DT_{50} values were reversed.

Table A 113: Input parameters related to active substance azoxystrobin for PEC_{SW/SED} calculations

Compound	Azoxystrobin	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	Yes / EFSA, 2010
Water solubility (mg/L)	6.0 (20°C)	Yes / EFSA, 2010
Saturated vapour pressure (Pa)	1.1×10^{-10} (20 °C)	Yes / EFSA, 2010
K _{FOC} / K _{FOM} (mL/g)	423 / 245 (arithmetic mean, n = 6)	Yes / EFSA, 2010 K _{FOM} = K _{FOC} /1.724
Freundlich Exponent 1/n	0.86 (arithmetic mean, n = 6)	Yes / EFSA, 2010
Plant Uptake	0.5	* Yes / DAR 2014 & Weinfurtner, 2013
DT _{50,soil} (d)	78 ^a (geometric mean field , n = 13)	Yes / EFSA, 2010
DT _{50,water} (d)	Option 1: 1000 ^{*b} Option 2: 205 ^{**b} (geometric mean, total system, n = 2)	*FOCUS default **Yes / EFSA, 2010
DT _{50,sed} (d)	Option 1: 205 ^{*b} (geometric mean, total system, n = 2) Option 2: 1000 ^{**b}	*Yes / EFSA, 2010 **FOCUS default

^a calculated from the geometric mean of the soil incorporated field studies (80.2 days, n = 3) and the slow phase of the non-incorporated studies (75.9 days, n = 10)

^b for compounds with K_{OC} between 100 and 2000 mL/g , the FOCUS kinetics advice regarding running simulations with both combinations for ascribing the whole system DT₅₀ and default and selecting the results that give the highest concentrations for the risk assessment was followed.

A 3.8.2 Results and discussions

Predicted environmental concentrations in surface water (PEC_{SW}) and sediment (PEC_{SED}) were calculated for the use of azoxystrobin on vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops in Europe in accordance with FOCUS guidelines.

The results are presented in the tables below in the following order:

Field uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Option 1 and Option 2

FOCUS Application dates and global maximum timing

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over Option 1 and Option 2

FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over single and multiple applications

FOCUS Step 4 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Option 1 and Option 2

FOCUS Step 4 PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over Option 1 and Option 2

FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – Maximum over single and multiple applications

Greenhouse uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy and vegetables, fruiting, Option 1 and Option 2 – 0.1% drift

FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following applications to vegetables, leafy and vegetables, fruiting, Option 1 and Option 2 – 0.2% drift

Field uses:

Table A 114: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58	Drift	0.795	1.58	Drift	0.795
	D3 2 nd	ditch	1.59	Drift	0.851	1.59	Drift	0.851
	D4	pond	0.649	Drainage	4.23	0.642	Drainage	4.28
	D4	stream	1.26	Drift	1.64	1.26	Drift	1.67
	D6	ditch	2.55	Drainage	2.47	2.55	Drainage	2.61
	R1	pond	0.216	Runoff	1.46	0.214	Runoff	1.47
	R1 2 nd	pond	0.198	Runoff	1.56	0.193	Runoff	1.56
	R1	stream	2.21	Runoff	0.851	2.21	Runoff	0.855
	R1 2 nd	stream	1.83	Runoff	0.946	1.83	Runoff	0.948
	R2	stream	1.38	Drift	2.19	1.38	Drift	2.20
	R2 2 nd	stream	1.40	Drift	1.53	1.40	Drift	1.55
	R3	stream	3.33	Runoff	1.20	3.33	Runoff	1.21
	R3 2 nd	stream	3.31	Runoff	2.51	3.31	Runoff	2.52
	R4	stream	1.69	Runoff	0.813	1.69	Runoff	0.814
	R4 2 nd	stream	5.36	Runoff	2.62	5.36	Runoff	2.62
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.931	1.39	Drift	0.935
	D3 2 nd	ditch	1.39	Drift	0.957	1.39	Drift	0.962
	D4	pond	1.35	Drainage	8.29	1.34	Drainage	8.37
	D4	stream	1.31	Drainage	3.22	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.21	5.58	Drainage	5.50
	R1	pond	0.435	Runoff	2.63	0.431	Runoff	2.65
	R1 2 nd	pond	0.399	Runoff	3.03	0.388	Runoff	3.02
	R1	stream	4.73	Runoff	1.75	4.73	Runoff	1.75
	R1 2 nd	stream	4.18	Runoff	2.15	4.18	Runoff	2.15
	R2	stream	2.50	Runoff	5.16	2.50	Runoff	5.18
	R2 2 nd	stream	1.27	Runoff	2.81	1.27	Runoff	2.82
	R3	stream	4.23	Runoff	2.61	4.23	Runoff	2.62
	R3 2 nd	stream	5.69	Runoff	4.79	5.69	Runoff	4.84
	R4	stream	6.36	Runoff	3.09	6.36	Runoff	3.09
	R4 2 nd	stream	8.41	Runoff	4.75	8.41	Runoff	4.77

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.808	1.59	Drift	0.808
	D3 2 nd	ditch	1.58	Drift	0.593	1.58	Drift	0.593
	D4	pond	0.395	Drainage	2.75	0.391	Drainage	2.76
	D4	stream	1.13	Drift	0.960	1.13	Drift	0.970
	D6	ditch	5.12	Drainage	5.63	5.11	Drainage	5.96
	R1	pond	0.604	Runoff	3.29	0.595	Runoff	3.23
	R1 2 nd	pond	0.289	Runoff	1.85	0.286	Runoff	1.85
	R1	stream	2.30	Runoff	2.85	2.30	Runoff	2.86
	R1 2 nd	stream	1.41	Runoff	0.567	1.41	Runoff	0.577
	R2	stream	1.40	Drift	2.28	1.40	Drift	2.43
	R2 2 nd	stream	1.39	Drift	3.28	1.39	Drift	3.31
	R3	stream	2.58	Runoff	2.44	2.58	Runoff	2.50
	R3 2 nd	stream	2.50	Runoff	2.37	2.50	Runoff	2.47
	R4	stream	3.24	Runoff	2.32	3.24	Runoff	2.33
	R4 2 nd	stream	3.39	Runoff	2.30	3.39	Runoff	2.30
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.930	1.39	Drift	0.935
	D3 2 nd	ditch	1.38	Drift	0.718	1.38	Drift	0.720
	D4	pond	1.40	Drainage	8.34	1.38	Drainage	8.36
	D4	stream	1.68	Drainage	3.28	1.68	Drainage	3.31
	D6	ditch	12.0	Drainage	13.4	12.0	Drainage	14.1
	R1	pond	0.892	Runoff	5.33	0.882	Runoff	5.23
	R1 2 nd	pond	0.705	Runoff	4.14	0.697	Runoff	4.15
	R1	stream	4.83	Runoff	4.88	4.83	Runoff	4.91
	R1 2 nd	stream	3.73	Runoff	1.45	3.73	Runoff	1.46
	R2	stream	1.74	Runoff	4.53	1.74	Runoff	4.54
	R2 2 nd	stream	1.41	Runoff	4.84	1.41	Runoff	4.92
	R3	stream	4.33	Runoff	2.92	4.33	Runoff	2.99
	R3 2 nd	stream	5.55	Runoff	7.79	5.55	Runoff	7.86
	R4	stream	7.10	Runoff	3.91	7.10	Runoff	3.93
	R4 2 nd	stream	6.90	Runoff	4.73	6.90	Runoff	4.75

Table A 115: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56	Drift	0.429	1.56	Drift	0.436
	R2	stream	1.38	Drift	2.15	1.38	Drift	2.16
	R3	stream	3.96	Runoff	1.55	3.96	Runoff	1.55
	R4	stream	5.71	Runoff	2.84	5.71	Runoff	2.84
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1.37	Drift	0.771	1.37	Drift	0.837
	R2	stream	1.70	Runoff	2.15	1.70	Runoff	2.20
	R3	stream	4.11	Runoff	2.70	4.11	Runoff	2.73
	R4	stream	8.46	Runoff	4.62	8.46	Runoff	4.63
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1.58	Drift	0.580	1.58	Drift	0.593
	R2	stream	1.40	Drift	1.84	1.40	Drift	1.85
	R3	stream	2.27	Runoff	1.96	2.27	Runoff	1.96
	R4	stream	2.93	Runoff	1.42	2.93	Runoff	1.42
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1.38	Drift	1.08	1.38	Drift	1.16
	R2	stream	1.89	Runoff	3.90	1.89	Runoff	3.90
	R3	stream	5.55	Runoff	4.41	5.55	Runoff	4.42
	R4	stream	7.31	Runoff	3.50	7.31	Runoff	3.50
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.53	1.95	Drainage	1.63
	R2	stream	1.40	Drift	2.80	1.40	Drift	2.89
	R3	stream	2.58	Runoff	2.61	2.58	Runoff	2.71
	R4	stream	3.73	Runoff	2.10	3.73	Runoff	2.12
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.08	3.64	Drainage	3.30
	R2	stream	1.21	Drift	5.34	1.21	Drift	5.51
	R3	stream	5.46	Runoff	5.64	5.46	Runoff	5.70
	R4	stream	6.57	Runoff	3.80	6.57	Runoff	3.82

Table A 116: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, bulb	D3	ditch	1.58	Drift	0.799	1.58	Drift	0.799

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
1 × 250 g a.s./ha, BBCH 11	D4	pond	0.605	Drainage	3.96	0.598	Drainage	4.00
	D4	stream	1.22	Drift	1.53	1.22	Drift	1.56
	D6	ditch	1.60	Drift	1.30	1.60	Drift	1.33
	D6 2 nd	ditch	4.56	Drainage	3.97	4.56	Drainage	4.47
	R1	pond	0.210	Runoff	1.23	0.208	Runoff	1.24
	R1	stream	2.16	Runoff	0.933	2.16	Runoff	0.936
	R2	stream	1.38	Drift	2.19	1.38	Drift	2.20
	R3	stream	3.35	Runoff	1.20	3.35	Runoff	1.20
	R4	stream	5.69	Runoff	2.75	5.69	Runoff	2.75
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.916	1.39	Drift	0.921
	D4	pond	1.27	Drainage	7.83	1.26	Drainage	7.91
	D4	stream	1.22	Drainage	3.03	1.22	Drainage	3.09
	D6	ditch	2.34	Drainage	2.30	2.34	Drainage	2.56
	D6 2 nd	ditch	12.7	Drainage	13.0	12.7	Drainage	14.1
	R1	pond	0.479	Runoff	2.59	0.474	Runoff	2.60
	R1	stream	5.37	Runoff	2.18	5.37	Runoff	2.18
	R2	stream	2.41	Runoff	3.93	2.41	Runoff	3.95
	R3	stream	4.33	Runoff	2.62	4.33	Runoff	2.63
	R4	stream	6.17	Runoff	3.47	6.17	Runoff	3.49
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.809	1.59	Drift	0.809
	D4	pond	0.487	Drainage	3.29	0.482	Drainage	3.31
	D4	stream	1.13	Drift	1.16	1.13	Drift	1.17
	D6	ditch	1.60	Drift	2.34	1.60	Drift	2.37
	D6 2 nd	ditch	1.61	Drift	1.56	1.61	Drift	1.57
	R1	pond	0.112	Runoff	0.874	0.110	Runoff	0.876
	R1	stream	1.03	Drift	0.353	1.03	Drift	0.354
	R2	stream	1.40	Drift	2.85	1.40	Drift	2.86
	R3	stream	3.30	Runoff	1.36	3.30	Runoff	1.36
	R4	stream	4.45	Runoff	2.50	4.45	Runoff	2.51
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.916	1.39	Drift	0.921
	D4	pond	1.34	Drainage	8.23	1.33	Drainage	8.28
	D4	stream	1.59	Drainage	3.09	1.59	Drainage	3.14
	D6	ditch	1.72	Drainage	3.39	1.72	Drainage	3.49
	D6 2 nd	ditch	1.46	Drift	1.94	1.46	Drift	2.15

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
	R1	pond	0.267	Runoff	1.89	0.262	Runoff	1.89
	R1	stream	2.72	Runoff	0.952	2.72	Runoff	0.955
	R2	stream	1.86	Runoff	4.03	1.86	Runoff	4.05
	R3	stream	4.98	Runoff	2.14	4.98	Runoff	2.15
	R4	stream	6.40	Runoff	3.87	6.40	Runoff	3.89

Table A 117: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Hops 1 × 250 g a.s./ha, BBCH 21	R1	pond	0.657	Drift	2.65	0.657	Drift	2.62
	R1	stream	9.44	Drift	1.25	9.44	Drift	1.25
Hops 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72	0.841	Drift	3.72
	R1	stream	7.82	Drift	1.07	7.82	Drift	1.08
Hops 1 × 250 g a.s./ha, BBCH 51	R1	pond	0.657	Drift	2.70	0.657	Drift	2.64
	R1	stream	9.21	Drift	0.722	9.21	Drift	0.722
Hops 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81	0.817	Drift	3.71
	R1	stream	7.81	Drift	0.755	7.81	Drift	0.759
Hops 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.657	Drift	2.82	0.657	Drift	2.76
	R1	stream	9.46	Drift	1.33	9.46	Drift	1.33
Hops 2 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89	0.796	Drift	3.79
	R1	stream	8.03	Drift	1.22	8.03	Drift	1.22

Table A 118: FOCUS Application dates and global maximum timing for vegetables, leafy

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	04-May-92	-	04-May-92	04-May-92
	D3 2 nd	ditch	18-Aug-92	-	18-Aug-92	18-Aug-92
	D4	pond	18-May-85	-	29-Dec-85	29-Dec-85
	D4	stream	18-May-85	-	18-May-85	18-May-85
	D6	ditch	25-Aug-86	-	29-Oct-86	29-Oct-86
	R1	pond	26-Apr-84	-	30-May-84	30-May-84
	R1 2 nd	pond	20-Aug-78	-	31-Dec-78	31-Dec-78
	R1	stream	26-Apr-84	-	20-May-84	20-May-84
	R1 2 nd	stream	20-Aug-78	-	17-Sep-78	17-Sep-78
	R2	stream	22-Mar-77	-	22-Mar-77	22-Mar-77
	R2 2 nd	stream	05-Aug-89	-	05-Aug-89	05-Aug-89
	R3	stream	10-Mar-80	-	22-Mar-80	22-Mar-80
	R3 2 nd	stream	25-Jun-75	-	01-Jul-75	01-Jul-75
	R4	stream	08-Mar-84	-	12-Apr-84	12-Apr-84
	R4 2 nd	stream	23-Jun-85	-	28-Jun-85	28-Jun-85
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	04-May-92	14-May-92	14-May-92	14-May-92
	D3 2 nd	ditch	18-Aug-92	26-Aug-92	26-Aug-92	26-Aug-92
	D4	pond	18-May-85	29-May-85	29-Dec-85	29-Dec-85
	D4	stream	18-May-85	29-May-85	07-Dec-85	07-Dec-85
	D6	ditch	25-Aug-86	01-Sep-86	29-Oct-86	29-Oct-86
	R1	pond	26-Apr-84	03-May-84	30-May-84	30-May-84
	R1 2 nd	pond	20-Aug-78	02-Sep-78	31-Dec-78	31-Dec-78
	R1	stream	26-Apr-84	03-May-84	20-May-84	20-May-84
	R1 2 nd	stream	20-Aug-78	02-Sep-78	17-Sep-78	17-Sep-78
	R2	stream	21-Mar-77	30-Mar-77	03-Apr-77	03-Apr-77
	R2 2 nd	stream	05-Aug-89	12-Aug-89	22-Oct-89	22-Oct-89
	R3	stream	10-Mar-80	28-Mar-80	20-Apr-80	20-Apr-80
	R3 2 nd	stream	25-Jun-75	06-Jul-75	10-Jul-75	10-Jul-75
	R4	stream	08-Mar-84	03-Apr-84	12-Apr-84	12-Apr-84
	R4 2 nd	stream	23-Jun-85	30-Jun-85	05-Jul-85	05-Jul-85
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	04-May-92	-	04-May-92	04-May-92
	D3 2 nd	ditch	18-Aug-92	-	18-Aug-92	18-Aug-92
	D4	pond	18-May-85	-	18-May-85	18-May-85

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
	D4	stream	18-May-85	-	30-Dec-85	30-Dec-85
	D6	ditch	25-Aug-86	-	29-Oct-86	29-Oct-86
	R1	pond	26-Apr-84	-	30-May-84	30-May-84
	R1 2 nd	pond	20-Aug-78	-	31-Dec-78	31-Dec-78
	R1	stream	26-Apr-84	-	20-May-84	20-May-84
	R1 2 nd	stream	20-Aug-78	-	17-Sep-78	17-Sep-78
	R2	stream	22-Mar-77	-	22-Mar-77	22-Mar-77
	R2 2 nd	stream	05-Aug-89	-	05-Aug-89	05-Aug-89
	R3	stream	10-Mar-80	-	22-Mar-80	22-Mar-80
	R3 2 nd	stream	25-Jun-75	-	01-Jul-75	01-Jul-75
	R4	stream	08-Mar-84	-	12-Apr-84	12-Apr-84
	R4 2 nd	stream	23-Jun-85	-	28-Jun-85	28-Jun-85
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	04-May-92	14-May-92	14-May-92	14-May-92
	D3 2 nd	ditch	18-Aug-92	26-Aug-92	26-Aug-92	26-Aug-92
	D4	pond	18-May-85	29-May-85	29-Dec-85	29-Dec-85
	D4	stream	18-May-85	29-May-85	07-Dec-85	07-Dec-85
	D6	ditch	25-Aug-86	01-Sep-86	29-Oct-86	29-Oct-86
	R1	pond	26-Apr-84	03-May-84	30-May-84	30-May-84
	R1 2 nd	pond	20-Aug-78	02-Sep-78	31-Dec-78	31-Dec-78
	R1	stream	26-Apr-84	03-May-84	20-May-84	20-May-84
	R1 2 nd	stream	20-Aug-78	02-Sep-78	17-Sep-78	17-Sep-78
	R2	stream	21-Mar-77	30-Mar-77	03-Apr-77	03-Apr-77
	R2 2 nd	stream	05-Aug-89	12-Aug-89	22-Oct-89	22-Oct-89
	R3	stream	10-Mar-80	28-Mar-80	20-Apr-80	20-Apr-80
	R3 2 nd	stream	25-Jun-75	06-Jul-75	10-Jul-75	10-Jul-75
	R4	stream	08-Mar-84	03-Apr-84	12-Apr-84	12-Apr-84
	R4 2 nd	stream	23-Jun-85	30-Jun-85	05-Jul-85	05-Jul-85

Table A 119: FOCUS Application dates and global maximum timing for vegetables, fruiting

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	23-Apr-86	-	23-Apr-86	23-Apr-86
	R2	stream	22-Mar-77	-	22-Mar-77	22-Mar-77
	R3	stream	18-May-80	-	23-May-80	23-May-80
	R4	stream	23-Apr-84	-	28-Apr-84	28-Apr-84
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	23-Apr-86	07-May-86	07-May-86	07-May-86
	R2	stream	22-Mar-77	22-Apr-77	05-May-77	05-May-77
	R3	stream	18-May-80	01-Jun-80	22-Jun-80	22-Jun-80
	R4	stream	23-Apr-84	04-May-84	09-May-84	09-May-84
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	19-May-86	-	19-May-86	19-May-86
	R2	stream	20-May-77	-	20-May-77	20-May-77
	R3	stream	18-Jun-75	-	29-Jun-75	29-Jun-75
	R4	stream	27-May-84	-	14-Jun-84	14-Jun-84
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	19-May-86	31-May-86	19-May-86	19-May-86
	R2	stream	20-May-77	27-May-77	10-Jun-77	10-Jun-77
	R3	stream	18-Jun-75	25-Jun-75	29-Jun-75	29-Jun-75
	R4	stream	27-May-84	06-Jun-84	14-Jun-84	14-Jun-84
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	17-Jul-86	-	30-Oct-86	30-Oct-86
	R2	stream	05-Aug-89	-	05-Aug-89	05-Aug-89
	R3	stream	30-Jul-75	-	05-Aug-75	05-Aug-75
	R4	stream	23-Jun-85	-	28-Jun-85	28-Jun-85
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	06-Jul-86	17-Jul-86	30-Oct-86	30-Oct-86
	R2	stream	05-Aug-89	12-Aug-89	12-Aug-89	12-Aug-89
	R3	stream	24-Jul-75	31-Jul-75	05-Aug-75	05-Aug-75
	R4	stream	12-Jun-85	23-Jun-85	28-Jun-85	28-Jun-85

Table A 120: FOCUS Application dates and global maximum timing for vegetables, bulb

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Vegetables, bulb	D3	ditch	04-May-92	-	04-May-92	04-May-92

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
1 × 250 g a.s./ha, BBCH 11	D4	pond	12-May-85	-	29-Dec-85	29-Dec-85
	D4	stream	12-May-85	-	12-May-85	12-May-85
	D6	ditch	16-May-86	-	16-May-86	16-May-86
	D6 2 nd	ditch	06-Nov-86	-	19-Jan-87	19-Jan-87
	R1	pond	28-Apr-84	-	30-May-84	30-May-84
	R1	stream	28-Apr-84	-	20-May-84	20-May-84
	R2	stream	22-Mar-77	-	22-Mar-77	22-Mar-77
	R3	stream	10-Mar-80	-	22-Mar-80	22-Mar-80
	R4	stream	09-Mar-84	-	14-Mar-84	14-Mar-84
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	04-May-92	16-May-92	16-May-92	16-May-92
	D4	pond	12-May-85	24-May-85	29-Dec-85	29-Dec-85
	D4	stream	12-May-85	24-May-85	07-Dec-85	07-Dec-85
	D6	ditch	16-May-86	28-May-86	05-Nov-86	05-Nov-86
	D6 2 nd	ditch	01-Dec-86	13-Dec-86	25-Dec-86	25-Dec-86
	R1	pond	28-Apr-84	10-May-84	30-May-84	30-May-84
	R1	stream	28-Apr-84	10-May-84	20-May-84	20-May-84
	R2	stream	14-Mar-77	26-Mar-77	03-Apr-77	03-Apr-77
	R3	stream	10-Mar-80	28-Mar-80	20-Apr-80	20-Apr-80
	R4	stream	09-Mar-84	03-Apr-84	11-Apr-84	11-Apr-84
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	04-Aug-92	-	04-Aug-92	04-Aug (216)
	D4	pond	27-Aug-85	-	30-Dec-85	04-Aug-92
	D4	stream	27-Aug-85	-	27-Aug-85	30-Dec-85
	D6	ditch	01-Jul-86	-	01-Jul-86	27-Aug-85
	D6 2 nd	ditch	14-Mar-86	-	14-Mar-86	01-Jul-86
	R1	pond	28-Jul-78	-	31-Dec-78	14-Mar-86
	R1	stream	28-Jul-78	-	28-Jul-78	31-Dec-78
	R2	stream	07-May-77	-	07-May-77	28-Jul-78
	R3	stream	18-May-80	-	23-May-80	07-May-77
	R4	stream	07-May-84	-	12-May-84	23-May-80
Vegetables, bulb	D3	ditch	24-Jul-92	05-Aug-92	05-Aug-92	05-Aug-92

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
2 × 250 g a.s./ha, BBCH 49	D4	pond	27-Aug-85	10-Sep-85	30-Dec-85	30-Dec-85
	D4	stream	27-Aug-85	10-Sep-85	07-Dec-85	07-Dec-85
	D6	ditch	19-Jun-86	01-Jul-86	05-Nov-86	05-Nov-86
	D6 2 nd	ditch	27-Feb-86	14-Mar-86	27-Feb-86	27-Feb-86
	R1	pond	28-Jul-78	20-Aug-78	31-Dec-78	31-Dec-78
	R1	stream	28-Jul-78	20-Aug-78	29-Sep-78	29-Sep-78
	R2	stream	22-Apr-77	07-May-77	13-May-77	13-May-77
	R3	stream	22-Apr-80	18-May-80	23-May-80	23-May-80
	R4	stream	20-Apr-84	07-May-84	12-May-84	12-May-84

Table A 121: FOCUS Application dates and global maximum timing for hops

Application scenario	Scenario	Water body	1 st Application date	2 nd Application date	Date of global maximum Option 1	Date of global maximum Option 2
Hops 1 × 250 g a.s./ha, BBCH 21	R1	pond	13-Jun-84	-	13-Jun-84	13-Jun-84
	R1	stream	13-Jun-84	-	13-Jun-84	13-Jun-84
Hops 2 × 250 g a.s./ha, BBCH 21	R1	pond	15-May-84	31-May-84	31-May-84	31-May-84
	R1	stream	15-May-84	31-May-84	31-May-84	31-May-84
Hops 1 × 250 g a.s./ha, BBCH 51	R1	pond	11-Jul-78	-	11-Jul-78	11-Jul-78
	R1	stream	11-Jul-78	-	11-Jul-78	11-Jul-78
Hops 2 × 250 g a.s./ha, BBCH 51	R1	pond	11-Jul-78	28-Jul-78	28-Jul-78	28-Jul-78
	R1	stream	11-Jul-78	28-Jul-78	28-Jul-78	28-Jul-78
Hops 1 × 250 g a.s./ha, BBCH 89	R1	pond	20-Aug-78	-	20-Aug-78	20-Aug-78
	R1	stream	20-Aug-78	-	20-Aug-78	20-Aug-78
Hops 2 × 250 g a.s./ha, BBCH 89	R1	pond	28-Jul-78	20-Aug-78	20-Aug-78	20-Aug-78
	R1	stream	28-Jul-78	20-Aug-78	20-Aug-78	20-Aug-78

Table A 122: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58	Drift	0.795
	D3 2 nd	ditch	1.59	Drift	0.851
	D4	pond	0.649	Drainage	4.28
	D4	stream	1.26	Drift	1.67
	D6	ditch	2.55	Drainage	2.61
	R1	pond	0.216	Runoff	1.47
	R1 2 nd	pond	0.198	Runoff	1.56
	R1	stream	2.21	Runoff	0.855
	R1 2 nd	stream	1.83	Runoff	0.948
	R2	stream	1.38	Drift	2.20
	R2 2 nd	stream	1.40	Drift	1.55
	R3	stream	3.33	Runoff	1.21
	R3 2 nd	stream	3.31	Runoff	2.52
	R4	stream	1.69	Runoff	0.814
	R4 2 nd	stream	5.36	Runoff	2.62
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.935
	D3 2 nd	ditch	1.39	Drift	0.962
	D4	pond	1.35	Drainage	8.37
	D4	stream	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.50
	R1	pond	0.435	Runoff	2.65
	R1 2 nd	pond	0.399	Runoff	3.03
	R1	stream	4.73	Runoff	1.75
	R1 2 nd	stream	4.18	Runoff	2.15
	R2	stream	2.50	Runoff	5.18
	R2 2 nd	stream	1.27	Runoff	2.82
	R3	stream	4.23	Runoff	2.62
	R3 2 nd	stream	5.69	Runoff	4.84
	R4	stream	6.36	Runoff	3.09
	R4 2 nd	stream	8.41	Runoff	4.77
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.808
	D3 2 nd	ditch	1.58	Drift	0.593
	D4	pond	0.395	Drainage	2.76
	D4	stream	1.13	Drift	0.970
	D6	ditch	5.12	Drainage	5.96

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
	R1	pond	0.604	Runoff	3.29
	R1 2 nd	pond	0.289	Runoff	1.85
	R1	stream	2.30	Runoff	2.86
	R1 2 nd	stream	1.41	Runoff	0.577
	R2	stream	1.40	Drift	2.43
	R2 2 nd	stream	1.39	Drift	3.31
	R3	stream	2.58	Runoff	2.50
	R3 2 nd	stream	2.50	Runoff	2.47
	R4	stream	3.24	Runoff	2.33
	R4 2 nd	stream	3.39	Runoff	2.30
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.935
	D3 2 nd	ditch	1.38	Drift	0.720
	D4	pond	1.40	Drainage	8.36
	D4	stream	1.68	Drainage	3.31
	D6	ditch	12.0	Drainage	14.1
	R1	pond	0.892	Runoff	5.33
	R1 2 nd	pond	0.705	Runoff	4.15
	R1	stream	4.83	Runoff	4.91
	R1 2 nd	stream	3.73	Runoff	1.46
	R2	stream	1.74	Runoff	4.54
	R2 2 nd	stream	1.41	Runoff	4.92
	R3	stream	4.33	Runoff	2.99
	R3 2 nd	stream	5.55	Runoff	7.86
	R4	stream	7.10	Runoff	3.93
	R4 2 nd	stream	6.90	Runoff	4.75

^a maximum over option 1 and 2

Table A 123: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56	Drift	0.436
	R2	stream	1.38	Drift	2.16
	R3	stream	3.96	Runoff	1.55
	R4	stream	5.71	Runoff	2.84
Vegetables, fruiting 2 × 250 g a.s./ha,	D6	ditch	1.37	Drift	0.837
	R2	stream	1.70	Runoff	2.20

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
BBCH 11	R3	stream	4.11	Runoff	2.73
	R4	stream	8.46	Runoff	4.63
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	1.58	Drift	0.593
	R2	stream	1.40	Drift	1.85
	R3	stream	2.27	Runoff	1.96
	R4	stream	2.93	Runoff	1.42
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1.38	Drift	1.16
	R2	stream	1.89	Runoff	3.90
	R3	stream	5.55	Runoff	4.42
	R4	stream	7.31	Runoff	3.50
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.63
	R2	stream	1.40	Drift	2.89
	R3	stream	2.58	Runoff	2.71
	R4	stream	3.73	Runoff	2.12
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.30
	R2	stream	1.21	Drift	5.51
	R3	stream	5.46	Runoff	5.70
	R4	stream	6.57	Runoff	3.82

^a maximum over option 1 and 2

Table A 124: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58	Drift	0.799
	D4	pond	0.605	Drainage	4.00
	D4	stream	1.22	Drift	1.56
	D6	ditch	1.60	Drift	1.33
	D6 2 nd	ditch	4.56	Drainage	4.47
	R1	pond	0.210	Runoff	1.24
	R1	stream	2.16	Runoff	0.936
	R2	stream	1.38	Drift	2.20
	R3	stream	3.35	Runoff	1.20
	R4	stream	5.69	Runoff	2.75
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.39	Drift	0.921
	D4	pond	1.27	Drainage	7.91
	D4	stream	1.22	Drainage	3.09
	D6	ditch	2.34	Drainage	2.56
	D6 2 nd	ditch	12.7	Drainage	14.1

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
	R1	pond	0.479	Runoff	2.60
	R1	stream	5.37	Runoff	2.18
	R2	stream	2.41	Runoff	3.95
	R3	stream	4.33	Runoff	2.63
	R4	stream	6.17	Runoff	3.49
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59	Drift	0.809
	D4	pond	0.487	Drainage	3.31
	D4	stream	1.13	Drift	1.17
	D6	ditch	1.60	Drift	2.37
	D6 2 nd	ditch	1.61	Drift	1.57
	R1	pond	0.112	Runoff	0.876
	R1	stream	1.03	Drift	0.354
	R2	stream	1.40	Drift	2.86
	R3	stream	3.30	Runoff	1.36
	R4	stream	4.45	Runoff	2.51
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.39	Drift	0.921
	D4	pond	1.34	Drainage	8.28
	D4	stream	1.59	Drainage	3.14
	D6	ditch	1.72	Drainage	3.49
	D6 2 nd	ditch	1.46	Drift	2.15
	R1	pond	0.267	Runoff	1.89
	R1	stream	2.72	Runoff	0.955
	R2	stream	1.86	Runoff	4.05
	R3	stream	4.98	Runoff	2.15
	R4	stream	6.40	Runoff	3.89

^a maximum over option 1 and 2

Table A 125: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops – maximum over option 1 and option 2

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Hops 1 × 250 g a.s./ha, BBCH 21	R1	pond	0.657	Drift	2.65
	R1	stream	9.44	Drift	1.25
Hops 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	7.82	Drift	1.08
Hops 1 × 250 g a.s./ha, BBCH 51	R1	pond	0.657	Drift	2.70
	R1	stream	9.21	Drift	0.722

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Hops 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	7.81	Drift	0.759
Hops 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.657	Drift	2.82
	R1	stream	9.46	Drift	1.33
Hops 1 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	8.03	Drift	1.22

^a maximum over option 1 and 2

Table A 126: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58*	Drift	0.935
	D3 2 nd	ditch	1.59*	Drift	0.962
	D4	pond	1.35	Drainage	8.37
	D4	stream	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.5
	R1	pond	0.435	Runoff	2.65
	R1 2 nd	pond	0.399	Runoff	3.03
	R1	stream	4.73	Runoff	1.75
	R1 2 nd	stream	4.18	Runoff	2.15
	R2	stream	2.5	Runoff	5.18
	R2 2 nd	stream	1.4*	Drift	2.82
	R3	stream	4.23	Runoff	2.62
	R3 2 nd	stream	5.69	Runoff	4.84
	R4	stream	6.36	Runoff	3.09
	R4 2 nd	stream	8.41	Runoff	4.77
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	1.59*	Drift	0.935
	D3 2 nd	ditch	1.58*	Drift	0.72
	D4	pond	1.4	Drainage	8.36
	D4	stream	1.68	Drainage	3.31
	D6	ditch	12	Drainage	14.1
	R1	pond	0.892	Runoff	5.33
	R1 2 nd	pond	0.705	Runoff	4.15
	R1	stream	4.83	Runoff	4.91
	R1 2 nd	stream	3.73	Runoff	1.46
	R2	stream	1.74	Runoff	4.54

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
	R2 2 nd	stream	1.41	Runoff	4.92
	R3	stream	4.33	Runoff	2.99
	R3 2 nd	stream	5.55	Runoff	7.86
	R4	stream	7.10	Runoff	3.93
	R4 2 nd	stream	6.90	Runoff	4.75

^a values resulting from single applications are marked with *

Table A 127: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	1.56*	Drift	0.837
	R2	stream	1.70	Runoff	2.20
	R3	stream	4.11	Runoff	2.73
	R4	stream	8.46	Runoff	4.63
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	1.58*	Drift	1.16
	R2	stream	1.89	Runoff	3.90
	R3	stream	5.55	Runoff	4.42
	R4	stream	7.31	Runoff	3.50
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.30
	R2	stream	1.40*	Drift	5.51
	R3	stream	5.46	Runoff	5.70
	R4	stream	6.57	Runoff	3.82

^a values resulting from single applications are marked with *

Table A 128: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, bulb – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	1.58*	Drift	0.921
	D4	pond	1.27	Drainage	7.91
	D4	stream	1.22*	Drift	3.09
	D6	ditch	2.34	Drainage	2.56
	D6 2 nd	ditch	12.7	Drainage	14.1
	R1	pond	0.479	Runoff	2.60
	R1	stream	5.37	Runoff	2.18
	R2	stream	2.41	Runoff	3.95
	R3	stream	4.33	Runoff	2.63

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	R4	stream	6.17	Runoff	3.49
	D3	ditch	1.59*	Drift	0.921
	D4	pond	1.34	Drainage	8.28
	D4	stream	1.59	Drainage	3.14
	D6	ditch	1.72	Drainage	3.49
	D6 2 nd	ditch	1.61*	Drift	2.15
	R1	pond	0.267	Runoff	1.89
	R1	stream	2.72	Runoff	0.955
	R2	stream	1.86	Runoff	4.05
	R3	stream	4.98	Runoff	2.15
	R4	stream	6.40	Runoff	3.89

^a values resulting from single applications are marked with *

Table A 129: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to hops – maximum over single and multiple application

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Hops 2 × 250 g a.s./ha, BBCH 21	R1	pond	0.847	Drift	3.72
	R1	stream	9.44*	Drift	1.25*
Hops 2 × 250 g a.s./ha, BBCH 51	R1	pond	0.828	Drift	3.81
	R1	stream	9.21*	Drift	0.759
Hops 2 × 250 g a.s./ha, BBCH 89	R1	pond	0.809	Drift	3.89
	R1	stream	9.46*	Drift	1.33*

^a values resulting from single applications are marked with *

Table A 130: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Option 1

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.648	Drainage	-	-	-	-	0.647	Drainage	0.647	Drainage	0.646	Drainage	0.645	Drainage
	D4	stream	0.634	Drainage	-	-	-	-	0.634	Drainage	0.634	Drainage	0.634	Drainage	0.634	Drainage
	D6	ditch	2.55	Drainage	-	-	-	-	2.55	Drainage	2.55	Drainage	2.55	Drainage	2.55	Drainage
	R1	pond	0.140	Runoff	0.108	Runoff	0.072	Runoff	0.203	Runoff	0.095	Runoff	0.072	Runoff	0.051	Runoff
	R1 2 nd	pond	0.127	Runoff	0.093	Runoff	0.061	Runoff	0.193	Runoff	0.087	Runoff	0.066	Runoff	0.046	Runoff
	R1	stream	1.44	Runoff	1.04	Drift	1.04	Drift	2.21	Runoff	1.00	Runoff	0.769	Runoff	0.524	Runoff
	R1 2 nd	stream	1.19	Runoff	1.05	Drift	1.05	Drift	1.83	Runoff	0.832	Runoff	0.639	Runoff	0.436	Runoff
	R2	stream	0.729	Runoff	1.38	Drift	1.38	Drift	1.12	Runoff	0.507	Runoff	0.389	Runoff	0.265	Runoff
	R2 2 nd	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.585	Runoff	0.272	Drift	0.204	Runoff	0.141	Drift
	R3	stream	2.16	Runoff	1.50	Runoff	1.47	Drift	3.33	Runoff	1.50	Runoff	1.15	Runoff	0.784	Runoff
	R3 2 nd	stream	2.16	Runoff	1.51	Runoff	1.47	Drift	3.31	Runoff	1.51	Runoff	1.16	Runoff	0.791	Runoff
	R4	stream	1.10	Runoff	1.04	Drift	1.04	Drift	1.69	Runoff	0.770	Runoff	0.591	Runoff	0.404	Runoff
	R4 2 nd	stream	3.50	Runoff	2.43	Runoff	1.28	Runoff	5.36	Runoff	2.43	Runoff	1.87	Runoff	1.28	Runoff
Vegetables,	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
leafy 2 × 250 g a.s./ha, BBCH 11	D3 2 nd	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.35	Drainage	-	-	-	-	1.35	Drainage	1.35	Drainage	1.35	Drainage	1.35	Drainage
	D4	stream	1.31	Drainage	-	-	-	-	1.31	Drainage	1.31	Drainage	1.31	Drainage	1.31	Drainage
	D6	ditch	5.58	Drainage	-	-	-	-	5.58	Drainage	5.58	Drainage	5.58	Drainage	5.58	Drainage
	R1	pond	0.278	Runoff	0.211	Runoff	0.136	Runoff	0.411	Runoff	0.187	Runoff	0.142	Runoff	0.100	Runoff
	R1 2 nd	pond	0.255	Runoff	0.185	Runoff	0.120	Runoff	0.389	Runoff	0.174	Runoff	0.133	Runoff	0.091	Runoff
	R1	stream	3.08	Runoff	2.15	Runoff	1.12	Runoff	4.73	Runoff	2.15	Runoff	1.65	Runoff	1.12	Runoff
	R1 2 nd	stream	2.73	Runoff	1.90	Runoff	0.996	Runoff	4.18	Runoff	1.90	Runoff	1.46	Runoff	0.996	Runoff
	R2	stream	1.62	Runoff	1.19	Drift	1.19	Drift	2.50	Runoff	1.13	Runoff	0.866	Runoff	0.591	Runoff
	R2 2 nd	stream	0.822	Runoff	1.21	Drift	1.21	Drift	1.27	Runoff	0.571	Runoff	0.439	Runoff	0.299	Runoff
	R3	stream	2.76	Runoff	1.93	Runoff	1.27	Drift	4.23	Runoff	1.93	Runoff	1.48	Runoff	1.01	Runoff
	R3 2 nd	stream	3.71	Runoff	2.59	Runoff	1.36	Runoff	5.69	Runoff	2.59	Runoff	1.99	Runoff	1.36	Runoff
	R4	stream	4.15	Runoff	2.89	Runoff	1.52	Runoff	6.36	Runoff	2.89	Runoff	2.22	Runoff	1.52	Runoff
	R4 2 nd	stream	5.49	Runoff	3.82	Runoff	2.00	Runoff	8.41	Runoff	3.82	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.428	Drift	-	-	-	-	0.227	Drift	0.227	Drift	0.155	Drift	0.118	Drift
	D4	pond	0.394	Drainage	-	-	-	-	0.390	Drainage	0.390	Drainage	0.388	Drainage	0.387	Drainage
	D4	stream	0.609	Drainage	-	-	-	-	0.609	Drainage	0.609	Drainage	0.609	Drainage	0.609	Drainage

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	D6	ditch	5.12	Drainage	-	-	-	-	5.12	Drainage	5.12	Drainage	5.12	Drainage	5.12	Drainage
	R1	pond	0.377	Runoff	0.270	Runoff	0.156	Runoff	0.589	Runoff	0.255	Runoff	0.193	Runoff	0.132	Runoff
	R1 2 nd	pond	0.184	Runoff	0.133	Runoff	0.077	Runoff	0.282	Runoff	0.126	Runoff	0.096	Runoff	0.066	Runoff
	R1	stream	1.50	Runoff	1.05	Runoff	1.05	Drift	2.30	Runoff	1.05	Runoff	0.805	Runoff	0.550	Runoff
	R1 2 nd	stream	0.918	Runoff	1.05	Drift	1.05	Drift	1.41	Runoff	0.640	Runoff	0.491	Runoff	0.335	Runoff
	R2	stream	0.524	Runoff	1.40	Drift	1.40	Drift	0.803	Runoff	0.365	Runoff	0.280	Runoff	0.191	Runoff
	R2 2 nd	stream	0.507	Drift	1.39	Drift	1.39	Drift	0.614	Runoff	0.275	Runoff	0.211	Runoff	0.144	Runoff
	R3	stream	1.68	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.17	Runoff	0.899	Runoff	0.613	Runoff
	R3 2 nd	stream	1.63	Runoff	1.47	Drift	1.47	Drift	2.50	Runoff	1.14	Runoff	0.874	Runoff	0.597	Runoff
	R4	stream	2.11	Runoff	1.47	Runoff	1.02	Drift	3.24	Runoff	1.47	Runoff	1.13	Runoff	0.768	Runoff
	R4 2 nd	stream	2.22	Runoff	1.54	Runoff	1.05	Drift	3.39	Runoff	1.54	Runoff	1.19	Runoff	0.809	Runoff
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D3 2 nd	ditch	0.358	Drift	-	-	-	-	0.186	Drift	0.186	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.39	Drainage	-	-	-	-	1.39	Drainage	1.39	Drainage	1.38	Drainage	1.38	Drainage
	D4	stream	1.68	Drainage	-	-	-	-	1.68	Drainage	1.68	Drainage	1.68	Drainage	1.68	Drainage
	D6	ditch	12.0	Drainage	-	-	-	-	12.0	Drainage	12.0	Drainage	12.0	Drainage	12.0	Drainage
	R1	pond	0.559	Runoff	0.405	Runoff	0.239	Runoff	0.864	Runoff	0.377	Runoff	0.285	Runoff	0.196	Runoff
	R1 2 nd	pond	0.446	Runoff	0.317	Runoff	0.178	Runoff	0.692	Runoff	0.303	Runoff	0.230	Runoff	0.157	Runoff

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	stream	3.15	Runoff	2.19	Runoff	1.15	Runoff	4.83	Runoff	2.19	Runoff	1.68	Runoff	1.15	Runoff
	R1 2 nd	stream	2.43	Runoff	1.70	Runoff	0.906	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.887	Runoff
	R2	stream	1.14	Runoff	1.21	Drift	1.21	Drift	1.74	Runoff	0.791	Runoff	0.608	Runoff	0.415	Runoff
	R2 2 nd	stream	0.909	Runoff	1.20	Drift	1.20	Drift	1.41	Runoff	0.631	Runoff	0.483	Runoff	0.329	Runoff
	R3	stream	2.82	Runoff	1.97	Runoff	1.28	Drift	4.33	Runoff	1.97	Runoff	1.51	Runoff	1.03	Runoff
	R3 2 nd	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.62	Runoff	3.22	Runoff	1.68	Runoff	7.10	Runoff	3.22	Runoff	2.47	Runoff	1.68	Runoff
	R4 2 nd	stream	4.50	Runoff	3.14	Runoff	1.65	Runoff	6.90	Runoff	3.14	Runoff	2.41	Runoff	1.65	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 131: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Option 2

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.642	Drainage	-	-	-	-	0.640	Drainage	0.640	Drainage	0.639	Drainage	0.639	Drainage
	D4	stream	0.634	Drainage	-	-	-	-	0.634	Drainage	0.634	Drainage	0.634	Drainage	0.634	Drainage
	D6	ditch	2.55	Drainage	-	-	-	-	2.55	Drainage	2.55	Drainage	2.55	Drainage	2.55	Drainage
	R1	pond	0.138	Runoff	0.107	Runoff	0.070	Runoff	0.201	Runoff	0.094	Runoff	0.071	Runoff	0.050	Runoff
	R1 2 nd	pond	0.124	Runoff	0.090	Runoff	0.059	Runoff	0.188	Runoff	0.085	Runoff	0.064	Runoff	0.045	Runoff
	R1	stream	1.44	Runoff	1.04	Drift	1.04	Drift	2.21	Runoff	1.00	Runoff	0.769	Runoff	0.524	Runoff
	R1 2 nd	stream	1.19	Runoff	1.05	Drift	1.05	Drift	1.83	Runoff	0.832	Runoff	0.639	Runoff	0.436	Runoff
	R2	stream	0.729	Runoff	1.38	Drift	1.38	Drift	1.12	Runoff	0.507	Runoff	0.389	Runoff	0.265	Runoff
	R2 2 nd	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.585	Runoff	0.272	Drift	0.204	Runoff	0.141	Drift
	R3	stream	2.16	Runoff	1.50	Runoff	1.47	Drift	3.33	Runoff	1.50	Runoff	1.15	Runoff	0.784	Runoff
	R3 2 nd	stream	2.16	Runoff	1.51	Runoff	1.47	Drift	3.31	Runoff	1.51	Runoff	1.16	Runoff	0.791	Runoff
	R4	stream	1.10	Runoff	1.04	Drift	1.04	Drift	1.69	Runoff	0.770	Runoff	0.591	Runoff	0.404	Runoff
	R4 2 nd	stream	3.50	Runoff	2.43	Runoff	1.28	Runoff	5.36	Runoff	2.43	Runoff	1.87	Runoff	1.28	Runoff
Vegetables,	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
leafy 2 × 250 g a.s./ha, BBCH 11	D3 2 nd	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.34	Drainage	-	-	-	-	1.34	Drainage	1.34	Drainage	1.33	Drainage	1.33	Drainage
	D4	stream	1.31	Drainage	-	-	-	-	1.31	Drainage	1.31	Drainage	1.31	Drainage	1.31	Drainage
	D6	ditch	5.58	Drainage	-	-	-	-	5.58	Drainage	5.58	Drainage	5.58	Drainage	5.58	Drainage
	R1	pond	0.275	Runoff	0.208	Runoff	0.133	Runoff	0.408	Runoff	0.185	Runoff	0.141	Runoff	0.098	Runoff
	R1 2 nd	pond	0.248	Runoff	0.179	Runoff	0.118	Runoff	0.379	Runoff	0.169	Runoff	0.129	Runoff	0.088	Runoff
	R1	stream	3.08	Runoff	2.15	Runoff	1.12	Runoff	4.73	Runoff	2.15	Runoff	1.65	Runoff	1.12	Runoff
	R1 2 nd	stream	2.73	Runoff	1.90	Runoff	0.996	Runoff	4.18	Runoff	1.90	Runoff	1.46	Runoff	0.996	Runoff
	R2	stream	1.62	Runoff	1.19	Drift	1.19	Drift	2.50	Runoff	1.13	Runoff	0.865	Runoff	0.591	Runoff
	R2 2 nd	stream	0.822	Runoff	1.21	Drift	1.21	Drift	1.27	Runoff	0.571	Runoff	0.438	Runoff	0.299	Runoff
	R3	stream	2.76	Runoff	1.93	Runoff	1.27	Drift	4.23	Runoff	1.93	Runoff	1.48	Runoff	1.01	Runoff
	R3 2 nd	stream	3.71	Runoff	2.59	Runoff	1.36	Runoff	5.69	Runoff	2.59	Runoff	1.99	Runoff	1.36	Runoff
	R4	stream	4.15	Runoff	2.89	Runoff	1.52	Runoff	6.36	Runoff	2.89	Runoff	2.22	Runoff	1.52	Runoff
	R4 2 nd	stream	5.49	Runoff	3.82	Runoff	2.00	Runoff	8.41	Runoff	3.82	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.428	Drift	-	-	-	-	0.227	Drift	0.227	Drift	0.155	Drift	0.118	Drift
	D4	pond	0.389	Drainage	-	-	-	-	0.386	Drainage	0.386	Drainage	0.384	Drainage	0.383	Drainage
	D4	stream	0.609	Drainage	-	-	-	-	0.609	Drainage	0.609	Drainage	0.609	Drainage	0.609	Drainage

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	D6	ditch	5.11	Drainage	-	-	-	-	5.11	Drainage	5.11	Drainage	5.11	Drainage	5.11	Drainage
	R1	pond	0.371	Runoff	0.266	Runoff	0.153	Runoff	0.580	Runoff	0.251	Runoff	0.190	Runoff	0.130	Runoff
	R1 2 nd	pond	0.182	Runoff	0.131	Runoff	0.076	Runoff	0.279	Runoff	0.124	Runoff	0.094	Runoff	0.065	Runoff
	R1	stream	1.50	Runoff	1.05	Runoff	1.05	Drift	2.30	Runoff	1.05	Runoff	0.805	Runoff	0.550	Runoff
	R1 2 nd	stream	0.918	Runoff	1.05	Drift	1.05	Drift	1.41	Runoff	0.640	Runoff	0.491	Runoff	0.335	Runoff
	R2	stream	0.524	Runoff	1.40	Drift	1.40	Drift	0.803	Runoff	0.365	Runoff	0.280	Runoff	0.191	Runoff
	R2 2 nd	stream	0.507	Drift	1.39	Drift	1.39	Drift	0.614	Runoff	0.275	Runoff	0.211	Runoff	0.144	Runoff
	R3	stream	1.68	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.17	Runoff	0.899	Runoff	0.613	Runoff
	R3 2 nd	stream	1.63	Runoff	1.47	Drift	1.47	Drift	2.50	Runoff	1.14	Runoff	0.874	Runoff	0.597	Runoff
	R4	stream	2.11	Runoff	1.47	Runoff	1.02	Drift	3.24	Runoff	1.47	Runoff	1.13	Runoff	0.768	Runoff
	R4 2 nd	stream	2.22	Runoff	1.54	Runoff	1.05	Drift	3.39	Runoff	1.54	Runoff	1.19	Runoff	0.809	Runoff
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D3 2 nd	ditch	0.358	Drift	-	-	-	-	0.186	Drift	0.186	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.38	Drainage	-	-	-	-	1.37	Drainage	1.37	Drainage	1.37	Drainage	1.37	Drainage
	D4	stream	1.68	Drainage	-	-	-	-	1.68	Drainage	1.68	Drainage	1.68	Drainage	1.68	Drainage
	D6	ditch	12.0	Drainage	-	-	-	-	12.0	Drainage	12.0	Drainage	12.0	Drainage	12.0	Drainage
	R1	pond	0.552	Runoff	0.400	Runoff	0.236	Runoff	0.855	Runoff	0.372	Runoff	0.282	Runoff	0.194	Runoff
	R1 2 nd	pond	0.441	Runoff	0.313	Runoff	0.175	Runoff	0.685	Runoff	0.300	Runoff	0.227	Runoff	0.155	Runoff

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	stream	3.15	Runoff	2.19	Runoff	1.15	Runoff	4.83	Runoff	2.19	Runoff	1.68	Runoff	1.15	Runoff
	R1 2 nd	stream	2.43	Runoff	1.70	Runoff	0.906	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.887	Runoff
	R2	stream	1.14	Runoff	1.21	Drift	1.21	Drift	1.74	Runoff	0.791	Runoff	0.608	Runoff	0.415	Runoff
	R2 2 nd	stream	0.909	Runoff	1.20	Drift	1.20	Drift	1.41	Runoff	0.631	Runoff	0.483	Runoff	0.329	Runoff
	R3	stream	2.82	Runoff	1.97	Runoff	1.28	Drift	4.33	Runoff	1.97	Runoff	1.51	Runoff	1.03	Runoff
	R3 2 nd	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.62	Runoff	3.22	Runoff	1.68	Runoff	7.10	Runoff	3.22	Runoff	2.47	Runoff	1.68	Runoff
	R4 2 nd	stream	4.50	Runoff	3.14	Runoff	1.65	Runoff	6.90	Runoff	3.14	Runoff	2.41	Runoff	1.65	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 132: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Use	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-	-	-
	D3 2 nd	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	R1	pond	0.055	Drift	0.055	Drift
	R1 2 nd	pond	0.055	Drift	0.055	Drift
	R1	stream	1.04	Drift	1.04	Drift
	R1 2 nd	stream	1.05	Drift	1.05	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R2 2 nd	stream	1.40	Drift	1.40	Drift
	R3	stream	1.47	Drift	1.47	Drift
	R3 2 nd	stream	1.47	Drift	1.47	Drift
	R4	stream	1.04	Drift	1.04	Drift
	R4 2 nd	stream	1.04	Drift	1.04	Drift
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-	-	-
	D3 2 nd	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	R1	pond	0.083	Drift	0.083	Drift
	R1 2 nd	pond	0.085	Runoff	0.083	Runoff
	R1	stream	0.903	Drift	0.903	Drift
	R1 2 nd	stream	0.906	Drift	0.906	Drift
	R2	stream	1.19	Drift	1.19	Drift
	R2 2 nd	stream	1.21	Drift	1.21	Drift
	R3	stream	1.57	Runoff	1.57	Runoff
	R3 2 nd	stream	1.28	Drift	1.28	Drift

	R4	stream	0.904	Drift	0.904	Drift
	R4 2 nd	stream	0.897	Drift	0.897	Drift
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-	-	-
	D3 2 nd	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	R1	pond	0.171	Runoff	0.170	Runoff
	R1 2 nd	pond	0.074	Runoff	0.072	Runoff
	R1	stream	1.05	Drift	1.05	Drift
	R1 2 nd	stream	1.05	Drift	1.05	Drift
	R2	stream	1.40	Drift	1.40	Drift
	R2 2 nd	stream	1.39	Drift	1.39	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R3 2 nd	stream	1.47	Drift	1.47	Drift
	R4	stream	1.02	Drift	1.02	Drift
	R4 2 nd	stream	1.05	Drift	1.05	Drift
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-	-	-
	D3 2 nd	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	R1	pond	0.233	Runoff	0.230	Runoff
	R1 2 nd	pond	0.168	Runoff	0.166	Runoff
	R1	stream	0.906	Drift	0.906	Drift
	R1 2 nd	stream	0.906	Drift	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R2 2 nd	stream	1.20	Drift	1.20	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R3 2 nd	stream	1.44	Runoff	1.44	Runoff
	R4	stream	0.904	Drift	0.904	Drift
	R4 2 nd	stream	0.906	Drift	0.906	Drift

Table A 133: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Option 1

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		5 ^a	10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c			
No spray buffer (m)		5 ^a	0		0		10		10		15 ^d		20			
Nozzle reduction (%)		0	0		0		0		0		0		0			
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.426	Drift	-	-	-	-	0.336	Drainage	0.336	Drainage	0.336	Drainage	0.336	Drainage
	R2	stream	0.765	Runoff	1.38	Drift	1.38	Drift	1.18	Runoff	0.532	Runoff	0.408	Runoff	0.278	Runoff
	R3	stream	2.57	Runoff	1.79	Runoff	1.47	Drift	3.96	Runoff	1.79	Runoff	1.37	Runoff	0.936	Runoff
	R4	stream	3.72	Runoff	2.60	Runoff	1.36	Runoff	5.71	Runoff	2.60	Runoff	1.99	Runoff	1.36	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	-	-	-	-	0.688	Drainage	0.688	Drainage	0.688	Drainage	0.688	Drainage
	R2	stream	1.10	Runoff	1.20	Drift	1.20	Drift	1.70	Runoff	0.761	Runoff	0.582	Runoff	0.395	Runoff
	R3	stream	2.68	Runoff	1.87	Runoff	1.28	Drift	4.11	Runoff	1.87	Runoff	1.44	Runoff	0.983	Runoff
	R4	stream	5.50	Runoff	3.83	Runoff	2.00	Runoff	8.46	Runoff	3.83	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	-	-	-	-	0.431	Drainage	0.431	Drainage	0.431	Drainage	0.431	Drainage
	R2	stream	0.512	Drift	1.40	Drift	1.40	Drift	0.760	Runoff	0.346	Runoff	0.266	Runoff	0.181	Runoff
	R3	stream	1.48	Runoff	1.48	Runoff	1.48	Drift	2.27	Runoff	1.03	Runoff	0.794	Runoff	0.542	Runoff
	R4	stream	1.91	Runoff	1.33	Runoff	1.02	Drift	2.93	Runoff	1.33	Runoff	1.02	Runoff	0.698	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	-	-	-	-	0.945	Drainage	0.945	Drainage	0.945	Drainage	0.945	Drainage
	R2	stream	1.24	Runoff	1.21	Drift	1.21	Drift	1.89	Runoff	0.862	Runoff	0.662	Runoff	0.452	Runoff
	R3	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.77	Runoff	3.32	Runoff	1.74	Runoff	7.31	Runoff	3.32	Runoff	2.55	Runoff	1.74	Runoff

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	-	-	-	-	1.95	Drainage	1.95	Drainage	1.95	Drainage	1.95	Drainage
	R2	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.346	Runoff	0.272	Drift	0.186	Drift	0.141	Drift
	R3	stream	1.69	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.18	Runoff	0.903	Runoff	0.617	Runoff
	R4	stream	2.43	Runoff	1.70	Runoff	1.05	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.889	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	-	-	-	-	3.64	Drainage	3.64	Drainage	3.64	Drainage	3.64	Drainage
	R2	stream	0.609	Runoff	1.21	Drift	1.21	Drift	0.934	Runoff	0.424	Runoff	0.325	Runoff	0.222	Runoff
	R3	stream	3.57	Runoff	2.49	Runoff	1.31	Runoff	5.46	Runoff	2.49	Runoff	1.91	Runoff	1.31	Runoff
	R4	stream	4.28	Runoff	2.99	Runoff	1.57	Runoff	6.57	Runoff	2.99	Runoff	2.29	Runoff	1.57	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 134: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Option 2

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)		5 ^a	10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c			
No spray buffer (m)		5 ^a	0		0		10		10		15 ^d		20			
Nozzle reduction (%)		0	0		0		0		0		0		0			
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.426	Drift	-	-	-	-	0.336	Drainage	0.336	Drainage	0.336	Drainage	0.336	Drainage
	R2	stream	0.765	Runoff	1.38	Drift	1.38	Drift	1.18	Runoff	0.532	Runoff	0.408	Runoff	0.278	Runoff
	R3	stream	2.57	Runoff	1.79	Runoff	1.47	Drift	3.96	Runoff	1.79	Runoff	1.37	Runoff	0.936	Runoff
	R4	stream	3.72	Runoff	2.60	Runoff	1.36	Runoff	5.71	Runoff	2.60	Runoff	1.99	Runoff	1.36	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	-	-	-	-	0.688	Drainage	0.688	Drainage	0.688	Drainage	0.688	Drainage
	R2	stream	1.10	Runoff	1.20	Drift	1.20	Drift	1.70	Runoff	0.761	Runoff	0.582	Runoff	0.395	Runoff
	R3	stream	2.68	Runoff	1.87	Runoff	1.28	Drift	4.11	Runoff	1.87	Runoff	1.44	Runoff	0.983	Runoff
	R4	stream	5.50	Runoff	3.83	Runoff	2.00	Runoff	8.46	Runoff	3.83	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	-	-	-	-	0.431	Drainage	0.431	Drainage	0.431	Drainage	0.431	Drainage
	R2	stream	0.512	Drift	1.40	Drift	1.40	Drift	0.760	Runoff	0.346	Runoff	0.266	Runoff	0.181	Runoff
	R3	stream	1.48	Runoff	1.48	Runoff	1.48	Drift	2.27	Runoff	1.03	Runoff	0.794	Runoff	0.542	Runoff
	R4	stream	1.91	Runoff	1.33	Runoff	1.02	Drift	2.93	Runoff	1.33	Runoff	1.02	Runoff	0.698	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	-	-	-	-	0.945	Drainage	0.945	Drainage	0.945	Drainage	0.945	Drainage
	R2	stream	1.24	Runoff	1.21	Drift	1.21	Drift	1.89	Runoff	0.862	Runoff	0.662	Runoff	0.452	Runoff
	R3	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.77	Runoff	3.32	Runoff	1.74	Runoff	7.31	Runoff	3.32	Runoff	2.55	Runoff	1.74	Runoff

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	-	-	-	-	1.95	Drainage	1.95	Drainage	1.95	Drainage	1.95	Drainage
	R2	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.346	Runoff	0.272	Drift	0.186	Drift	0.141	Drift
	R3	stream	1.69	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.18	Runoff	0.903	Runoff	0.617	Runoff
	R4	stream	2.43	Runoff	1.70	Runoff	1.05	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.889	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	-	-	-	-	3.64	Drainage	3.64	Drainage	3.64	Drainage	3.64	Drainage
	R2	stream	0.609	Runoff	1.21	Drift	1.21	Drift	0.934	Runoff	0.424	Runoff	0.325	Runoff	0.222	Runoff
	R3	stream	3.57	Runoff	2.49	Runoff	1.31	Runoff	5.46	Runoff	2.49	Runoff	1.91	Runoff	1.31	Runoff
	R4	stream	4.28	Runoff	2.99	Runoff	1.57	Runoff	6.57	Runoff	2.99	Runoff	2.29	Runoff	1.57	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 135: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 89

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-	-	-
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.04	Drift	1.04	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-	-	-
	R2	stream	1.20	Drift	1.20	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.903	Drift	0.903	Drift
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-	-	-
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.02	Drift	1.02	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-	-	-
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.906	Drift	0.906	Drift
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-	-	-
	R2	stream	1.40	Drift	1.40	Drift
	R3	stream	1.48	Drift	1.48	Drift
	R4	stream	1.05	Drift	1.05	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-	-	-
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.906	Drift	0.906	Drift

Table A 136: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Option 1

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.604	Drainage	-	-	-	-	0.603	Drainage	0.603	Drainage	0.602	Drainage	0.602	Drainage
	D4	stream	0.582	Drainage	-	-	-	-	0.582	Drainage	0.582	Drainage	0.582	Drainage	0.582	Drainage
	D6	ditch	0.918	Drainage	-	-	-	-	0.918	Drainage	0.918	Drainage	0.918	Drainage	0.918	Drainage
	D6 2 nd	ditch	4.56	Drainage	-	-	-	-	4.56	Drainage	4.56	Drainage	4.56	Drainage	4.56	Drainage
	R1	pond	0.136	Runoff	0.106	Runoff	0.071	Runoff	0.197	Runoff	0.092	Runoff	0.070	Runoff	0.050	Runoff
	R1	stream	1.41	Runoff	1.04	Drift	1.04	Drift	2.16	Runoff	0.979	Runoff	0.751	Runoff	0.512	Runoff
	R2	stream	0.747	Runoff	1.38	Drift	1.38	Drift	1.15	Runoff	0.519	Runoff	0.398	Runoff	0.271	Runoff
	R3	stream	2.18	Runoff	1.51	Runoff	1.47	Drift	3.35	Runoff	1.51	Runoff	1.16	Runoff	0.790	Runoff
	R4	stream	3.71	Runoff	2.58	Runoff	1.35	Runoff	5.69	Runoff	2.58	Runoff	1.98	Runoff	1.35	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.359	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.27	Drainage	-	-	-	-	1.27	Drainage	1.27	Drainage	1.27	Drainage	1.27	Drainage
	D4	stream	1.22	Drainage	-	-	-	-	1.22	Drainage	1.22	Drainage	1.22	Drainage	1.22	Drainage
	D6	ditch	2.34	Drainage	-	-	-	-	2.34	Drainage	2.34	Drainage	2.34	Drainage	2.34	Drainage
	D6 2 nd	ditch	12.7	Drainage	-	-	-	-	12.7	Drainage	12.7	Drainage	12.7	Drainage	12.7	Drainage
	R1	pond	0.305	Runoff	0.230	Runoff	0.146	Runoff	0.454	Runoff	0.206	Runoff	0.156	Runoff	0.109	Runoff

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	stream	3.50	Runoff	2.43	Runoff	1.27	Runoff	5.37	Runoff	2.43	Runoff	1.87	Runoff	1.27	Runoff
	R2	stream	1.56	Runoff	1.50	Drift	1.35	Drift	2.41	Runoff	1.09	Runoff	0.833	Runoff	0.568	Runoff
	R3	stream	2.83	Runoff	1.98	Runoff	1.27	Drift	4.33	Runoff	1.98	Runoff	1.52	Runoff	1.04	Runoff
	R4	stream	4.02	Runoff	2.80	Runoff	1.47	Runoff	6.17	Runoff	2.80	Runoff	2.15	Runoff	1.47	Runoff
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.485	Drainage	-	-	-	-	0.482	Drainage	0.482	Drainage	0.480	Drainage	0.479	Drainage
	D4	stream	0.714	Drainage	-	-	-	-	0.714	Drainage	0.714	Drainage	0.714	Drainage	0.714	Drainage
	D6	ditch	0.595	Drainage	-	-	-	-	0.595	Drainage	0.595	Drainage	0.595	Drainage	0.595	Drainage
	D6 2 nd	ditch	0.640	Drainage	-	-	-	-	0.640	Drainage	0.640	Drainage	0.640	Drainage	0.640	Drainage
	R1	pond	0.073	Runoff	0.055	Runoff	0.055	Drift	0.108	Runoff	0.050	Runoff	0.038	Runoff	0.027	Runoff
	R1	stream	0.631	Runoff	1.03	Drift	1.03	Drift	0.973	Runoff	0.438	Runoff	0.335	Runoff	0.228	Runoff
	R2	stream	0.568	Runoff	1.40	Drift	1.40	Drift	0.880	Runoff	0.394	Runoff	0.301	Runoff	0.205	Runoff
	R3	stream	2.15	Runoff	1.49	Runoff	1.47	Drift	3.30	Runoff	1.49	Runoff	1.14	Runoff	0.780	Runoff
	R4	stream	2.89	Runoff	2.01	Runoff	1.05	Runoff	4.45	Runoff	2.01	Runoff	1.54	Runoff	1.05	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.359	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.34	Drainage	-	-	-	-	1.33	Drainage	1.33	Drainage	1.33	Drainage	1.32	Drainage
	D4	stream	1.59	Drainage	-	-	-	-	1.59	Drainage	1.59	Drainage	1.59	Drainage	1.59	Drainage
	D6	ditch	1.72	Drainage	-	-	-	-	1.72	Drainage	1.72	Drainage	1.72	Drainage	1.72	Drainage

Mitigation options																
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	D6 2 nd	ditch	1.16	Drainage	-	-	-	-	1.16	Drainage	1.16	Drainage	1.16	Drainage	1.16	Drainage
	R1	pond	0.172	Runoff	0.127	Runoff	0.077	Drift	0.259	Runoff	0.118	Runoff	0.090	Runoff	0.062	Runoff
	R1	stream	1.76	Runoff	1.22	Runoff	0.906	Drift	2.72	Runoff	1.22	Runoff	0.935	Runoff	0.637	Runoff
	R2	stream	1.20	Runoff	1.21	Drift	1.21	Drift	1.86	Runoff	0.833	Runoff	0.637	Runoff	0.433	Runoff
	R3	stream	3.24	Runoff	2.25	Runoff	1.28	Drift	4.98	Runoff	2.25	Runoff	1.73	Runoff	1.18	Runoff
	R4	stream	4.16	Runoff	2.89	Runoff	1.51	Runoff	6.40	Runoff	2.89	Runoff	2.22	Runoff	1.51	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 137: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Option 2

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.598	Drainage	-	-	-	-	0.597	Drainage	0.597	Drainage	0.596	Drainage	0.596	Drainage
	D4	stream	0.582	Drainage	-	-	-	-	0.582	Drainage	0.582	Drainage	0.582	Drainage	0.582	Drainage
	D6	ditch	0.918	Drainage	-	-	-	-	0.918	Drainage	0.918	Drainage	0.918	Drainage	0.918	Drainage
	D6 2 nd	ditch	4.56	Drainage	-	-	-	-	4.56	Drainage	4.56	Drainage	4.56	Drainage	4.56	Drainage
	R1	pond	0.134	Runoff	0.104	Runoff	0.070	Runoff	0.195	Runoff	0.091	Runoff	0.069	Runoff	0.049	Runoff
	R1	stream	1.41	Runoff	1.04	Drift	1.04	Drift	2.16	Runoff	0.979	Runoff	0.751	Runoff	0.512	Runoff
	R2	stream	0.747	Runoff	1.38	Drift	1.38	Drift	1.15	Runoff	0.519	Runoff	0.398	Runoff	0.271	Runoff
	R3	stream	2.18	Runoff	1.51	Runoff	1.47	Drift	3.35	Runoff	1.51	Runoff	1.16	Runoff	0.790	Runoff
	R4	stream	3.71	Runoff	2.58	Runoff	1.35	Runoff	5.69	Runoff	2.58	Runoff	1.98	Runoff	1.35	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.359	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.26	Drainage	-	-	-	-	1.26	Drainage	1.26	Drainage	1.26	Drainage	1.26	Drainage
	D4	stream	1.22	Drainage	-	-	-	-	1.22	Drainage	1.22	Drainage	1.22	Drainage	1.22	Drainage
	D6	ditch	2.34	Drainage	-	-	-	-	2.34	Drainage	2.34	Drainage	2.34	Drainage	2.34	Drainage
	D6 2 nd	ditch	12.7	Drainage	-	-	-	-	12.7	Drainage	12.7	Drainage	12.7	Drainage	12.7	Drainage
	R1	pond	0.302	Runoff	0.227	Runoff	0.144	Runoff	0.451	Runoff	0.204	Runoff	0.154	Runoff	0.108	Runoff

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	stream	3.50	Runoff	2.43	Runoff	1.27	Runoff	5.37	Runoff	2.43	Runoff	1.87	Runoff	1.27	Runoff
	R2	stream	1.56	Runoff	1.50	Drift	1.35	Drift	2.41	Runoff	1.09	Runoff	0.833	Runoff	0.568	Runoff
	R3	stream	2.83	Runoff	1.98	Runoff	1.27	Drift	4.33	Runoff	1.98	Runoff	1.52	Runoff	1.04	Runoff
	R4	stream	4.02	Runoff	2.80	Runoff	1.47	Runoff	6.17	Runoff	2.80	Runoff	2.15	Runoff	1.47	Runoff
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.480	Drainage	-	-	-	-	0.477	Drainage	0.477	Drainage	0.475	Drainage	0.474	Drainage
	D4	stream	0.714	Drainage	-	-	-	-	0.714	Drainage	0.714	Drainage	0.714	Drainage	0.714	Drainage
	D6	ditch	0.595	Drainage	-	-	-	-	0.595	Drainage	0.595	Drainage	0.595	Drainage	0.595	Drainage
	D6 2 nd	ditch	0.640	Drainage	-	-	-	-	0.640	Drainage	0.640	Drainage	0.640	Drainage	0.640	Drainage
	R1	pond	0.071	Runoff	0.055	Drift	0.055	Drift	0.106	Runoff	0.049	Runoff	0.037	Runoff	0.026	Runoff
	R1	stream	0.631	Runoff	1.03	Drift	1.03	Drift	0.973	Runoff	0.438	Runoff	0.335	Runoff	0.228	Runoff
	R2	stream	0.568	Runoff	1.40	Drift	1.40	Drift	0.880	Runoff	0.394	Runoff	0.301	Runoff	0.205	Runoff
	R3	stream	2.15	Runoff	1.49	Runoff	1.47	Drift	3.30	Runoff	1.49	Runoff	1.14	Runoff	0.779	Runoff
	R4	stream	2.89	Runoff	2.01	Runoff	1.05	Runoff	4.45	Runoff	2.01	Runoff	1.54	Runoff	1.05	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.32	Drainage	-	-	-	-	1.32	Drainage	1.32	Drainage	1.31	Drainage	1.31	Drainage
	D4	stream	1.59	Drainage	-	-	-	-	1.59	Drainage	1.59	Drainage	1.59	Drainage	1.59	Drainage
	D6	ditch	1.72	Drainage	-	-	-	-	1.72	Drainage	1.72	Drainage	1.72	Drainage	1.72	Drainage

Mitigation options																
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	D6 2 nd	ditch	1.16	Drainage	-	-	-	-	1.16	Drainage	1.16	Drainage	1.16	Drainage	1.16	Drainage
	R1	pond	0.168	Runoff	0.123	Runoff	0.075	Drift	0.254	Runoff	0.115	Runoff	0.087	Runoff	0.060	Runoff
	R1	stream	1.76	Runoff	1.22	Runoff	0.906	Drift	2.72	Runoff	1.22	Runoff	0.935	Runoff	0.637	Runoff
	R2	stream	1.20	Runoff	1.21	Drift	1.21	Drift	1.86	Runoff	0.833	Runoff	0.637	Runoff	0.433	Runoff
	R3	stream	3.24	Runoff	2.25	Runoff	1.28	Drift	4.98	Runoff	2.25	Runoff	1.73	Runoff	1.18	Runoff
	R4	stream	4.16	Runoff	2.89	Runoff	1.51	Runoff	6.40	Runoff	2.89	Runoff	2.22	Runoff	1.51	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 138: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	D6 2 nd	ditch	-	-	-	-
	R1	pond	0.055	Drift	0.055	Drift
	R1	stream	1.04	Drift	1.04	Drift
	R2	stream	1.38	Drift	1.38	Drift
	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.03	Drift	1.03	Drift
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	D6 2 nd	ditch	-	-	-	-
	R1	pond	0.081	Drift	0.080	Drift
	R1	stream	0.902	Drift	0.902	Drift
	R2	stream	1.19	Drift	1.19	Drift
	R3	stream	1.55	Runoff	1.55	Runoff
	R4	stream	0.897	Drift	0.897	Drift
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	D6 2 nd	ditch	-	-	-	-
	R1	pond	0.055	Drift	0.055	Drift
	R1	stream	1.03	Drift	1.03	Drift
	R2	stream	1.40	Drift	1.40	Drift

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	R3	stream	1.47	Drift	1.47	Drift
	R4	stream	1.01	Drift	1.01	Drift
	D3	ditch	-	-	-	-
	D4	pond	-	-	-	-
	D4	stream	-	-	-	-
	D6	ditch	-	-	-	-
	D6 2 nd	ditch	-	-	-	-
	R1	pond	0.077	Drift	0.075	Drift
	R1	stream	0.906	Drift	0.906	Drift
	R2	stream	1.21	Drift	1.21	Drift
	R3	stream	1.28	Drift	1.28	Drift
	R4	stream	0.897	Drift	0.897	Drift

Table A 139: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to hops, BBCH 21 – 89 – Option 1

Mitigation options												
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)												
Vegetative strip (m)			5 ^a		0		10 – 12 ^b		15 ^c		0	
No spray buffer (m)			5 ^a		10		10		15 ^c		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.71	Drift	4.02	Drift	4.02	Drift	2.65	Drift	1.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.966	Drift	0.525	Drift	0.516	Drift	0.284	Drift	0.170	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	1.24	Runoff
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.51	Drift	3.92	Drift	3.92	Drift	2.59	Drift	1.18	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.951	Drift	0.508	Drift	0.507	Drift	0.278	Drift	0.156	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	0.785	Drift
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.73	Drift	4.03	Drift	4.03	Drift	2.66	Drift	1.21	Drift
Hops	R1	pond	0.930	Drift	0.496	Drift	0.496	Drift	0.271	Drift	0.150	Drift

Mitigation options												
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)												
2 × 250 g a.s./ha; BBCH 89	R1	stream	6.30	Drift	2.89	Drift	2.89	Drift	1.77	Drift	0.807	Drift
Vegetative strip (m)			18 – 20 ^d		0		0					
No spray buffer (m)			20		20		30					
Nozzle reduction (%)			0		50		0					
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry				
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift				
	R1	stream	1.21	Drift	0.691	Runoff	0.691	Runoff				
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.158	Drift	0.093	Drift	0.081	Drift				
	R1	stream	0.786	Drift	1.24	Runoff	1.24	Runoff				
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift				
	R1	stream	1.18	Drift	0.589	Drift	0.571	Runoff				
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.154	Drift	0.079	Drift	0.067	Drift				
	R1	stream	0.785	Drift	0.571	Runoff	0.571	Runoff				
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift				
	R1	stream	1.21	Drift	0.606	Drift	0.392	Drift				

Mitigation options								
Option 1 (Water DT ₅₀ = 1000 d, Sediment DT ₅₀ = 205 d)								
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.150	Drift	0.075	Drift	0.063	Drift
	R1	stream	0.807	Drift	0.403	Drift	0.263	Drift

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^d equivalent to 80% runoff mitigation

Table A 140: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to hops, BBCH 21 – 89 – Option 2

Mitigation options												
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)												
Vegetative strip (m)			5 ^a		0		10 – 12 ^b		15 ^c		0	
No spray buffer (m)			5 ^a		10		10		15 ^c		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.71	Drift	4.02	Drift	4.02	Drift	2.65	Drift	1.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.958	Drift	0.521	Drift	0.512	Drift	0.281	Drift	0.169	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	1.24	Runoff
Hops	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift

Mitigation options												
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)												
1 × 250 g a.s./ha; BBCH 51	R1	stream	7.51	Drift	3.92	Drift	3.92	Drift	2.59	Drift	1.18	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.938	Drift	0.501	Drift	0.500	Drift	0.274	Drift	0.154	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	0.785	Drift
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.73	Drift	4.03	Drift	4.03	Drift	2.66	Drift	1.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.915	Drift	0.487	Drift	0.487	Drift	0.267	Drift	0.148	Drift
	R1	stream	6.30	Drift	2.89	Drift	2.89	Drift	1.77	Drift	0.807	Drift
Vegetative strip (m)			18 – 20 ^d		0		0					
No spray buffer (m)			20		20		30					
Nozzle reduction (%)			0		50		0					
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry				
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift				
	R1	stream	1.21	Drift	0.691	Runoff	0.691	Runoff				
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.157	Drift	0.092	Drift	0.080	Drift				
	R1	stream	0.786	Drift	1.24	Runoff	1.24	Runoff				

Mitigation options								
Option 2 (Water DT ₅₀ = 205 d, Sediment DT ₅₀ = 1000 d)								
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift
	R1	stream	1.18	Drift	0.589	Drift	0.571	Runoff
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.152	Drift	0.078	Drift	0.066	Drift
	R1	stream	0.785	Drift	0.571	Runoff	0.571	Runoff
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift
	R1	stream	1.21	Drift	0.606	Drift	0.392	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.148	Drift	0.074	Drift	0.062	Drift
	R1	stream	0.807	Drift	0.403	Drift	0.263	Drift

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^d equivalent to 80% runoff mitigation

Table A 141: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to hops using 5 m VFS mod, BBCH 21 – 89

Mitigation options						
Vegetative strip (m)			5 VFS mod			
No spray buffer (m)			0			
Nozzle reduction (%)			0			
Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d		Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d	
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21	R1	pond	0.657	Drift	0.657	Drift
	R1	stream	9.44	Drift	9.44	Drift
Hops 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.832	Drift	0.826	Drift
	R1	stream	7.82	Drift	7.82	Drift
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.657	Drift	0.657	Drift
	R1	stream	9.21	Drift	9.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.826	Drift	0.815	Drift
	R1	stream	7.81	Drift	7.81	Drift
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.657	Drift	0.657	Drift
	R1	stream	9.46	Drift	9.46	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.809	Drift	0.796	Drift
	R1	stream	8.03	Drift	8.03	Drift

Table A 142: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, leafy, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.648	Drainage	-	-	-	-	0.647	Drainage	0.647	Drainage	0.646	Drainage	0.645	Drainage
	D4	stream	0.634	Drainage	-	-	-	-	0.634	Drainage	0.634	Drainage	0.634	Drainage	0.634	Drainage
	D6	ditch	2.55	Drainage	-	-	-	-	2.55	Drainage	2.55	Drainage	2.55	Drainage	2.55	Drainage
	R1	pond	0.140	Runoff	0.108	Runoff	0.072	Runoff	0.203	Runoff	0.095	Runoff	0.072	Runoff	0.051	Runoff
	R1 2 nd	pond	0.127	Runoff	0.093	Runoff	0.061	Runoff	0.193	Runoff	0.087	Runoff	0.066	Runoff	0.046	Runoff
	R1	stream	1.44	Runoff	1.04	Drift	1.04	Drift	2.21	Runoff	1.00	Runoff	0.769	Runoff	0.524	Runoff
	R1 2 nd	stream	1.19	Runoff	1.05	Drift	1.05	Drift	1.83	Runoff	0.832	Runoff	0.639	Runoff	0.436	Runoff
	R2	stream	0.729	Runoff	1.38	Drift	1.38	Drift	1.12	Runoff	0.507	Runoff	0.389	Runoff	0.265	Runoff
	R2 2 nd	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.585	Runoff	0.272	Drift	0.204	Runoff	0.141	Drift
	R3	stream	2.16	Runoff	1.50	Runoff	1.47	Drift	3.33	Runoff	1.50	Runoff	1.15	Runoff	0.784	Runoff
	R3 2 nd	stream	2.16	Runoff	1.51	Runoff	1.47	Drift	3.31	Runoff	1.51	Runoff	1.16	Runoff	0.791	Runoff
	R4	stream	1.10	Runoff	1.04	Drift	1.04	Drift	1.69	Runoff	0.770	Runoff	0.591	Runoff	0.404	Runoff
	R4 2 nd	stream	3.50	Runoff	2.43	Runoff	1.28	Runoff	5.36	Runoff	2.43	Runoff	1.87	Runoff	1.28	Runoff
Vegetables, leafy	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D3 2 nd	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
2 × 250 g a.s./ha, BBCH 11	D4	pond	1.35	Drainage	-	-	-	-	1.35	Drainage	1.35	Drainage	1.35	Drainage	1.35	Drainage
	D4	stream	1.31	Drainage	-	-	-	-	1.31	Drainage	1.31	Drainage	1.31	Drainage	1.31	Drainage
	D6	ditch	5.58	Drainage	-	-	-	-	5.58	Drainage	5.58	Drainage	5.58	Drainage	5.58	Drainage
	R1	pond	0.278	Runoff	0.211	Runoff	0.136	Runoff	0.411	Runoff	0.187	Runoff	0.142	Runoff	0.100	Runoff
	R1 2 nd	pond	0.255	Runoff	0.185	Runoff	0.120	Runoff	0.389	Runoff	0.174	Runoff	0.133	Runoff	0.091	Runoff
	R1	stream	3.08	Runoff	2.15	Runoff	1.12	Runoff	4.73	Runoff	2.15	Runoff	1.65	Runoff	1.12	Runoff
	R1 2 nd	stream	2.73	Runoff	1.90	Runoff	0.996	Runoff	4.18	Runoff	1.90	Runoff	1.46	Runoff	0.996	Runoff
	R2	stream	1.62	Runoff	1.19	Drift	1.19	Drift	2.50	Runoff	1.13	Runoff	0.866	Runoff	0.591	Runoff
	R2 2 nd	stream	0.822	Runoff	1.21	Drift	1.21	Drift	1.27	Runoff	0.571	Runoff	0.439	Runoff	0.299	Runoff
	R3	stream	2.76	Runoff	1.93	Runoff	1.27	Drift	4.23	Runoff	1.93	Runoff	1.48	Runoff	1.01	Runoff
	R3 2 nd	stream	3.71	Runoff	2.59	Runoff	1.36	Runoff	5.69	Runoff	2.59	Runoff	1.99	Runoff	1.36	Runoff
	R4	stream	4.15	Runoff	2.89	Runoff	1.52	Runoff	6.36	Runoff	2.89	Runoff	2.22	Runoff	1.52	Runoff
	R4 2 nd	stream	5.49	Runoff	3.82	Runoff	2.00	Runoff	8.41	Runoff	3.82	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D3 2 nd	ditch	0.428	Drift	-	-	-	-	0.227	Drift	0.227	Drift	0.155	Drift	0.118	Drift
	D4	pond	0.394	Drainage	-	-	-	-	0.390	Drainage	0.390	Drainage	0.388	Drainage	0.387	Drainage
	D4	stream	0.609	Drainage	-	-	-	-	0.609	Drainage	0.609	Drainage	0.609	Drainage	0.609	Drainage
	D6	ditch	5.12	Drainage	-	-	-	-	5.12	Drainage	5.12	Drainage	5.12	Drainage	5.12	Drainage
	R1	pond	0.377	Runoff	0.270	Runoff	0.156	Runoff	0.589	Runoff	0.255	Runoff	0.193	Runoff	0.132	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1 2 nd	pond	0.184	Runoff	0.133	Runoff	0.077	Runoff	0.282	Runoff	0.126	Runoff	0.096	Runoff	0.066	Runoff
	R1	stream	1.50	Runoff	1.05	Runoff	1.05	Drift	2.30	Runoff	1.05	Runoff	0.805	Runoff	0.550	Runoff
	R1 2 nd	stream	0.918	Runoff	1.05	Drift	1.05	Drift	1.41	Runoff	0.640	Runoff	0.491	Runoff	0.335	Runoff
	R2	stream	0.524	Runoff	1.40	Drift	1.40	Drift	0.803	Runoff	0.365	Runoff	0.280	Runoff	0.191	Runoff
	R2 2 nd	stream	0.507	Drift	1.39	Drift	1.39	Drift	0.614	Runoff	0.275	Runoff	0.211	Runoff	0.144	Runoff
	R3	stream	1.68	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.17	Runoff	0.899	Runoff	0.613	Runoff
	R3 2 nd	stream	1.63	Runoff	1.47	Drift	1.47	Drift	2.50	Runoff	1.14	Runoff	0.874	Runoff	0.597	Runoff
	R4	stream	2.11	Runoff	1.47	Runoff	1.02	Drift	3.24	Runoff	1.47	Runoff	1.13	Runoff	0.768	Runoff
	R4 2 nd	stream	2.22	Runoff	1.54	Runoff	1.05	Drift	3.39	Runoff	1.54	Runoff	1.19	Runoff	0.809	Runoff
Vegetables, leafy 2 × 250 g a.s./ha BBCH 11 – 49, BBCH 49	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D3 2 nd	ditch	0.358	Drift	-	-	-	-	0.186	Drift	0.186	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.39	Drainage	-	-	-	-	1.39	Drainage	1.39	Drainage	1.38	Drainage	1.38	Drainage
	D4	stream	1.68	Drainage	-	-	-	-	1.68	Drainage	1.68	Drainage	1.68	Drainage	1.68	Drainage
	D6	ditch	12.0	Drainage	-	-	-	-	12.0	Drainage	12.0	Drainage	12.0	Drainage	12.0	Drainage
	R1	pond	0.559	Runoff	0.405	Runoff	0.239	Runoff	0.864	Runoff	0.377	Runoff	0.285	Runoff	0.196	Runoff
	R1 2 nd	pond	0.446	Runoff	0.317	Runoff	0.178	Runoff	0.692	Runoff	0.303	Runoff	0.230	Runoff	0.157	Runoff
	R1	stream	3.15	Runoff	2.19	Runoff	1.15	Runoff	4.83	Runoff	2.19	Runoff	1.68	Runoff	1.15	Runoff
	R1 2 nd	stream	2.43	Runoff	1.70	Runoff	0.906	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.887	Runoff
	R2	stream	1.14	Runoff	1.21	Drift	1.21	Drift	1.74	Runoff	0.791	Runoff	0.608	Runoff	0.415	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R2 2 nd	stream	0.909	Runoff	1.20	Drift	1.20	Drift	1.41	Runoff	0.631	Runoff	0.483	Runoff	0.329	Runoff
	R3	stream	2.82	Runoff	1.97	Runoff	1.28	Drift	4.33	Runoff	1.97	Runoff	1.51	Runoff	1.03	Runoff
	R3 2 nd	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.62	Runoff	3.22	Runoff	1.68	Runoff	7.10	Runoff	3.22	Runoff	2.47	Runoff	1.68	Runoff
	R4 2 nd	stream	4.50	Runoff	3.14	Runoff	1.65	Runoff	6.90	Runoff	3.14	Runoff	2.41	Runoff	1.65	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 143: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D3 ^{2nd}	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.055	Drift
	R1 ^{2nd}	pond	0.055	Drift
	R1	stream	1.04	Drift
	R1 ^{2nd}	stream	1.05	Drift
	R2	stream	1.38	Drift
	R2 ^{2nd}	stream	1.40	Drift
	R3	stream	1.47	Drift
	R3 ^{2nd}	stream	1.47	Drift
	R4	stream	1.04	Drift
	R4 ^{2nd}	stream	1.04	Drift
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D3 ^{2nd}	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.083	Drift
	R1 ^{2nd}	pond	0.085	Runoff
	R1	stream	0.903	Drift
	R1 ^{2nd}	stream	0.906	Drift
	R2	stream	1.19	Drift
	R2 ^{2nd}	stream	1.21	Drift
	R3	stream	1.57	Runoff
	R3 ^{2nd}	stream	1.28	Drift
	R4	stream	0.904	Drift
	R4 ^{2nd}	stream	0.897	Drift
Vegetables, leafy	D3	ditch	-	-

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
1 × 250 g a.s./ha, BBCH 49	D3 ^{2nd}	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.171	Runoff
	R1 ^{2nd}	pond	0.074	Runoff
	R1	stream	1.05	Drift
	R1 ^{2nd}	stream	1.05	Drift
	R2	stream	1.40	Drift
	R2 ^{2nd}	stream	1.39	Drift
	R3	stream	1.48	Drift
	R3 ^{2nd}	stream	1.47	Drift
	R4	stream	1.02	Drift
	R4 ^{2nd}	stream	1.05	Drift
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D3 ^{2nd}	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.233	Runoff
	R1 ^{2nd}	pond	0.168	Runoff
	R1	stream	0.906	Drift
	R1 ^{2nd}	stream	0.906	Drift
	R2	stream	1.21	Drift
	R2 ^{2nd}	stream	1.20	Drift
	R3	stream	1.28	Drift
	R3 ^{2nd}	stream	1.44	Runoff
	R4	stream	0.904	Drift
	R4 ^{2nd}	stream	0.906	Drift

Table A 144: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to vegetables, fruiting, BBCH 11 – 89 – Maximum over Option 1 and Option 2

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.426	Drift	-	-	-	-	0.336	Drainage	0.336	Drainage	0.336	Drainage	0.336	Drainage
	R2	stream	0.765	Runoff	1.38	Drift	1.38	Drift	1.18	Runoff	0.532	Runoff	0.408	Runoff	0.278	Runoff
	R3	stream	2.57	Runoff	1.79	Runoff	1.47	Drift	3.96	Runoff	1.79	Runoff	1.37	Runoff	0.936	Runoff
	R4	stream	3.72	Runoff	2.60	Runoff	1.36	Runoff	5.71	Runoff	2.60	Runoff	1.99	Runoff	1.36	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	-	-	-	-	0.688	Drainage	0.688	Drainage	0.688	Drainage	0.688	Drainage
	R2	stream	1.10	Runoff	1.20	Drift	1.20	Drift	1.70	Runoff	0.761	Runoff	0.582	Runoff	0.395	Runoff
	R3	stream	2.68	Runoff	1.87	Runoff	1.28	Drift	4.11	Runoff	1.87	Runoff	1.44	Runoff	0.983	Runoff
	R4	stream	5.50	Runoff	3.83	Runoff	2.00	Runoff	8.46	Runoff	3.83	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	-	-	-	-	0.431	Drainage	0.431	Drainage	0.431	Drainage	0.431	Drainage
	R2	stream	0.512	Drift	1.40	Drift	1.40	Drift	0.760	Runoff	0.346	Runoff	0.266	Runoff	0.181	Runoff
	R3	stream	1.48	Runoff	1.48	Runoff	1.48	Drift	2.27	Runoff	1.03	Runoff	0.794	Runoff	0.542	Runoff
	R4	stream	1.91	Runoff	1.33	Runoff	1.02	Drift	2.93	Runoff	1.33	Runoff	1.02	Runoff	0.698	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	-	-	-	-	0.945	Drainage	0.945	Drainage	0.945	Drainage	0.945	Drainage
	R2	stream	1.24	Runoff	1.21	Drift	1.21	Drift	1.89	Runoff	0.862	Runoff	0.662	Runoff	0.452	Runoff
	R3	stream	3.63	Runoff	2.53	Runoff	1.33	Runoff	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.77	Runoff	3.32	Runoff	1.74	Runoff	7.31	Runoff	3.32	Runoff	2.55	Runoff	1.74	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	-	-	-	-	1.95	Drainage	1.95	Drainage	1.95	Drainage	1.95	Drainage
	R2	stream	0.513	Drift	1.40	Drift	1.40	Drift	0.346	Runoff	0.272	Drift	0.186	Drift	0.141	Drift
	R3	stream	1.69	Runoff	1.48	Drift	1.48	Drift	2.58	Runoff	1.18	Runoff	0.903	Runoff	0.617	Runoff
	R4	stream	2.43	Runoff	1.70	Runoff	1.05	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.889	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	-	-	-	-	3.64	Drainage	3.64	Drainage	3.64	Drainage	3.64	Drainage
	R2	stream	0.609	Runoff	1.21	Drift	1.21	Drift	0.934	Runoff	0.424	Runoff	0.325	Runoff	0.222	Runoff
	R3	stream	3.57	Runoff	2.49	Runoff	1.31	Runoff	5.46	Runoff	2.49	Runoff	1.91	Runoff	1.31	Runoff
	R4	stream	4.28	Runoff	2.99	Runoff	1.57	Runoff	6.57	Runoff	2.99	Runoff	2.29	Runoff	1.57	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 145: FOCUS Step 4 PEC_{sw} azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-
	R2	stream	1.38	Drift
	R3	stream	1.47	Drift
	R4	stream	1.04	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-
	R2	stream	1.20	Drift
	R3	stream	1.28	Drift
	R4	stream	0.903	Drift
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-
	R2	stream	1.40	Drift
	R3	stream	1.48	Drift
	R4	stream	1.02	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.906	Drift
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-
	R2	stream	1.40	Drift
	R3	stream	1.48	Drift
	R4	stream	1.05	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.906	Drift

Table A 146: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to vegetables, bulb, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.604	Drainage	-	-	-	-	0.603	Drainage	0.603	Drainage	0.602	Drainage	0.602	Drainage
	D4	stream	0.582	Drainage	-	-	-	-	0.582	Drainage	0.582	Drainage	0.582	Drainage	0.582	Drainage
	D6	ditch	0.918	Drainage	-	-	-	-	0.918	Drainage	0.918	Drainage	0.918	Drainage	0.918	Drainage
	D6 2 nd	ditch	4.56	Drainage	-	-	-	-	4.56	Drainage	4.56	Drainage	4.56	Drainage	4.56	Drainage
	R1	pond	0.136	Runoff	0.106	Runoff	0.071	Runoff	0.197	Runoff	0.092	Runoff	0.070	Runoff	0.050	Runoff
	R1	stream	1.41	Runoff	1.04	Drift	1.04	Drift	2.16	Runoff	0.979	Runoff	0.751	Runoff	0.512	Runoff
	R2	stream	0.747	Runoff	1.38	Drift	1.38	Drift	1.15	Runoff	0.519	Runoff	0.398	Runoff	0.271	Runoff
	R3	stream	2.18	Runoff	1.51	Runoff	1.47	Drift	3.35	Runoff	1.51	Runoff	1.16	Runoff	0.790	Runoff
	R4	stream	3.71	Runoff	2.58	Runoff	1.35	Runoff	5.69	Runoff	2.58	Runoff	1.98	Runoff	1.35	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.359	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.27	Drainage	-	-	-	-	1.27	Drainage	1.27	Drainage	1.27	Drainage	1.27	Drainage
	D4	stream	1.22	Drainage	-	-	-	-	1.22	Drainage	1.22	Drainage	1.22	Drainage	1.22	Drainage
	D6	ditch	2.34	Drainage	-	-	-	-	2.34	Drainage	2.34	Drainage	2.34	Drainage	2.34	Drainage
	D6 2 nd	ditch	12.7	Drainage	-	-	-	-	12.7	Drainage	12.7	Drainage	12.7	Drainage	12.7	Drainage
	R1	pond	0.305	Runoff	0.230	Runoff	0.146	Runoff	0.454	Runoff	0.206	Runoff	0.156	Runoff	0.109	Runoff
	R1	stream	3.50	Runoff	2.43	Runoff	1.27	Runoff	5.37	Runoff	2.43	Runoff	1.87	Runoff	1.27	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R2	stream	1.56	Runoff	1.50	Drift	1.35	Drift	2.41	Runoff	1.09	Runoff	0.833	Runoff	0.568	Runoff
	R3	stream	2.83	Runoff	1.98	Runoff	1.27	Drift	4.33	Runoff	1.98	Runoff	1.52	Runoff	1.04	Runoff
	R4	stream	4.02	Runoff	2.80	Runoff	1.47	Runoff	6.17	Runoff	2.80	Runoff	2.15	Runoff	1.47	Runoff
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430	Drift	-	-	-	-	0.228	Drift	0.228	Drift	0.156	Drift	0.118	Drift
	D4	pond	0.485	Drainage	-	-	-	-	0.482	Drainage	0.482	Drainage	0.480	Drainage	0.479	Drainage
	D4	stream	0.714	Drainage	-	-	-	-	0.714	Drainage	0.714	Drainage	0.714	Drainage	0.714	Drainage
	D6	ditch	0.595	Drainage	-	-	-	-	0.595	Drainage	0.595	Drainage	0.595	Drainage	0.595	Drainage
	D6 2 nd	ditch	0.640	Drainage	-	-	-	-	0.640	Drainage	0.640	Drainage	0.640	Drainage	0.640	Drainage
	R1	pond	0.073	Runoff	0.055	Runoff	0.055	Drift	0.108	Runoff	0.050	Runoff	0.038	Runoff	0.027	Runoff
	R1	stream	0.631	Runoff	1.03	Drift	1.03	Drift	0.973	Runoff	0.438	Runoff	0.335	Runoff	0.228	Runoff
	R2	stream	0.568	Runoff	1.40	Drift	1.40	Drift	0.880	Runoff	0.394	Runoff	0.301	Runoff	0.205	Runoff
	R3	stream	2.15	Runoff	1.49	Runoff	1.47	Drift	3.30	Runoff	1.49	Runoff	1.14	Runoff	0.780	Runoff
	R4	stream	2.89	Runoff	2.01	Runoff	1.05	Runoff	4.45	Runoff	2.01	Runoff	1.54	Runoff	1.05	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.360	Drift	-	-	-	-	0.187	Drift	0.187	Drift	0.126	Drift	0.095	Drift
	D4	pond	1.34	Drainage	-	-	-	-	1.33	Drainage	1.33	Drainage	1.33	Drainage	1.32	Drainage
	D4	stream	1.59	Drainage	-	-	-	-	1.59	Drainage	1.59	Drainage	1.59	Drainage	1.59	Drainage
	D6	ditch	1.72	Drainage	-	-	-	-	1.72	Drainage	1.72	Drainage	1.72	Drainage	1.72	Drainage
	D6 2 nd	ditch	1.16	Drainage	-	-	-	-	1.16	Drainage	1.16	Drainage	1.16	Drainage	1.16	Drainage
	R1	pond	0.172	Runoff	0.127	Runoff	0.077	Drift	0.259	Runoff	0.118	Runoff	0.090	Runoff	0.062	Runoff

Mitigation options																
Vegetative strip (m)		5 ^a	10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c			
No spray buffer (m)		5 ^a	0		0		10		10		15 ^d		20			
Nozzle reduction (%)		0	0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R1	stream	1.76	Runoff	1.22	Runoff	0.906	Drift	2.72	Runoff	1.22	Runoff	0.935	Runoff	0.637	Runoff
	R2	stream	1.20	Runoff	1.21	Drift	1.21	Drift	1.86	Runoff	0.833	Runoff	0.637	Runoff	0.433	Runoff
	R3	stream	3.24	Runoff	2.25	Runoff	1.28	Drift	4.98	Runoff	2.25	Runoff	1.73	Runoff	1.18	Runoff
	R4	stream	4.16	Runoff	2.89	Runoff	1.51	Runoff	6.40	Runoff	2.89	Runoff	2.22	Runoff	1.51	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 147: FOCUS Step 4 PEC_{sw} azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.055	Drift
	R1	stream	1.04	Drift
	R2	stream	1.38	Drift
	R3	stream	1.47	Drift
	R4	stream	1.03	Drift
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.081	Drift
	R1	stream	0.902	Drift
	R2	stream	1.19	Drift
	R3	stream	1.55	Runoff
	R4	stream	0.897	Drift
Vegetables, bulb 1 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.055	Drift
	R1	stream	1.03	Drift
	R2	stream	1.40	Drift
	R3	stream	1.47	Drift
	R4	stream	1.01	Drift
Vegetables, bulb	D3	ditch	-	-

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
2 × 250 g a.s./ha, BBCH 49	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.077	Drift
	R1	stream	0.906	Drift
	R2	stream	1.21	Drift
	R3	stream	1.28	Drift
	R4	stream	0.897	Drift

Table A 148: FOCUS Step 4 PEC_{sw} for azoxystrobin following application to hops, BBCH 21 – 89 – Maximum over Option 1 and Option 2

Mitigation options												
Vegetative strip (m)			5 ^a		0		10 – 12 ^b		15 ^c		0	
No spray buffer (m)			5 ^a		10		10		15 ^c		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.71	Drift	4.02	Drift	4.02	Drift	2.65	Drift	1.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.966	Drift	0.525	Drift	0.516	Drift	0.284	Drift	0.170	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	1.24	Runoff
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.51	Drift	3.92	Drift	3.92	Drift	2.59	Drift	1.18	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.951	Drift	0.508	Drift	0.507	Drift	0.278	Drift	0.156	Drift
	R1	stream	6.13	Drift	2.81	Drift	2.81	Drift	1.72	Drift	0.785	Drift
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.741	Drift	0.421	Drift	0.421	Drift	0.236	Drift	0.131	Drift
	R1	stream	7.73	Drift	4.03	Drift	4.03	Drift	2.66	Drift	1.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.930	Drift	0.496	Drift	0.496	Drift	0.271	Drift	0.150	Drift
	R1	stream	6.30	Drift	2.89	Drift	2.89	Drift	1.77	Drift	0.807	Drift

Mitigation options								
Vegetative strip (m)		18 – 20 ^d	0		0			
No spray buffer (m)		20	20		30			
Nozzle reduction (%)		0	50		0			
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift
	R1	stream	1.21	Drift	0.691	Runoff	0.691	Runoff
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.158	Drift	0.093	Drift	0.081	Drift
	R1	stream	0.786	Drift	1.24	Runoff	1.24	Runoff
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift
	R1	stream	1.18	Drift	0.589	Drift	0.571	Runoff
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.154	Drift	0.079	Drift	0.067	Drift
	R1	stream	0.785	Drift	0.571	Runoff	0.571	Runoff
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.131	Drift	0.065	Drift	0.055	Drift
	R1	stream	1.21	Drift	0.606	Drift	0.392	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.150	Drift	0.075	Drift	0.063	Drift
	R1	stream	0.807	Drift	0.403	Drift	0.263	Drift

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^dequivalent to 80% runoff mitigation

Table A 149: FOCUS Step 4 PEC_{SW} for azoxystrobin following application to hops using 5 m VFS mod, BBCH 11 – 49 – Maximum over Option 1 and Option 2

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry
Hops 1 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.657	Drift
	R1	stream	9.44	Drift
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.832	Drift
	R1	stream	7.82	Drift
Hops 1 × 250 g a.s./ha; BBCH 51	R1	pond	0.657	Drift
	R1	stream	9.21	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.826	Drift
	R1	stream	7.81	Drift
Hops 1 × 250 g a.s./ha; BBCH 89	R1	pond	0.657	Drift
	R1	stream	9.46	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.809	Drift
	R1	stream	8.03	Drift

Table A 150: FOCUS Step 4 Global Maximum PEC_{SW} for azoxystrobin following application to vegetables, leafy – Maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.156*	Drift	0.118*	Drift
	D3 2 nd	ditch	0.430*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.156*	Drift	0.118*	Drift
	D4	pond	1.35	Drainage	-	-	-	-	1.35	Drainage	1.35	Drainage	1.35	Drainage	1.35	Drainage
	D4	stream	1.31	Drainage	-	-	-	-	1.31	Drainage	1.31	Drainage	1.31	Drainage	1.31	Drainage
	D6	ditch	5.58	Drainage	-	-	-	-	5.58	Drainage	5.58	Drainage	5.58	Drainage	5.58	Drainage
	R1	pond	0.278	Runoff	0.211	Runoff	0.136	Runoff	0.411	Runoff	0.187	Runoff	0.142	Runoff	0.100	Runoff
	R1 2 nd	pond	0.255	Runoff	0.185	Runoff	0.120	Runoff	0.389	Runoff	0.174	Runoff	0.133	Runoff	0.091	Runoff
	R1	stream	3.08	Runoff	2.15	Runoff	1.12	Runoff	4.73	Runoff	2.15	Runoff	1.65	Runoff	1.12	Runoff
	R1 2 nd	stream	2.73	Runoff	1.90	Runoff	1.05*	Drift	4.18	Runoff	1.90	Runoff	1.46	Runoff	0.996	Runoff
	R2	stream	1.62	Runoff	1.38*	Drift	1.38*	Drift	2.50	Runoff	1.13	Runoff	0.866	Runoff	0.591	Runoff
	R2 2 nd	stream	0.822	Runoff	1.40*	Drift	1.40*	Drift	1.27	Runoff	0.571	Runoff	0.439	Runoff	0.299	Runoff
	R3	stream	2.76	Runoff	1.93	Runoff	1.47*	Drift	4.23	Runoff	1.93	Runoff	1.48	Runoff	1.01	Runoff
	R3 2 nd	stream	3.71	Runoff	2.59	Runoff	1.47*	Drift	5.69	Runoff	2.59	Runoff	1.99	Runoff	1.36	Runoff
	R4	stream	4.15	Runoff	2.89	Runoff	1.52	Runoff	6.36	Runoff	2.89	Runoff	2.22	Runoff	1.52	Runoff
	R4 2 nd	stream	5.49	Runoff	3.82	Runoff	2.00	Runoff	8.41	Runoff	3.82	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, leafy	D3	ditch	0.430*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.156*	Drift	0.118*	Drift
	D3 2 nd	ditch	0.428*	Drift	-	-	-	-	0.227*	Drift	0.227*	Drift	0.155*	Drift	0.118*	Drift

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
2 × 250 g a.s./ha, BBCH 49	D4	pond	1.39	Drainage	-	-	-	-	1.39	Drainage	1.39	Drainage	1.38	Drainage	1.38	Drainage
	D4	stream	1.68	Drainage	-	-	-	-	1.68	Drainage	1.68	Drainage	1.68	Drainage	1.68	Drainage
	D6	ditch	12.0	Drainage	-	-	-	-	12.0	Drainage	12.0	Drainage	12.0	Drainage	12.0	Drainage
	R1	pond	0.559	Runoff	0.405	Runoff	0.239	Runoff	0.864	Runoff	0.377	Runoff	0.285	Runoff	0.196	Runoff
	R1 2 nd	pond	0.446	Runoff	0.317	Runoff	0.178	Runoff	0.692	Runoff	0.303	Runoff	0.230	Runoff	0.157	Runoff
	R1	stream	3.15	Runoff	2.19	Runoff	1.15	Runoff	4.83	Runoff	2.19	Runoff	1.68	Runoff	1.15	Runoff
	R1 2 nd	stream	2.43	Runoff	1.70	Runoff	1.05*	Drift	3.73	Runoff	1.70	Runoff	1.30	Runoff	0.887	Runoff
	R2	stream	1.14	Runoff	1.40*	Drift	1.40*	Drift	1.74	Runoff	0.791	Runoff	0.608	Runoff	0.415	Runoff
	R2 2 nd	stream	0.909	Runoff	1.39*	Drift	1.39*	Drift	1.41	Runoff	0.631	Runoff	0.483	Runoff	0.329	Runoff
	R3	stream	2.82	Runoff	1.97	Runoff	1.48*	Drift	4.33	Runoff	1.97	Runoff	1.51	Runoff	1.03	Runoff
	R3 2 nd	stream	3.63	Runoff	2.53	Runoff	1.47*	Drift	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.62	Runoff	3.22	Runoff	1.68	Runoff	7.10	Runoff	3.22	Runoff	2.47	Runoff	1.68	Runoff
	R4 2 nd	stream	4.50	Runoff	3.14	Runoff	1.65	Runoff	6.90	Runoff	3.14	Runoff	2.41	Runoff	1.65	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 151: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, leafy using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.083	Drift
	R1 2 nd	pond	0.085	Runoff
	R1	stream	1.04*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.38*	Drift
	R2 2 nd	stream	1.40*	Drift
	R3	stream	1.57	Runoff
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.04*	Drift
	R4 2 nd	stream	1.04*	Drift
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1	pond	0.233	Runoff
	R1 2 nd	pond	0.168	Runoff
	R1	stream	1.05*	Drift
	R1 2 nd	stream	1.05*	Drift
	R2	stream	1.40*	Drift
	R2 2 nd	stream	1.39*	Drift
	R3	stream	1.48*	Drift
	R3 2 nd	stream	1.47*	Drift
	R4	stream	1.02*	Drift
	R4	stream 2 nd	1.05*	Drift

Table A 152: FOCUS Step 4 Global Maximum PEC_{SW} for azoxystrobin following application to vegetables, fruiting – Maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)		5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c		
No spray buffer (m)		5 ^a		0		0		10		10		15 ^d		20		
Nozzle reduction (%)		0		0		0		0		0		0		0		
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	-	-	-	-	0.688	Drainage	0.688	Drainage	0.688	Drainage	0.688	Drainage
	R2	stream	1.10	Runoff	1.38*	Drift	1.38*	Drift	1.70	Runoff	0.761	Runoff	0.582	Runoff	0.395	Runoff
	R3	stream	2.68	Runoff	1.87	Runoff	1.47*	Drift	4.11	Runoff	1.87	Runoff	1.44	Runoff	0.983	Runoff
	R4	stream	5.50	Runoff	3.83	Runoff	2.00	Runoff	8.46	Runoff	3.83	Runoff	2.93	Runoff	2.00	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	-	-	-	-	0.945	Drainage	0.945	Drainage	0.945	Drainage	0.945	Drainage
	R2	stream	1.24	Runoff	1.40*	Drift	1.40*	Drift	1.89	Runoff	0.862	Runoff	0.662	Runoff	0.452	Runoff
	R3	stream	3.63	Runoff	2.53	Runoff	1.48*	Drift	5.55	Runoff	2.53	Runoff	1.94	Runoff	1.33	Runoff
	R4	stream	4.77	Runoff	3.32	Runoff	1.74	Runoff	7.31	Runoff	3.32	Runoff	2.55	Runoff	1.74	Runoff
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	-	-	-	-	3.64	Drainage	3.64	Drainage	3.64	Drainage	3.64	Drainage
	R2	stream	0.609	Runoff	1.40*	Drift	1.40*	Drift	0.934	Runoff	0.424	Runoff	0.325	Runoff	0.222	Runoff
	R3	stream	3.57	Runoff	2.49	Runoff	1.48*	Drift	5.46	Runoff	2.49	Runoff	1.91	Runoff	1.31	Runoff
	R4	stream	4.28	Runoff	2.99	Runoff	1.57	Runoff	6.57	Runoff	2.99	Runoff	2.29	Runoff	1.57	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 153: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, fruiting using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
Vegetative strip (m)		5 VFS mod		
No spray buffer (m)		0		
Nozzle reduction (%)		0		
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	-	-
	R2	stream	1.38*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.04*	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	-	-
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.02*	Drift
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	-	-
	R2	stream	1.40*	Drift
	R3	stream	1.48*	Drift
	R4	stream	1.05*	Drift

Table A 154: FOCUS Step 4 Global Maximum PEC_{SW} for azoxystrobin following application to vegetables, bulb – Maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.429*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.156*	Drift	0.118*	Drift
	D4	pond	1.27	Drainage	-	-	-	-	1.27	Drainage	1.27	Drainage	1.27	Drainage	1.27	Drainage
	D4	stream	1.22	Drainage	-	-	-	-	1.22	Drainage	1.22	Drainage	1.22	Drainage	1.22	Drainage
	D6	ditch	2.34	Drainage	-	-	-	-	2.34	Drainage	2.34	Drainage	2.34	Drainage	2.34	Drainage
	D6 2 nd	ditch	12.7	Drainage	-	-	-	-	12.7	Drainage	12.7	Drainage	12.7	Drainage	12.7	Drainage
	R1	pond	0.305	Runoff	0.230	Runoff	0.146	Runoff	0.454	Runoff	0.206	Runoff	0.156	Runoff	0.109	Runoff
	R1	stream	3.50	Runoff	2.43	Runoff	1.27	Runoff	5.37	Runoff	2.43	Runoff	1.87	Runoff	1.27	Runoff
	R2	stream	1.56	Runoff	1.50	Drift	1.38*	Drift	2.41	Runoff	1.09	Runoff	0.833	Runoff	0.568	Runoff
	R3	stream	2.83	Runoff	1.98	Runoff	1.47*	Drift	4.33	Runoff	1.98	Runoff	1.52	Runoff	1.04	Runoff
	R4	stream	4.02	Runoff	2.80	Runoff	1.47	Runoff	6.17	Runoff	2.80	Runoff	2.15	Runoff	1.47	Runoff
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.430*	Drift	-	-	-	-	0.228*	Drift	0.228*	Drift	0.156*	Drift	0.118*	Drift
	D4	pond	1.34	Drainage	-	-	-	-	1.33	Drainage	1.33	Drainage	1.33	Drainage	1.32	Drainage
	D4	stream	1.59	Drainage	-	-	-	-	1.59	Drainage	1.59	Drainage	1.59	Drainage	1.59	Drainage
	D6	ditch	1.72	Drainage	-	-	-	-	1.72	Drainage	1.72	Drainage	1.72	Drainage	1.72	Drainage
	D6 2 nd	ditch	1.16	Drainage	-	-	-	-	1.16	Drainage	1.16	Drainage	1.16	Drainage	1.16	Drainage
	R1	pond	0.172	Runoff	0.127	Runoff	0.077	Drift	0.259	Runoff	0.118	Runoff	0.09	Runoff	0.062	Runoff
	R1	stream	1.76	Runoff	1.22	Runoff	1.03*	Drift	2.72	Runoff	1.22	Runoff	0.935	Runoff	0.637	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10 – 12 ^b		18 - 20 ^c		0		10 – 12 ^b		15 ^d		18 - 20 ^c	
No spray buffer (m)			5 ^a		0		0		10		10		15 ^d		20	
Nozzle reduction (%)			0		0		0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry	PEC _{sw} (µg/L)	Dominant Route of Entry
	R2	stream	1.20	Runoff	1.40*	Drift	1.40*	Drift	1.86	Runoff	0.833	Runoff	0.637	Runoff	0.433	Runoff
	R3	stream	3.24	Runoff	2.25	Runoff	1.47*	Drift	4.98	Runoff	2.25	Runoff	1.73	Runoff	1.18	Runoff
	R4	stream	4.16	Runoff	2.89	Runoff	1.51	Runoff	6.40	Runoff	2.89	Runoff	2.22	Runoff	1.51	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 155: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to vegetables, bulb using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.081	Drift
	R1	stream	1.04*	Drift
	R2	stream	1.38*	Drift
	R3	stream	1.55	Runoff
	R4	stream	1.03*	Drift
Vegetables, bulb 2 × 250 g a.s./ha, BBCH 49	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.077	Drift
	R1	stream	1.03*	Drift
	R2	stream	1.40*	Drift
	R3	stream	1.47*	Drift
	R4	stream	1.01*	Drift

Table A 156: FOCUS Step 4 Global Maximum PEC_{SW} for azoxystrobin following application to hops – Maximum over single and multiple applications

Mitigation options												
Vegetative strip (m)			5 ^a		0		10 – 12 ^b		15 ^c		0	
No spray buffer (m)			5 ^a		10		10		15 ^c		20	
Nozzle reduction (%)			0		0		0		0		0	
Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SW} (µg/L)	Dominant Route of Entry
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.966	Drift	0.525	Drift	0.516	Drift	0.284	Drift	0.170	Drift
	R1	stream	7.71*	Drift	4.02*	Drift	4.02*	Drift	2.65*	Drift	1.24	Runoff
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.951	Drift	0.508	Drift	0.507	Drift	0.278	Drift	0.156	Drift
	R1	stream	7.51*	Drift	3.92*	Drift	3.92*	Drift	2.59*	Drift	1.18*	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.930	Drift	0.496	Drift	0.496	Drift	0.271	Drift	0.150	Drift
	R1	stream	7.73*	Drift	4.03*	Drift	4.03*	Drift	2.66*	Drift	1.21*	Drift
Vegetative strip (m)			18 – 20 ^d		0		0					
No spray buffer (m)			20		20		30					
Nozzle reduction (%)			0		50		0					
Application	Scenario	Water	PEC _{SW}	Dominant	PEC _{SW}	Dominant	PEC _{SW}	Dominant				

Mitigation options								
scenario		body	(µg/L)	Route of Entry	(µg/L)	Route of Entry	(µg/L)	Route of Entry
Hops 2 × 250 g a.s./ha; BBCH 21 ^b	R1	pond	0.158	Drift	0.093	Drift	0.081	Drift
	R1	stream	1.21*	Drift	1.24	Runoff	1.24	Runoff
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.154	Drift	0.079	Drift	0.067	Drift
	R1	stream	1.18*	Drift	0.589*	Drift	0.571*	Runoff
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.150	Drift	0.075	Drift	0.063	Drift
	R1	stream	1.21*	Drift	0.606*	Drift	0.392*	Drift

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^d equivalent to 80% runoff mitigation

Table A 157: FOCUS Step 4 Global Maximum PEC_{sw} for azoxystrobin following application to hops using 5 m VFS mod, BBCH 11 – 49 – Maximum over single and multiple applications

Mitigation options				
		Vegetative strip (m)	5 VFS mod	
		No spray buffer (m)	0	
		Nozzle reduction (%)	0	
Use	Scenario	Water body	PEC _{sw} (µg/L)	Dominant Route of Entry
Hops 2 × 250 g a.s./ha; BBCH 21	R1	pond	0.832	Drift
	R1	stream	9.44*	Drift
Hops 2 × 250 g a.s./ha; BBCH 51	R1	pond	0.826	Drift
	R1	stream	9.21*	Drift
Hops 2 × 250 g a.s./ha; BBCH 89	R1	pond	0.809	Drift
	R1	stream	9.46*	Drift

Greenhouse uses

Table A 158: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – 0.1% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.082	Drift	0.047	0.082	Drift	0.047
	D3 2 nd	ditch	0.082	Drift	0.050	0.082	Drift	0.050
	D4	pond	0.646	Drainage	4.16	0.639	Drainage	4.20
	D4	stream	0.634	Drainage	1.64	0.634	Drainage	1.67
	D6	ditch	2.55	Drainage	2.45	2.55	Drainage	2.58
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.082	Drift	0.064	0.082	Drift	0.064
	D3 2 nd	ditch	0.082	Drift	0.066	0.082	Drift	0.066
	D4	pond	1.35	Drainage	8.20	1.34	Drainage	8.27
	D4	stream	1.31	Drainage	3.21	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.17	5.58	Drainage	5.45
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.082	Drift	0.048	0.082	Drift	0.048
	D3 2 nd	ditch	0.082	Drift	0.034	0.082	Drift	0.034
	D4	pond	0.388	Drainage	2.65	0.384	Drainage	2.66
	D4	stream	0.609	Drainage	0.958	0.609	Drainage	0.968
	D6	ditch	5.12	Drainage	5.62	5.11	Drainage	5.95
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.082	Drift	0.064	0.082	Drift	0.064
	D3 2 nd	ditch	0.082	Drift	0.048	0.082	Drift	0.049
	D4	pond	1.39	Drainage	8.22	1.37	Drainage	8.24
	D4	stream	1.68	Drainage	3.28	1.68	Drainage	3.30
	D6	ditch	12.0	Drainage	13.3	12.0	Drainage	14.1

Table A 159: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – 0.1% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.336	Drainage	0.364	0.336	Drainage	0.390

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	0.753	0.688	Drainage	0.805
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	0.475	0.431	Drainage	0.507
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	1.05	0.945	Drainage	1.12
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.51	1.95	Drainage	1.60
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.04	3.64	Drainage	3.25

Table A 160: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy – 0.2% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.164	Drift	0.091	0.164	Drift	0.091
	D3 2 nd	ditch	0.165	Drift	0.098	0.165	Drift	0.098
	D4	pond	0.649	Drainage	4.22	0.642	Drainage	4.27
	D4	stream	0.634	Drainage	1.64	0.634	Drainage	1.67
	D6	ditch	2.55	Drainage	2.45	2.55	Drainage	2.58
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.165	Drift	0.123	0.165	Drift	0.124
	D3 2 nd	ditch	0.165	Drift	0.127	0.165	Drift	0.127
	D4	pond	1.36	Drainage	8.31	1.34	Drainage	8.40
	D4	stream	1.31	Drainage	3.21	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.17	5.58	Drainage	5.46
Vegetables, leafy 1 × 250 g a.s./ha,	D3	ditch	0.164	Drift	0.093	0.164	Drift	0.093
	D3 2 nd	ditch	0.164	Drift	0.067	0.164	Drift	0.067

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
BBCH 49	D4	pond	0.394	Drainage	2.73	0.390	Drainage	2.74
	D4	stream	0.609	Drainage	0.958	0.609	Drainage	0.969
	D6	ditch	5.12	Drainage	5.62	5.11	Drainage	5.95
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.165	Drift	0.123	0.165	Drift	0.124
	D3 2 nd	ditch	0.164	Drift	0.094	0.164	Drift	0.094
	D4	pond	1.40	Drainage	8.37	1.39	Drainage	8.40
	D4	stream	1.68	Drainage	3.28	1.68	Drainage	3.30
	D6	ditch	12.0	Drainage	13.3	12.0	Drainage	14.1

Table A 161: FOCUS Step 3 PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – 0.2% drift

Application scenario	Scenario	Water body	Option 1 Water DT ₅₀ = 1000 d Sediment DT ₅₀ = 205 d			Option 2 Water DT ₅₀ = 205 d Sediment DT ₅₀ = 1000 d		
			PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.336	Drainage	0.365	0.336	Drainage	0.391
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	0.755	0.688	Drainage	0.807
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	0.476	0.431	Drainage	0.508
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	1.05	0.945	Drainage	1.12
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.51	1.95	Drainage	1.61
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.04	3.64	Drainage	3.25

Table A 162: FOCUS Step 3 Summary Table, Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy - maximum over option 1 and option 2 – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.082	Drift	0.047
	D3 2 nd	ditch	0.082	Drift	0.050
	D4	pond	0.646	Drainage	4.20
	D4	stream	0.634	Drainage	1.67
	D6	ditch	2.55	Drainage	2.58
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.082	Drift	0.064
	D3 2 nd	ditch	0.082	Drift	0.066
	D4	pond	1.35	Drainage	8.27
	D4	stream	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.45
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.082	Drift	0.048
	D3 2 nd	ditch	0.082	Drift	0.034
	D4	pond	0.388	Drainage	2.66
	D4	stream	0.609	Drainage	0.968
	D6	ditch	5.12	Drainage	5.95
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.082	Drift	0.064
	D3 2 nd	ditch	0.082	Drift	0.049
	D4	pond	1.39	Drainage	8.24
	D4	stream	1.68	Drainage	3.30
	D6	ditch	12.0	Drainage	14.1

^a maximum over option 1 and 2

Table A 163: FOCUS Step 3 Summary Table, Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over option 1 and option 2 – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 11	D6	ditch	0.336	Drainage	0.390
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	0.805
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	0.507
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	1.12

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.60
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.25

^a maximum over option 1 and 2

Table A 164: FOCUS Step 3 Summary Table, PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, leafy - maximum over option 1 and option 2 – 0.2% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 11	D3	ditch	0.164	Drift	0.091
	D3 2 nd	ditch	0.165	Drift	0.098
	D4	pond	0.649	Drainage	4.27
	D4	stream	0.634	Drainage	1.67
	D6	ditch	2.55	Drainage	2.58
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 11	D3	ditch	0.165	Drift	0.124
	D3 2 nd	ditch	0.165	Drift	0.127
	D4	pond	1.36	Drainage	8.40
	D4	stream	1.31	Drainage	3.28
	D6	ditch	5.58	Drainage	5.46
Vegetables, leafy 1 × 250 g a.s./ha, BBCH 49	D3	ditch	0.164	Drift	0.093
	D3 2 nd	ditch	0.164	Drift	0.067
	D4	pond	0.394	Drainage	2.74
	D4	stream	0.609	Drainage	0.969
	D6	ditch	5.12	Drainage	5.95
Vegetables, leafy 2 × 250 g a.s./ha, BBCH 49	D3	ditch	0.165	Drift	0.124
	D3 2 nd	ditch	0.164	Drift	0.094
	D4	pond	1.40	Drainage	8.40
	D4	stream	1.68	Drainage	3.30
	D6	ditch	12.0	Drainage	14.1

^a maximum over option 1 and 2

Table A 165: FOCUS Step 3 Summary Table, Global Maximum PEC_{SW} and PEC_{SED} for azoxystrobin following application to vegetables, fruiting – maximum over option 1 and option 2 – 0.2% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant Route of Entry	PEC _{SED} (µg/kg) ^a
Vegetables, fruiting 1 × 250 g a.s./ha,	D6	ditch	0.336	Drainage	0.391

Application scenario	Scenario	Water body	PEC_{sw} (µg/L)^a	Dominant Route of Entry	PEC_{sed} (µg/kg)^a
BBCH 11					
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 11	D6	ditch	0.688	Drainage	0.807
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 51	D6	ditch	0.431	Drainage	0.508
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 51	D6	ditch	0.945	Drainage	1.12
Vegetables, fruiting 1 × 250 g a.s./ha, BBCH 89	D6	ditch	1.95	Drainage	1.61
Vegetables, fruiting 2 × 250 g a.s./ha, BBCH 89	D6	ditch	3.64	Drainage	3.25

^a maximum over option 1 and 2

A 3.9 KCP 9.2.5: Oxathiapiprolin - FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED}

Comments of zRMS:	All input parameters for oxathiapiprolin and its metabolites were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{SW} calculations acceptable for the parent and its metabolites.
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Results below outline detailed FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for all crops and all uses outlined in the GAP

Table A 166: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{SW, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	0.539	0.401	27.3
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	0.175	0.063	30.0
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.110	0.068	4.65
Northern Europe	Jun-Sep	0.110	0.068	4.65
Northern Europe	Oct-Feb	0.174	0.165	10.5
Southern Europe	Mar-May	0.143	0.134	8.58
Southern Europe	Jun-Sep	0.112	0.104	6.62
Southern Europe	Oct-Feb	0.143	0.134	8.58
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.110	0.015	5.13
Northern Europe	Jun-Sep	0.110	0.015	5.13
Northern Europe	Oct-Feb	0.110	0.026	11.6
Southern Europe	Mar-May	0.110	0.023	9.46
Southern Europe	Jun-Sep	0.110	0.019	7.29
Southern Europe	Oct-Feb	0.110	0.023	9.46

^a two-time as required by ecotox

Table A 167: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{SW, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	1.08	0.801	54.5
Step 2 (K _{FOC} = 45586 mL/g)				
-	-	0.350	0.125	60.1

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{SW, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.153	0.140	8.97
Northern Europe	Jun-Sep	0.153	0.140	8.97
Northern Europe	Oct-Feb	0.338	0.321	20.5
Southern Europe	Mar-May	0.276	0.261	16.7
Southern Europe	Jun-Sep	0.215	0.201	12.8
Southern Europe	Oct-Feb	0.276	0.261	16.7
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.100	0.023	9.90
Northern Europe	Jun-Sep	0.100	0.023	9.90
Northern Europe	Oct-Feb	0.100	0.046	22.6
Southern Europe	Mar-May	0.100	0.038	18.4
Southern Europe	Jun-Sep	0.100	0.031	14.1
Southern Europe	Oct-Feb	0.100	0.038	18.4

^a two-time as required by ecotox

Table A 168: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{SW, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	0.539	0.401	27.3
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	0.175	0.063	30.0
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.110	0.068	4.65
Northern Europe	Jun-Sep	0.110	0.068	4.65
Southern Europe	Mar-May	0.143	0.134	8.58
Southern Europe	Jun-Sep	0.112	0.104	6.62
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.110	0.015	5.13
Northern Europe	Jun-Sep	0.110	0.015	5.13
Southern Europe	Mar-May	0.110	0.023	9.46
Southern Europe	Jun-Sep	0.110	0.019	7.29

^a two-time as required by ecotox

Table A 169: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days))

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	1.08	0.801	54.5
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	0.350	0.125	60.1
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.153	0.140	8.97
Northern Europe	Jun-Sep	0.153	0.140	8.97
Southern Europe	Mar-May	0.276	0.261	16.7
Southern Europe	Jun-Sep	0.215	0.201	12.8
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.100	0.023	9.90
Northern Europe	Jun-Sep	0.100	0.023	9.90
Southern Europe	Mar-May	0.100	0.038	18.4
Southern Europe	Jun-Sep	0.100	0.031	14.1

^a twa-time as required by ecotox

Table A 170: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	0.539	0.401	27.3
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	0.175	0.063	30.0
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.110	0.078	5.44
Northern Europe	Jun-Sep	0.110	0.078	5.44
Northern Europe	Oct-Feb	0.206	0.196	12.5
Southern Europe	Mar-May	0.168	0.159	10.2
Southern Europe	Jun-Sep	0.130	0.122	7.79
Southern Europe	Oct-Feb	0.168	0.159	10.2
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.110	0.016	6.00
Northern Europe	Jun-Sep	0.110	0.016	6.00

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Northern Europe	Oct-Feb	0.110	0.030	13.8
Southern Europe	Mar-May	0.110	0.026	11.2
Southern Europe	Jun-Sep	0.110	0.021	8.59
Southern Europe	Oct-Feb	0.110	0.026	11.2

^a twa-time as required by ecotox

Table A 171: FOCUS Step 1 and 2 PEC_{sw} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	1.08	0.801	54.5
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	0.350	0.125	60.1
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.175	0.162	10.4
Northern Europe	Jun-Sep	0.175	0.162	10.4
Northern Europe	Oct-Feb	0.394	0.376	24.0
Southern Europe	Mar-May	0.321	0.305	19.5
Southern Europe	Jun-Sep	0.248	0.234	14.9
Southern Europe	Oct-Feb	0.321	0.305	19.5
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.100	0.026	11.5
Northern Europe	Jun-Sep	0.100	0.026	11.5
Northern Europe	Oct-Feb	0.100	0.053	26.5
Southern Europe	Mar-May	0.100	0.044	21.5
Southern Europe	Jun-Sep	0.100	0.035	16.5
Southern Europe	Oct-Feb	0.100	0.044	21.5

^a twa-time as required by ecotox

Table A 172: FOCUS Step 1 and 2 PEC_{sw} and PEC_{SED} for oxathiapiprolin following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	1.20	0.479	31.6
Step 1 (K _{FOC} = 45586 mL/g)				

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{sed} (µg/kg)
-	-	0.838	0.088	34.9
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.773	0.151	7.73
Northern Europe	Jun-Sep	0.773	0.151	7.73
Northern Europe	Oct-Feb	0.773	0.202	11.7
Southern Europe	Mar-May	0.773	0.185	10.3
Southern Europe	Jun-Sep	0.773	0.168	9.04
Southern Europe	Oct-Feb	0.773	0.185	10.3
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.773	0.054	8.54
Northern Europe	Jun-Sep	0.773	0.054	8.54
Northern Europe	Oct-Feb	0.773	0.062	12.9
Southern Europe	Mar-May	0.773	0.059	11.4
Southern Europe	Jun-Sep	0.773	0.056	9.98
Southern Europe	Oct-Feb	0.773	0.059	11.4

^a twa-time as required by ecotox

Table A 173: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for oxathiapiprolin following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{sw} (µg/L)	21 d - PEC _{sw, twa} (µg/L) ^a	Max PEC _{sed} (µg/kg)
Step 1 (K _{FOC} = 6242.3 mL/g)				
-	-	2.40	0.958	63.3
Step 1 (K _{FOC} = 45586 mL/g)				
-	-	1.68	0.176	69.8
Step 2 (K _{FOC} = 6242.3 mL/g)				
Northern Europe	Mar-May	0.813	0.251	14.3
Northern Europe	Jun-Sep	0.813	0.251	14.3
Northern Europe	Oct-Feb	0.813	0.351	21.9
Southern Europe	Mar-May	0.813	0.318	19.4
Southern Europe	Jun-Sep	0.813	0.284	16.9
Southern Europe	Oct-Feb	0.813	0.318	19.4
Step 2 (K _{FOC} = 45586 mL/g)				
Northern Europe	Mar-May	0.726	0.067	15.9
Northern Europe	Jun-Sep	0.726	0.067	15.9
Northern Europe	Oct-Feb	0.726	0.082	24.3

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	21 d - PEC _{SW, twa} (µg/L) ^a	Max PEC _{SED} (µg/kg)
Southern Europe	Mar-May	0.726	0.077	21.5
Southern Europe	Jun-Sep	0.726	0.072	18.7
Southern Europe	Oct-Feb	0.726	0.077	21.5

^a twa-time as required by ecotox

Table A 174: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.151	1.77
Step 2			
Northern Europe	Mar-May	0.022	0.261
Northern Europe	Jun-Sep	0.022	0.261
Northern Europe	Oct-Feb	0.056	0.652
Southern Europe	Mar-May	0.045	0.521
Southern Europe	Jun-Sep	0.034	0.391
Southern Europe	Oct-Feb	0.045	0.521

Table A 175: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May	0.044	0.514
Northern Europe	Jun-Sep	0.044	0.514
Northern Europe	Oct-Feb	0.110	1.28
Southern Europe	Mar-May	0.088	1.03
Southern Europe	Jun-Sep	0.066	0.771
Southern Europe	Oct-Feb	0.088	1.03

Table A 176: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.151	1.77
Step 2			
Northern Europe	Mar-May	0.022	0.261
Northern Europe	Jun-Sep	0.022	0.261
Southern Europe	Mar-May	0.045	0.521
Southern Europe	Jun-Sep	0.034	0.391

Table A 177: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May	0.044	0.514
Northern Europe	Jun-Sep	0.044	0.514
Southern Europe	Mar-May	0.088	1.03
Southern Europe	Jun-Sep	0.066	0.771

Table A 178: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.151	1.77
Step 2			
Northern Europe	Mar-May	0.027	0.313
Northern Europe	Jun-Sep	0.027	0.313
Northern Europe	Oct-Feb	0.067	0.782
Southern Europe	Mar-May	0.054	0.626
Southern Europe	Jun-Sep	0.040	0.469
Southern Europe	Oct-Feb	0.054	0.626

Table A 179: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May	0.052	0.610
Northern Europe	Jun-Sep	0.052	0.610
Northern Europe	Oct-Feb	0.131	1.53
Southern Europe	Mar-May	0.104	1.22
Southern Europe	Jun-Sep	0.078	0.915
Southern Europe	Oct-Feb	0.104	1.22

Table A 180: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.151	1.77
Step 2			
Northern Europe	Mar-May	0.015	0.174
Northern Europe	Jun-Sep	0.015	0.174
Northern Europe	Oct-Feb	0.037	0.435
Southern Europe	Mar-May	0.030	0.348
Southern Europe	Jun-Sep	0.022	0.261
Southern Europe	Oct-Feb	0.030	0.348

Table A 181: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RDT31 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.303	3.54
Step 2			
Northern Europe	Mar-May	0.029	0.339
Northern Europe	Jun-Sep	0.029	0.339
Northern Europe	Oct-Feb	0.073	0.847
Southern Europe	Mar-May	0.058	0.678
Southern Europe	Jun-Sep	0.044	0.508
Southern Europe	Oct-Feb	0.058	0.678

Table A 182: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.596	2.93
Step 2			
Northern Europe	Mar-May	0.092	0.452
Northern Europe	Jun-Sep	0.092	0.452
Northern Europe	Oct-Feb	0.219	1.08
Southern Europe	Mar-May	0.177	0.871
Southern Europe	Jun-Sep	0.135	0.661
Southern Europe	Oct-Feb	0.177	0.871

Table A 183: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	1.19	5.86
Step 2			
Northern Europe	Mar-May	0.178	0.870
Northern Europe	Jun-Sep	0.178	0.870
Northern Europe	Oct-Feb	0.424	2.09
Southern Europe	Mar-May	0.342	1.68
Southern Europe	Jun-Sep	0.260	1.28
Southern Europe	Oct-Feb	0.342	1.68

Table A 184: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.596	2.93
Step 2			
Northern Europe	Mar-May	0.092	0.452
Northern Europe	Jun-Sep	0.092	0.452
Southern Europe	Mar-May	0.177	0.871
Southern Europe	Jun-Sep	0.135	0.661

Table A 185: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	1.19	5.86
Step 2			
Northern Europe	Mar-May	0.178	0.870
Northern Europe	Jun-Sep	0.178	0.870
Southern Europe	Mar-May	0.342	1.68
Southern Europe	Jun-Sep	0.260	1.28

Table A 186: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.596	2.93
Step 2			
Northern Europe	Mar-May	0.109	0.536
Northern Europe	Jun-Sep	0.109	0.536
Northern Europe	Oct-Feb	0.261	1.29
Southern Europe	Mar-May	0.211	1.04
Southern Europe	Jun-Sep	0.160	0.787
Southern Europe	Oct-Feb	0.211	1.04

Table A 187: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	1.19	5.86
Step 2			
Northern Europe	Mar-May	0.206	1.01
Northern Europe	Jun-Sep	0.206	1.01
Northern Europe	Oct-Feb	0.495	2.44
Southern Europe	Mar-May	0.399	1.97
Southern Europe	Jun-Sep	0.302	1.49
Southern Europe	Oct-Feb	0.399	1.97

Table A 188: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.662	3.13
Step 2			
Northern Europe	Mar-May	0.110	0.510
Northern Europe	Jun-Sep	0.110	0.510
Northern Europe	Oct-Feb	0.195	0.929
Southern Europe	Mar-May	0.167	0.789
Southern Europe	Jun-Sep	0.138	0.649
Southern Europe	Oct-Feb	0.167	0.789

Table A 189: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RAB06 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	1.33	6.25
Step 2			
Northern Europe	Mar-May	0.205	0.951
Northern Europe	Jun-Sep	0.205	0.951
Northern Europe	Oct-Feb	0.366	1.75
Southern Europe	Mar-May	0.312	1.48
Southern Europe	Jun-Sep	0.259	1.22
Southern Europe	Oct-Feb	0.312	1.48

Table A 190: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.030	1.47
Step 2			
Northern Europe	Mar-May	0.005	0.219
Northern Europe	Jun-Sep	0.005	0.219
Northern Europe	Oct-Feb	0.011	0.547
Southern Europe	Mar-May	0.009	0.437
Southern Europe	Jun-Sep	0.007	0.328
Southern Europe	Oct-Feb	0.009	0.437

Table A 191: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May	0.009	0.436
Northern Europe	Jun-Sep	0.009	0.436
Northern Europe	Oct-Feb	0.022	1.09
Southern Europe	Mar-May	0.018	0.871
Southern Europe	Jun-Sep	0.013	0.653
Southern Europe	Oct-Feb	0.018	0.871

Table A 192: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.030	1.47
Step 2			
Northern Europe	Mar-May	0.005	0.219
Northern Europe	Jun-Sep	0.005	0.219
Southern Europe	Mar-May	0.009	0.437
Southern Europe	Jun-Sep	0.007	0.328

Table A 193: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May	0.009	0.436
Northern Europe	Jun-Sep	0.009	0.436
Southern Europe	Mar-May	0.018	0.871
Southern Europe	Jun-Sep	0.013	0.653

Table A 194: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
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Step 1			
-	-	0.030	1.47
Step 2			
Northern Europe	Mar-May	0.005	0.262
Northern Europe	Jun-Sep	0.005	0.262
Northern Europe	Oct-Feb	0.013	0.656
Southern Europe	Mar-May	0.011	0.525
Southern Europe	Jun-Sep	0.008	0.394
Southern Europe	Oct-Feb	0.011	0.525

Table A 195: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May	0.011	0.521
Northern Europe	Jun-Sep	0.011	0.521
Northern Europe	Oct-Feb	0.027	1.30
Southern Europe	Mar-May	0.021	1.04
Southern Europe	Jun-Sep	0.016	0.782
Southern Europe	Oct-Feb	0.021	1.04

Table A 196: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.030	1.47
Step 2			
Northern Europe	Mar-May	0.003	0.146
Northern Europe	Jun-Sep	0.003	0.146
Northern Europe	Oct-Feb	0.008	0.365
Southern Europe	Mar-May	0.006	0.292
Southern Europe	Jun-Sep	0.005	0.219
Southern Europe	Oct-Feb	0.006	0.292

Table A 197: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-QPS10 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.060	2.93
Step 2			
Northern Europe	Mar-May	0.006	0.290
Northern Europe	Jun-Sep	0.006	0.290
Northern Europe	Oct-Feb	0.015	0.724
Southern Europe	Mar-May	0.012	0.579
Southern Europe	Jun-Sep	0.009	0.434
Southern Europe	Oct-Feb	0.012	0.579

Table A 198: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.136	0.010
Step 2			
Northern Europe	Mar-May	0.020	0.002
Northern Europe	Jun-Sep	0.020	0.002
Northern Europe	Oct-Feb	0.051	0.004
Southern Europe	Mar-May	0.041	0.003
Southern Europe	Jun-Sep	0.030	0.002
Southern Europe	Oct-Feb	0.041	0.003

Table A 199: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May	0.040	0.003
Northern Europe	Jun-Sep	0.040	0.003
Northern Europe	Oct-Feb	0.100	0.007
Southern Europe	Mar-May	0.080	0.006
Southern Europe	Jun-Sep	0.060	0.004

Southern Europe	Oct-Feb	0.080	0.006
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Table A 200: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.136	0.010
Step 2			
Northern Europe	Mar-May	0.020	0.002
Northern Europe	Jun-Sep	0.020	0.002
Southern Europe	Mar-May	0.041	0.003
Southern Europe	Jun-Sep	0.030	0.002

Table A 201: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May	0.040	0.003
Northern Europe	Jun-Sep	0.040	0.003
Southern Europe	Mar-May	0.080	0.006
Southern Europe	Jun-Sep	0.060	0.004

Table A 202: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.136	0.010
Step 2			
Northern Europe	Mar-May	0.024	0.002
Northern Europe	Jun-Sep	0.024	0.002
Northern Europe	Oct-Feb	0.061	0.005
Southern Europe	Mar-May	0.049	0.004
Southern Europe	Jun-Sep	0.036	0.003
Southern Europe	Oct-Feb	0.049	0.004

Table A 203: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May	0.048	0.004
Northern Europe	Jun-Sep	0.048	0.004
Northern Europe	Oct-Feb	0.120	0.009
Southern Europe	Mar-May	0.096	0.007
Southern Europe	Jun-Sep	0.072	0.005
Southern Europe	Oct-Feb	0.096	0.007

Table A 204: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.136	0.010
Step 2			
Northern Europe	Mar-May	0.014	0.001
Northern Europe	Jun-Sep	0.014	0.001
Northern Europe	Oct-Feb	0.034	0.003
Southern Europe	Mar-May	0.027	0.002
Southern Europe	Jun-Sep	0.020	0.002
Southern Europe	Oct-Feb	0.027	0.002

Table A 205: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-E8S72 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1			
-	-	0.272	0.020
Step 2			
Northern Europe	Mar-May	0.027	0.002
Northern Europe	Jun-Sep	0.027	0.002
Northern Europe	Oct-Feb	0.067	0.005
Southern Europe	Mar-May	0.053	0.004
Southern Europe	Jun-Sep	0.040	0.003
Southern Europe	Oct-Feb	0.053	0.004

Table A 206: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.346	0.035
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.033	2.44
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.059	0.006
Northern Europe	Jun-Sep	0.059	0.006
Northern Europe	Oct-Feb	0.133	0.013
Southern Europe	Mar-May	0.108	0.011
Southern Europe	Jun-Sep	0.083	0.008
Southern Europe	Oct-Feb	0.108	0.011
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.009	0.414
Northern Europe	Jun-Sep	0.009	0.414
Northern Europe	Oct-Feb	0.010	0.937
Southern Europe	Mar-May	0.009	0.762
Southern Europe	Jun-Sep	0.009	0.588
Southern Europe	Oct-Feb	0.009	0.762

Table A 207: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.692	0.069
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.066	4.89
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.113	0.011
Northern Europe	Jun-Sep	0.113	0.011
Northern Europe	Oct-Feb	0.258	0.026
Southern Europe	Mar-May	0.210	0.021
Southern Europe	Jun-Sep	0.162	0.016
Southern Europe	Oct-Feb	0.210	0.021

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.009	0.799
Northern Europe	Jun-Sep	0.009	0.799
Northern Europe	Oct-Feb	0.019	1.82
Southern Europe	Mar-May	0.015	1.48
Southern Europe	Jun-Sep	0.012	1.14
Southern Europe	Oct-Feb	0.015	1.48

Table A 208: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.346	0.035
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.033	2.44
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.059	0.006
Northern Europe	Jun-Sep	0.059	0.006
Southern Europe	Mar-May	0.108	0.011
Southern Europe	Jun-Sep	0.083	0.008
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.009	0.414
Northern Europe	Jun-Sep	0.009	0.414
Southern Europe	Mar-May	0.009	0.762
Southern Europe	Jun-Sep	0.009	0.588

Table A 209: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.692	0.069
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.066	4.89
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.113	0.011
Northern Europe	Jun-Sep	0.113	0.011
Southern Europe	Mar-May	0.210	0.021

Southern Europe	Jun-Sep	0.162	0.016
Step 2 ($K_{FOC} = 10000 \text{ mL/g}$)			
Northern Europe	Mar-May	0.009	0.799
Northern Europe	Jun-Sep	0.009	0.799
Southern Europe	Mar-May	0.015	1.48
Southern Europe	Jun-Sep	0.012	1.14

Table A 210: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, bulb, BBCH 11-49 ($1 \times 12 \text{ g a.s./ha}$)

Scenario FOCUS	Period/ Waterbody	Max PEC_{SW} ($\mu\text{g/L}$)	Max PEC_{SED} ($\mu\text{g/kg}$)
Step 1 ($K_{FOC} = 10 \text{ mL/g}$)			
-	-	0.346	0.035
Step 1 ($K_{FOC} = 10000 \text{ mL/g}$)			
-	-	0.033	2.44
Step 2 ($K_{FOC} = 10 \text{ mL/g}$)			
Northern Europe	Mar-May	0.069	0.007
Northern Europe	Jun-Sep	0.069	0.007
Northern Europe	Oct-Feb	0.157	0.016
Southern Europe	Mar-May	0.128	0.013
Southern Europe	Jun-Sep	0.098	0.010
Southern Europe	Oct-Feb	0.128	0.013
Step 2 ($K_{FOC} = 10000 \text{ mL/g}$)			
Northern Europe	Mar-May	0.009	0.484
Northern Europe	Jun-Sep	0.009	0.484
Northern Europe	Oct-Feb	0.012	1.11
Southern Europe	Mar-May	0.009	0.902
Southern Europe	Jun-Sep	0.009	0.693
Southern Europe	Oct-Feb	0.009	0.902

Table A 211: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to vegetables, bulb, BBCH 11-49 ($2 \times 12 \text{ g a.s./ha}$, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC_{SW} ($\mu\text{g/L}$)	Max PEC_{SED} ($\mu\text{g/kg}$)
Step 1 ($K_{FOC} = 10 \text{ mL/g}$)			
-	-	0.692	0.069
Step 1 ($K_{FOC} = 10000 \text{ mL/g}$)			
-	-	0.066	4.89

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.131	0.013
Northern Europe	Jun-Sep	0.131	0.013
Northern Europe	Oct-Feb	0.303	0.030
Southern Europe	Mar-May	0.245	0.025
Southern Europe	Jun-Sep	0.188	0.019
Southern Europe	Oct-Feb	0.245	0.025
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.010	0.924
Northern Europe	Jun-Sep	0.010	0.924
Northern Europe	Oct-Feb	0.022	2.14
Southern Europe	Mar-May	0.018	1.73
Southern Europe	Jun-Sep	0.014	1.33
Southern Europe	Oct-Feb	0.018	1.73

Table A 212: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.402	0.040
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.090	2.84
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.098	0.010
Northern Europe	Jun-Sep	0.098	0.010
Northern Europe	Oct-Feb	0.147	0.015
Southern Europe	Mar-May	0.131	0.013
Southern Europe	Jun-Sep	0.114	0.011
Southern Europe	Oct-Feb	0.131	0.013
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.066	0.690
Northern Europe	Jun-Sep	0.066	0.690
Northern Europe	Oct-Feb	0.066	1.04
Southern Europe	Mar-May	0.066	0.923
Southern Europe	Jun-Sep	0.066	0.807
Southern Europe	Oct-Feb	0.066	0.923

Table A 213: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-S2K66 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.805	0.080
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.179	5.67
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.183	0.018
Northern Europe	Jun-Sep	0.183	0.018
Northern Europe	Oct-Feb	0.278	0.028
Southern Europe	Mar-May	0.246	0.025
Southern Europe	Jun-Sep	0.214	0.021
Southern Europe	Oct-Feb	0.246	0.025
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.067	1.29
Northern Europe	Jun-Sep	0.067	1.29
Northern Europe	Oct-Feb	0.067	1.96
Southern Europe	Mar-May	0.067	1.74
Southern Europe	Jun-Sep	0.067	1.51
Southern Europe	Oct-Feb	0.067	1.74

Table A 214: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.399	0.040
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.038	2.82
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.068	0.007
Northern Europe	Jun-Sep	0.068	0.007
Northern Europe	Oct-Feb	0.153	0.015
Southern Europe	Mar-May	0.125	0.012
Southern Europe	Jun-Sep	0.096	0.010
Southern Europe	Oct-Feb	0.125	0.012
Step 2 (K _{FOC} = 10000 mL/g)			

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Mar-May	0.011	0.478
Northern Europe	Jun-Sep	0.011	0.478
Northern Europe	Oct-Feb	0.011	1.08
Southern Europe	Mar-May	0.011	0.880
Southern Europe	Jun-Sep	0.011	0.679
Southern Europe	Oct-Feb	0.011	0.880

Table A 215: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.799	0.080
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.077	5.64
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.131	0.013
Northern Europe	Jun-Sep	0.131	0.013
Northern Europe	Oct-Feb	0.298	0.030
Southern Europe	Mar-May	0.242	0.024
Southern Europe	Jun-Sep	0.186	0.019
Southern Europe	Oct-Feb	0.242	0.024
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.011	0.922
Northern Europe	Jun-Sep	0.011	0.922
Northern Europe	Oct-Feb	0.022	2.11
Southern Europe	Mar-May	0.018	1.71
Southern Europe	Jun-Sep	0.014	1.32
Southern Europe	Oct-Feb	0.018	1.71

Table A 216: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.399	0.040
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.038	2.82
Step 2 (K _{FOC} = 10 mL/g)			

Northern Europe	Mar-May	0.068	0.007
Northern Europe	Jun-Sep	0.068	0.007
Southern Europe	Mar-May	0.125	0.012
Southern Europe	Jun-Sep	0.096	0.010
Step 2 ($K_{FOC} = 10000 \text{ mL/g}$)			
Northern Europe	Mar-May	0.011	0.478
Northern Europe	Jun-Sep	0.011	0.478
Southern Europe	Mar-May	0.011	0.880
Southern Europe	Jun-Sep	0.011	0.679

Table A 217: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, fruiting, BBCH 11-89 ($2 \times 12 \text{ g a.s./ha}$, with application interval of 7 days))

Scenario FOCUS	Period/ Waterbody	Max PEC_{SW} ($\mu\text{g/L}$)	Max PEC_{SED} ($\mu\text{g/kg}$)
Step 1 ($K_{FOC} = 10 \text{ mL/g}$)			
-	-	0.799	0.080
Step 1 ($K_{FOC} = 10000 \text{ mL/g}$)			
-	-	0.077	5.64
Step 2 ($K_{FOC} = 10 \text{ mL/g}$)			
Northern Europe	Mar-May	0.131	0.013
Northern Europe	Jun-Sep	0.131	0.013
Southern Europe	Mar-May	0.242	0.024
Southern Europe	Jun-Sep	0.186	0.019
Step 2 ($K_{FOC} = 10000 \text{ mL/g}$)			
Northern Europe	Mar-May	0.011	0.922
Northern Europe	Jun-Sep	0.011	0.922
Southern Europe	Mar-May	0.018	1.71
Southern Europe	Jun-Sep	0.014	1.32

Table A 218: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, bulb, BBCH 11-49 ($1 \times 12 \text{ g a.s./ha}$)

Scenario FOCUS	Period/ Waterbody	Max PEC_{SW} ($\mu\text{g/L}$)	Max PEC_{SED} ($\mu\text{g/kg}$)
Step 1 ($K_{FOC} = 10 \text{ mL/g}$)			
-	-	0.399	0.040
Step 1 ($K_{FOC} = 10000 \text{ mL/g}$)			
-	-	0.038	2.82
Step 2 ($K_{FOC} = 10 \text{ mL/g}$)			
Northern Europe	Mar-May	0.079	0.008
Northern Europe	Jun-Sep	0.079	0.008

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Oct-Feb	0.182	0.018
Southern Europe	Mar-May	0.147	0.015
Southern Europe	Jun-Sep	0.113	0.011
Southern Europe	Oct-Feb	0.147	0.015
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.011	0.558
Northern Europe	Jun-Sep	0.011	0.558
Northern Europe	Oct-Feb	0.013	1.28
Southern Europe	Mar-May	0.011	1.04
Southern Europe	Jun-Sep	0.011	0.800
Southern Europe	Oct-Feb	0.011	1.04

Table A 219: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.799	0.080
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.077	5.64
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.151	0.015
Northern Europe	Jun-Sep	0.151	0.015
Northern Europe	Oct-Feb	0.349	0.035
Southern Europe	Mar-May	0.283	0.028
Southern Europe	Jun-Sep	0.217	0.022
Southern Europe	Oct-Feb	0.283	0.028
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.011	1.07
Northern Europe	Jun-Sep	0.011	1.07
Northern Europe	Oct-Feb	0.025	2.47
Southern Europe	Mar-May	0.021	2.00
Southern Europe	Jun-Sep	0.016	1.53
Southern Europe	Oct-Feb	0.021	2.00

Table A 220: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.465	0.046
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.104	3.27
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.113	0.011
Northern Europe	Jun-Sep	0.113	0.011
Northern Europe	Oct-Feb	0.170	0.017
Southern Europe	Mar-May	0.151	0.015
Southern Europe	Jun-Sep	0.132	0.013
Southern Europe	Oct-Feb	0.151	0.015
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.076	0.797
Northern Europe	Jun-Sep	0.076	0.797
Northern Europe	Oct-Feb	0.076	1.20
Southern Europe	Mar-May	0.076	1.07
Southern Europe	Jun-Sep	0.076	0.931
Southern Europe	Oct-Feb	0.076	1.07

Table A 221: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RSE01 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.929	0.093
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.207	6.55
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.211	0.021
Northern Europe	Jun-Sep	0.211	0.021
Northern Europe	Oct-Feb	0.321	0.032
Southern Europe	Mar-May	0.284	0.028
Southern Europe	Jun-Sep	0.247	0.025
Southern Europe	Oct-Feb	0.284	0.028
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.077	1.49

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Jun-Sep	0.077	1.49
Northern Europe	Oct-Feb	0.077	2.26
Southern Europe	Mar-May	0.077	2.00
Southern Europe	Jun-Sep	0.077	1.74
Southern Europe	Oct-Feb	0.077	2.00

Table A 222: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.655	0.066
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.063	4.63
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.111	0.011
Northern Europe	Jun-Sep	0.111	0.011
Northern Europe	Oct-Feb	0.251	0.025
Southern Europe	Mar-May	0.205	0.020
Southern Europe	Jun-Sep	0.158	0.016
Southern Europe	Oct-Feb	0.205	0.020
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.018	0.784
Northern Europe	Jun-Sep	0.018	0.784
Northern Europe	Oct-Feb	0.019	1.78
Southern Europe	Mar-May	0.018	1.44
Southern Europe	Jun-Sep	0.018	1.11
Southern Europe	Oct-Feb	0.018	1.44

Table A 223: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	1.31	0.131
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.126	9.26

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.214	0.021
Northern Europe	Jun-Sep	0.214	0.021
Northern Europe	Oct-Feb	0.489	0.049
Southern Europe	Mar-May	0.398	0.040
Southern Europe	Jun-Sep	0.306	0.031
Southern Europe	Oct-Feb	0.398	0.040
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.017	1.51
Northern Europe	Jun-Sep	0.017	1.51
Northern Europe	Oct-Feb	0.036	3.46
Southern Europe	Mar-May	0.029	2.81
Southern Europe	Jun-Sep	0.023	2.16
Southern Europe	Oct-Feb	0.029	2.81

Table A 224: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.655	0.066
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.063	4.63
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.111	0.011
Northern Europe	Jun-Sep	0.111	0.011
Southern Europe	Mar-May	0.205	0.020
Southern Europe	Jun-Sep	0.158	0.016
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.018	0.784
Northern Europe	Jun-Sep	0.018	0.784
Southern Europe	Mar-May	0.018	1.44
Southern Europe	Jun-Sep	0.018	1.11

Table A 225: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
-	-	1.31	0.131
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.126	9.26
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.214	0.021
Northern Europe	Jun-Sep	0.214	0.021
Southern Europe	Mar-May	0.398	0.040
Southern Europe	Jun-Sep	0.306	0.031
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.017	1.51
Northern Europe	Jun-Sep	0.017	1.51
Southern Europe	Mar-May	0.029	2.81
Southern Europe	Jun-Sep	0.023	2.16

Table A 226: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.655	0.066
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.063	4.63
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.130	0.013
Northern Europe	Jun-Sep	0.130	0.013
Northern Europe	Oct-Feb	0.298	0.030
Southern Europe	Mar-May	0.242	0.024
Southern Europe	Jun-Sep	0.186	0.019
Southern Europe	Oct-Feb	0.242	0.024
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.018	0.916
Northern Europe	Jun-Sep	0.018	0.916
Northern Europe	Oct-Feb	0.022	2.11
Southern Europe	Mar-May	0.018	1.71
Southern Europe	Jun-Sep	0.018	1.31
Southern Europe	Oct-Feb	0.018	1.71

Table A 227: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	1.31	0.131
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.126	9.26
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.248	0.025
Northern Europe	Jun-Sep	0.248	0.025
Northern Europe	Oct-Feb	0.573	0.057
Southern Europe	Mar-May	0.465	0.046
Southern Europe	Jun-Sep	0.356	0.036
Southern Europe	Oct-Feb	0.465	0.046
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.019	1.75
Northern Europe	Jun-Sep	0.019	1.75
Northern Europe	Oct-Feb	0.042	4.05
Southern Europe	Mar-May	0.034	3.28
Southern Europe	Jun-Sep	0.026	2.52
Southern Europe	Oct-Feb	0.034	3.28

Table A 228: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.762	0.076
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.170	5.37
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.186	0.019
Northern Europe	Jun-Sep	0.186	0.019
Northern Europe	Oct-Feb	0.279	0.028
Southern Europe	Mar-May	0.248	0.025
Southern Europe	Jun-Sep	0.217	0.022
Southern Europe	Oct-Feb	0.248	0.025
Step 2 (K _{FOC} = 10000 mL/g)			

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Mar-May	0.125	1.31
Northern Europe	Jun-Sep	0.125	1.31
Northern Europe	Oct-Feb	0.125	1.97
Southern Europe	Mar-May	0.125	1.75
Southern Europe	Jun-Sep	0.125	1.53
Southern Europe	Oct-Feb	0.125	1.75

Table A 229: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-RYJ52 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	1.53	0.152
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.340	10.8
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.346	0.035
Northern Europe	Jun-Sep	0.346	0.035
Northern Europe	Oct-Feb	0.527	0.053
Southern Europe	Mar-May	0.466	0.047
Southern Europe	Jun-Sep	0.406	0.041
Southern Europe	Oct-Feb	0.466	0.047
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.126	2.44
Northern Europe	Jun-Sep	0.126	2.44
Northern Europe	Oct-Feb	0.126	3.71
Southern Europe	Mar-May	0.126	3.29
Southern Europe	Jun-Sep	0.126	2.86
Southern Europe	Oct-Feb	0.126	3.29

Table A 230: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.477	0.048
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.046	3.37

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.081	0.008
Northern Europe	Jun-Sep	0.081	0.008
Northern Europe	Oct-Feb	0.183	0.018
Southern Europe	Mar-May	0.149	0.015
Southern Europe	Jun-Sep	0.115	0.012
Southern Europe	Oct-Feb	0.149	0.015
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.013	0.571
Northern Europe	Jun-Sep	0.013	0.571
Northern Europe	Oct-Feb	0.013	1.29
Southern Europe	Mar-May	0.013	1.05
Southern Europe	Jun-Sep	0.013	0.811
Southern Europe	Oct-Feb	0.013	1.05

Table A 231: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.954	0.095
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.092	6.74
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.156	0.016
Northern Europe	Jun-Sep	0.156	0.016
Northern Europe	Oct-Feb	0.356	0.036
Southern Europe	Mar-May	0.289	0.029
Southern Europe	Jun-Sep	0.223	0.022
Southern Europe	Oct-Feb	0.289	0.029
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.013	1.10
Northern Europe	Jun-Sep	0.013	1.10
Northern Europe	Oct-Feb	0.026	2.52
Southern Europe	Mar-May	0.021	2.04
Southern Europe	Jun-Sep	0.017	1.57
Southern Europe	Oct-Feb	0.021	2.04

Table A 232: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.477	0.048
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.046	3.37
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.081	0.008
Northern Europe	Jun-Sep	0.081	0.008
Southern Europe	Mar-May	0.149	0.015
Southern Europe	Jun-Sep	0.115	0.012
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.013	0.571
Northern Europe	Jun-Sep	0.013	0.571
Southern Europe	Mar-May	0.013	1.05
Southern Europe	Jun-Sep	0.013	0.811

Table A 233: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.954	0.095
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.092	6.74
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.156	0.016
Northern Europe	Jun-Sep	0.156	0.016
Southern Europe	Mar-May	0.289	0.029
Southern Europe	Jun-Sep	0.223	0.022
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.013	1.10
Northern Europe	Jun-Sep	0.013	1.10
Southern Europe	Mar-May	0.021	2.04
Southern Europe	Jun-Sep	0.017	1.57

Table A 234: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.477	0.048
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.046	3.37
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.095	0.009
Northern Europe	Jun-Sep	0.095	0.009
Northern Europe	Oct-Feb	0.217	0.022
Southern Europe	Mar-May	0.176	0.018
Southern Europe	Jun-Sep	0.135	0.014
Southern Europe	Oct-Feb	0.176	0.018
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.013	0.667
Northern Europe	Jun-Sep	0.013	0.667
Northern Europe	Oct-Feb	0.016	1.53
Southern Europe	Mar-May	0.013	1.24
Southern Europe	Jun-Sep	0.013	0.955
Southern Europe	Oct-Feb	0.013	1.24

Table A 235: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.954	0.095
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.092	6.74
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.180	0.018
Northern Europe	Jun-Sep	0.180	0.018
Northern Europe	Oct-Feb	0.417	0.042
Southern Europe	Mar-May	0.338	0.034
Southern Europe	Jun-Sep	0.259	0.026
Southern Europe	Oct-Feb	0.338	0.034

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.014	1.27
Northern Europe	Jun-Sep	0.014	1.27
Northern Europe	Oct-Feb	0.030	2.95
Southern Europe	Mar-May	0.025	2.39
Southern Europe	Jun-Sep	0.019	1.83
Southern Europe	Oct-Feb	0.025	2.39

Table A 236: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	0.555	0.055
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.124	3.91
Step 2 (K _{FOC} = 10 mL/g)			
Northern Europe	Mar-May	0.135	0.014
Northern Europe	Jun-Sep	0.135	0.014
Northern Europe	Oct-Feb	0.203	0.020
Southern Europe	Mar-May	0.181	0.018
Southern Europe	Jun-Sep	0.158	0.016
Southern Europe	Oct-Feb	0.181	0.018
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.091	0.952
Northern Europe	Jun-Sep	0.091	0.952
Northern Europe	Oct-Feb	0.091	1.43
Southern Europe	Mar-May	0.091	1.27
Southern Europe	Jun-Sep	0.091	1.11
Southern Europe	Oct-Feb	0.091	1.27

Table A 237: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-Q7D41 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 10 mL/g)			
-	-	1.11	0.111
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.247	7.82
Step 2 (K _{FOC} = 10 mL/g)			

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Mar-May	0.252	0.025
Northern Europe	Jun-Sep	0.252	0.025
Northern Europe	Oct-Feb	0.383	0.038
Southern Europe	Mar-May	0.340	0.034
Southern Europe	Jun-Sep	0.296	0.030
Southern Europe	Oct-Feb	0.340	0.034
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.092	1.77
Northern Europe	Jun-Sep	0.092	1.77
Northern Europe	Oct-Feb	0.092	2.70
Southern Europe	Mar-May	0.092	2.39
Southern Europe	Jun-Sep	0.092	2.08
Southern Europe	Oct-Feb	0.092	2.39

Table A 238: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, leafy, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.429	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.041	2.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.073	< 0.001
Northern Europe	Jun-Sep	0.073	< 0.001
Northern Europe	Oct-Feb	0.165	< 0.001
Southern Europe	Mar-May	0.134	< 0.001
Southern Europe	Jun-Sep	0.103	< 0.001
Southern Europe	Oct-Feb	0.134	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.012	0.507
Northern Europe	Jun-Sep	0.012	0.507
Northern Europe	Oct-Feb	0.012	1.15
Southern Europe	Mar-May	0.012	0.934
Southern Europe	Jun-Sep	0.012	0.721
Southern Europe	Oct-Feb	0.012	0.934

Table A 239: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, leafy, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.858	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.081	5.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.140	< 0.001
Northern Europe	Jun-Sep	0.140	< 0.001
Northern Europe	Oct-Feb	0.320	< 0.001
Southern Europe	Mar-May	0.260	< 0.001
Southern Europe	Jun-Sep	0.200	< 0.001
Southern Europe	Oct-Feb	0.260	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.011	0.978
Northern Europe	Jun-Sep	0.011	0.978
Northern Europe	Oct-Feb	0.023	2.23
Southern Europe	Mar-May	0.019	1.82
Southern Europe	Jun-Sep	0.015	1.40
Southern Europe	Oct-Feb	0.019	1.82

Table A 240: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, fruiting, BBCH 11-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.429	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.041	2.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.073	< 0.001
Northern Europe	Jun-Sep	0.073	< 0.001
Southern Europe	Mar-May	0.134	< 0.001
Southern Europe	Jun-Sep	0.103	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.012	0.507
Northern Europe	Jun-Sep	0.012	0.507

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Southern Europe	Mar-May	0.012	0.934
Southern Europe	Jun-Sep	0.012	0.721

Table A 241: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, fruiting, BBCH 11-89 (2 × 12 g a.s./ha, with application interval of 7 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.858	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.081	5.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.140	< 0.001
Northern Europe	Jun-Sep	0.140	< 0.001
Southern Europe	Mar-May	0.260	< 0.001
Southern Europe	Jun-Sep	0.200	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.011	0.978
Northern Europe	Jun-Sep	0.011	0.978
Southern Europe	Mar-May	0.019	1.82
Southern Europe	Jun-Sep	0.015	1.40

Table A 242: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, bulb, BBCH 11-49 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.429	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.041	2.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.085	< 0.001
Northern Europe	Jun-Sep	0.085	< 0.001
Northern Europe	Oct-Feb	0.195	< 0.001
Southern Europe	Mar-May	0.158	< 0.001
Southern Europe	Jun-Sep	0.122	< 0.001
Southern Europe	Oct-Feb	0.158	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.012	0.592

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Northern Europe	Jun-Sep	0.012	0.592
Northern Europe	Oct-Feb	0.014	1.36
Southern Europe	Mar-May	0.012	1.11
Southern Europe	Jun-Sep	0.012	0.849
Southern Europe	Oct-Feb	0.012	1.11

Table A 243: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to vegetables, bulb, BBCH 11-49 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.858	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.081	5.99
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.162	< 0.001
Northern Europe	Jun-Sep	0.162	< 0.001
Northern Europe	Oct-Feb	0.375	< 0.001
Southern Europe	Mar-May	0.304	< 0.001
Southern Europe	Jun-Sep	0.233	< 0.001
Southern Europe	Oct-Feb	0.304	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.012	1.13
Northern Europe	Jun-Sep	0.012	1.13
Northern Europe	Oct-Feb	0.027	2.62
Southern Europe	Mar-May	0.022	2.12
Southern Europe	Jun-Sep	0.017	1.63
Southern Europe	Oct-Feb	0.022	2.12

Table A 244: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to hops, BBCH 21-89 (1 × 12 g a.s./ha)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.498	< 0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.110	3.48

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.121	< 0.001
Northern Europe	Jun-Sep	0.121	< 0.001
Northern Europe	Oct-Feb	0.183	< 0.001
Southern Europe	Mar-May	0.162	< 0.001
Southern Europe	Jun-Sep	0.142	< 0.001
Southern Europe	Oct-Feb	0.162	< 0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.081	0.846
Northern Europe	Jun-Sep	0.081	0.846
Northern Europe	Oct-Feb	0.081	1.27
Southern Europe	Mar-May	0.081	1.13
Southern Europe	Jun-Sep	0.081	0.988
Southern Europe	Oct-Feb	0.081	1.13

Table A 245: FOCUS Step 1 and 2 PEC_{SW} and PEC_{SED} for IN-P3X26 following application to hops, BBCH 21-89 (2 × 12 g a.s./ha, with application interval of 12 days)

Scenario FOCUS	Period/ Waterbody	Max PEC _{SW} (µg/L)	Max PEC _{SED} (µg/kg)
Step 1 (K _{FOC} = 0.1 mL/g)			
-	-	0.997	0.001
Step 1 (K _{FOC} = 10000 mL/g)			
-	-	0.220	6.95
Step 2 (K _{FOC} = 0.1 mL/g)			
Northern Europe	Mar-May	0.226	< 0.001
Northern Europe	Jun-Sep	0.226	< 0.001
Northern Europe	Oct-Feb	0.344	< 0.001
Southern Europe	Mar-May	0.305	< 0.001
Southern Europe	Jun-Sep	0.265	< 0.001
Southern Europe	Oct-Feb	0.305	<0.001
Step 2 (K _{FOC} = 10000 mL/g)			
Northern Europe	Mar-May	0.081	1.58
Northern Europe	Jun-Sep	0.081	1.58
Northern Europe	Oct-Feb	0.081	2.40
Southern Europe	Mar-May	0.081	2.13
Southern Europe	Jun-Sep	0.081	1.85
Southern Europe	Oct-Feb	0.081	2.13

A 3.10 KCP 9.2.5: Anagu, I. & Bo, Y, 2021, Oxathiapiprolin PEC_{sw} following application to various crops

Use numbers in this summary refer to the modelling report and not to the GAP table in section 8.1 above.

Comments of zRMS:	All input parameters for oxathiapiprolin were considered acceptable as they followed the EFSA conclusion and LoEP or corresponded to standard default values. Thus, the zRMS considers the presented PEC _{soil} calculations acceptable for the active substance.
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Reference:	KCP 9.2.5:.
Report	Oxathiapiprolin - A European Environmental Fate Assessment for Parent Using the FOCUS Surface Water Models at Step 3 to 4 Following Spray Application to Various Crops Using Arithmetic Mean Sorption Endpoints Report No. 116223-7 (Syngenta File No VV-911814)
Guideline(s):	<p>EFSA (2014). EFSA Guidance Document on clustering and ranking of emissions of active substances of plant protection products and transformation products of these active substances from protected crops (greenhouses and crops grown under cover) to relevant environmental compartments. EFSA Journal 2014;12(3):3615, 43 pp.</p> <p>FOCUS (2001). FOCUS surface water scenarios in the EU evaluation process under 91/414/EEC. Report of the FOCUS working group on surface water scenarios, EC document reference SANCO/4802/2001 rev. 2.</p> <p>FOCUS (2007). Landscape and mitigation factors in aquatic ecological risk assessment. Volume 1. Extended summary and recommendations, the final report of the FOCUS working group on landscape and mitigation factors in ecological risk assessment, EC document reference SANCO/10422/2005, version 2.0, September 2007.</p> <p>FOCUS (2015). Generic guidance for FOCUS surface water scenarios, version 1.4.</p>
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes/No/Supplementary

A 3.10.1 Materials and methods

This report describes a FOCUS modelling study that examined the potential for oxathiapiprolin to reach surface water following field (foliar) and greenhouse application to vegetables (leafy, fruiting and bulb) and hops. The FOCUS tool SWASH (v 5.3), including the operational models FOCUS-MACRO (v 5.5.4), FOCUS-PRZM (v 4.3.1) and FOCUS-TOXSWA (v 5.5.3), were used in the modelling study for Step 3 simulations. The ECPA tool SWAN (v 5.0.0) was used to implement mitigation options at Step 4.

Twofold applications at the rate of 12 g a.s./ha, were considered. Applications starting from approximately BBCH 11 were considered for vegetables with an interval of 7 days between applications for vegetables, leafy and fruiting as well as 12 days for vegetables, bulb. For hops, applications from approximately BBCH 21 with an interval of 12 days between applications were considered. Due to the wide BBCH range, simulations were carried out for possible applications at early (BBCH 11 or 21), intermediate (BBCH 51)

and late (BBCH 49 or 89) stages, depending on the crop. The input parameters relating to application are shown below.

Table A 246: Input parameters related to application for PEC_{SW/SED} calculations

Crop	Vegetables, leafy	Vegetables, fruiting	Vegetables, bulb	Hops
Application rate (g a.s./ha)	12	12	12	12
Number of applications / interval (d)	2 / 7	2 / 7	2 / 12	2 / 12
BBCH growth stage	11 - 49	11 - 89	11 - 49	21 - 89
Application method	Ground spray	Ground spray	Ground spray	Air blast
CAM (Chemical application method)	2 (application foliar linear)			
Soil depth (cm)	4 (default)			
Models used for calculation	FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v5.0.0			

Ground spray application (foliar spray) was considered as the application method in the simulations for vegetables (leafy, fruiting and bulb) while air blast was considered as the application method in the simulations for hops. Crop interception at Step 3 is calculated internally by the model on the basis of the maximum interception capacity and the actual leaf area index.

An application window has to be specified from which the Pesticide Application Timer (PAT), internal to the model, determines actual application dates which were set generically for all scenarios. The application dates for the early and intermediate applications were selected with the tool AppDate (v3.06) based on BBCH growth stages given in the recommended GAP. For the late applications, the end of the application window was set to the harvest date. Simulations were carried out using the FOCUS standard crops ‘vegetables, leafy’, ‘vegetables, fruiting’, ‘vegetables, bulb’, and ‘hops’. Application windows are presented in Table A 247, below.

Table A 247: FOCUS Step 3 Scenario related input parameters for PEC_{SW/SED} calculations for the application of oxathiapiprolin

Crop	Rationale	Scenario	Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
Vegetables, leafy, BBCH 11 - 49 2 × 12 g a.s./ha 7 days interval BBCH 11	Start of window at BBCH 11 (AppDate v3.06)	D3 1 st	30-Apr (120)	30-May (150)	30-Apr (120)	6-Jun (157)
		D3 2 nd	10-Aug (222)	9-Sep (252)	10-Aug (222)	16-Sep (259)
		D4	18-May (138)	17-Jun (168)	18-May (138)	24-Jun (175)
		D6	21-Aug (233)	20-Sep (263)	21-Aug (233)	27-Sep (270)
		R1 1 st	25-Apr (115)	25-May (145)	25-Apr (115)	1-Jun (152)
		R1 2 nd	5-Aug (217)	4-Sep (247)	5-Aug (217)	11-Sep (254)
		R2 1 st	9-Mar (68)	8-Apr (98)	9-Mar (68)	15-Apr (105)

Crop	Rationale	Scenario	Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
		R2 2 nd	4-Aug (216)	3-Sep (246)	4-Aug (216)	10-Sep (253)
		R3 1 st	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R3 2 nd	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
		R4 1 st	8-Mar (67)	7-Apr (97)	8-Mar (67)	14-Apr (104)
		R4 2 nd	22-Jun (173)	22-Jul (203)	22-Jun (173)	29-Jul (210)
Vegetables, leafy, BBCH 11 - 49 2 × 12 g a.s./ha 7 days interval BBCH 49	End of window at harvest	D3 1 st	20-Jun (171)	20-Jul (201)	13-Jun (164)	20-Jul (201)
		D3 2 nd	20-Sep (263)	20-Oct (293)	13-Sep (256)	20-Oct (293)
		D4	27-Aug (239)	26-Sep (269)	20-Aug (232)	26-Sep (269)
		D6	31-Oct (304)	30-Nov (334)	24-Oct (297)	30-Nov (334)
		R1 1 st	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
		R1 2 nd	15-Sep (258)	15-Oct (288)	8-Sep (251)	15-Oct (288)
		R2 1 st	1-Jun (152)	1-Jul (182)	25-May (145)	1-Jul (182)
		R2 2 nd	16-Oct (289)	15-Nov (319)	9-Oct (282)	15-Nov (319)
		R3 1 st	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R3 2 nd	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
		R4 1 st	2-May (122)	1-Jun (152)	25-Apr (115)	1-Jun (152)
		R4 2 nd	16-Aug (228)	15-Sep (258)	9-Aug (221)	15-Sep (258)
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 11	Start of window at BBCH 11 (AppDate v3.06)	D6	13-Apr (103)	13-May (133)	13-Apr (103)	20-May (140)
		R2	19-Mar (78)	18-Apr (108)	19-Mar (78)	25-Apr (115)
		R3	13-May (133)	12-Jun (163)	13-May (133)	19-Jun (170)
		R4	23-Apr (113)	23-May (143)	23-Apr (113)	30-May (150)
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 51	Start of window at BBCH 51 (AppDate v3.06)	D6	15-May (135)	14-Jun (165)	15-May (135)	21-Jun (172)
		R2	19-May (139)	18-Jun (169)	19-May (139)	25-Jun (176)
		R3	15-Jun (166)	15-Jul (196)	15-Jun (166)	22-Jul (203)
		R4	26-May (146)	25-Jun (176)	26-May (146)	2-Jul (183)
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11 - 89 7 days interval BBCH 89	End of window at harvest	D6	11-Jul (192)	10-Aug (222)	4-Jul (185)	10-Aug (222)
		R2	1-Aug (213)	31-Aug (243)	25-Jul (206)	31-Aug (243)
		R3	26-Jul (207)	25-Aug (237)	19-Jul (200)	25-Aug (237)
		R4	15-Jun (166)	15-Jul (196)	8-Jun (159)	15-Jul (196)
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11 - 49 12 days interval BBCH 11	Start of window at BBCH 11 (AppDate v3.06)	D3	3-May (123)	2-Jun (153)	3-May (123)	14-Jun (165)
		D4	2-May (122)	1-Jun (152)	2-May (122)	13-Jun (164)
		D6 1 st	16-May (136)	15-Jun (166)	16-May (136)	27-Jun (178)
		D6 2 nd	4-Nov (308)	4-Dec (338)	4-Nov (308)	16-Dec (350)

Crop	Rationale	Scenario	Oxathiapiprolin			
			Application window used in modelling			
			Single application		Multiple applications	
			Start of Window	End of Window	Start of Window	End of Window
		R1	28-Apr (118)	28-May (148)	28-Apr (118)	9-Jun (160)
		R2	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R3	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
		R4	9-Mar (68)	8-Apr (98)	9-Mar (68)	20-Apr (110)
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11 - 49 12 days interval BBCH 49	End of window at harvest	D3	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)
		D4	14-Aug (226)	13-Sep (256)	2-Aug (214)	13-Sep (256)
		D6 1 st	1-Jul (182)	31-Jul (212)	19-Jun (170)	31-Jul (212)
		D6 2 nd	11-Mar (70)	10-Apr (100)	27-Feb (58)	10-Apr (100)
		R1	26-Jul (207)	25-Aug (237)	14-Jul (195)	25-Aug (237)
		R2	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R3	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
		R4	1-May (121)	31-May (151)	19-Apr (109)	31-May (151)
Hops, 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 21	Start of window at BBCH 21 (AppDate v3.06)	R1	15-May (135)	14-Jun (165)	15-May (135)	26-Jun (177)
Hops, 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 51	Start of window at BBCH 51 (AppDate v3.06)	R1	7-Jul (188)	6-Aug (218)	7-Jul (188)	18-Aug (230)
Hops, 2 × 12 g a.s./ha BBCH 21 - 89 12 days interval BBCH 89	End of window at harvest	R1	2-Aug (214)	1-Sep (244)	21-Jul (202)	1-Sep (244)

Due to the statistical nature of the drift implementation at Step 3 (FOCUS, 2001, 2015), the loading to the water body for a single application is higher than the loading from an individual event from a multiple application pattern, which can therefore generate a higher global maximum PEC_{SW} value. All values are presented but where the single application results in a higher instantaneous PEC, this is highlighted in the summary table.

Step 4 calculations were carried out for all the scenarios with the following mitigation methods:

- spray drift reduction by 50%, 75% and 90% drift reducing nozzles
- spray drift reduction by non-sprayed buffer strips of 10 m, 20 m and 30 m and runoff reduction using vegetated buffer strips of 10 m and 20 m using runoff and erosion reduction values as given by the FOCUS Working Group on Landscape and Mitigation Factors (2007) – runoff/erosion reduction of 60/85% for 10 m, and 80/95% for 20 m

- runoff reduction considering 5 m and 15 m vegetated filter strip (Austrian-specific reduction measures (BAES, 2020)) in combination with spray drift reduction considering a non-sprayed buffer strip of 5 m and 15 m respectively
- Runoff reduction considering 5 m VFSmod

In order to simulate conditions in greenhouses, drift entries to surface water were amended with drift rates of 0.1% and 0.2% of the dose rate at Step 3 (EFSA, 2014). As entry via runoff is not expected to occur in greenhouses, only the FOCUS D scenarios were considered.

The input parameters for oxathiapiprolin as used in the modelling are shown in Table A 248.

Table A 248: Input parameters related to oxathiapiprolin for $PEC_{SW/SED}$ calculations

Compound	Oxathiapiprolin	Value in accordance to EU endpoint / Reference
Molar mass (g/mol)	539.53	Yes / EFSA, 2016
Water solubility (mg/L)	0.1844 (20°C)	Yes / EFSA, 2016
Saturated vapour pressure (Pa)	1.141×10^{-6} (20°C)	Yes / EFSA, 2016
K_{FOC} / K_{FOM} (mL/g)	6242.6 / 3621 (arithmetic mean, n = 5)	Yes / EFSA, 2016 $K_{FOM} = K_{FOC}/1.724$
Freundlich Exponent 1/n	0.97 (arithmetic mean, n = 5)	Yes / EFSA, 2016
Plant Uptake	0	Worst-case assumption
$DT_{50,soil}$ (d)	121.2 (geometric mean lab, normalisation to pF2, 20 °C with Q_{10} of 2.58, n = 6)	Yes / EFSA, 2016
$DT_{50,water}$ (d)	70.3 (geometric mean, total system, n = 2)	Yes / EFSA, 2016
$DT_{50,sed}$ (d)	1000 (FOCUS default)	Yes / EFSA, 2016

A 3.10.2 Results and discussions

Predicted environmental concentrations in surface water (PEC_{SW}) and sediment (PEC_{SED}) were calculated for the use of oxathiapiprolin on vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops in Europe in accordance with FOCUS guidelines.

The results are presented in the tables below in the following order:

Field uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops

FOCUS Application dates and global maximum timing

FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – maximum over single and multiple applications

FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following applications to single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops

FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following single/multiple applications to vegetables, leafy, vegetables, fruiting, vegetables, bulb and hops – maximum over single and multiple applications

Greenhouse uses:

FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following single/multiple applications to vegetables, leafy and vegetables, fruiting – 0.1% drift

FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following applications to vegetables, leafy and vegetables, fruiting – 0.2% drift

Field uses:

Table A 249: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.076	Drift	0.055
	D3 2 nd	ditch	0.076	Drift	0.060
	D4	pond	0.003	Drift	0.020
	D4	stream	0.060	Drift	0.004
	D6	ditch	0.074	Drift	0.018
	R1 1 st	pond	0.007	Runoff	0.180
	R1 2 nd	pond	0.008	Runoff	0.188
	R1 1 st	stream	0.050	Drift	1.06
	R1 2 nd	stream	0.050	Drift	0.567
	R2 1 st	stream	0.066	Drift	1.37
	R2 2 nd	stream	0.067	Drift	2.93
	R3 1 st	stream	0.070	Drift	0.917
	R3 2 nd	stream	0.070	Drift	0.491
	R4 1 st	stream	0.050	Drift	0.214
	R4 2 nd	stream	0.050	Drift	0.193
	D3 1 st	ditch	0.066	Drift	0.077
	D3 2 nd	ditch	0.066	Drift	0.081

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D4	pond	0.004	Drift	0.035
	D4	stream	0.053	Drift	0.007
	D6	ditch	0.065	Drift	0.030
	R1 1 st	pond	0.015	Runoff	0.358
	R1 2 nd	pond	0.016	Runoff	0.371
	R1 1 st	stream	0.043	Drift	2.02
	R1 2 nd	stream	0.043	Drift	1.10
	R2 1 st	stream	0.057	Drift	2.76
	R2 2 nd	stream	0.058	Drift	5.55
	R3 1 st	stream	0.061	Drift	2.02
	R3 2 nd	stream	0.061	Drift	1.03
	R4 1 st	stream	0.056	Runoff	0.516
	R4 2 nd	stream	0.061	Runoff	0.382
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.076	Drift	0.056
	D3 2 nd	ditch	0.075	Drift	0.038
	D4	pond	0.003	Drift	0.022
	D4	stream	0.054	Drift	0.002
	D6	ditch	0.072	Drift	0.007
	R1 1 st	pond	0.007	Runoff	0.187
	R1 2 nd	pond	0.009	Runoff	0.208
	R1 1 st	stream	0.050	Drift	0.841
	R1 2 nd	stream	0.050	Drift	0.650
	R2 1 st	stream	0.067	Drift	2.17
	R2 2 nd	stream	0.066	Drift	3.24
	R3 1 st	stream	0.070	Drift	2.98
	R3 2 nd	stream	0.070	Drift	1.43
	R4 1 st	stream	0.049	Drift	0.588
	R4 2 nd	stream	0.050	Drift	0.825
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.066	Drift	0.077
	D3 2 nd	ditch	0.066	Drift	0.056
	D4	pond	0.004	Drift	0.038
	D4	stream	0.052	Drift	0.004
	D6	ditch	0.066	Drift	0.033
	R1 1 st	pond	0.015	Runoff	0.365
	R1 2 nd	pond	0.017	Runoff	0.392
	R1 1 st	stream	0.043	Drift	1.65

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
	R1 2 nd	stream	0.043	Drift	1.58
	R2 1 st	stream	0.058	Drift	3.21
	R2 2 nd	stream	0.057	Drift	6.44
	R3 1 st	stream	0.061	Drift	4.34
	R3 2 nd	stream	0.061	Drift	2.32
	R4 1 st	stream	0.051	Runoff	1.04
	R4 2 nd	stream	0.051	Runoff	1.39

Table A 250: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	0.074	Drift	0.020
	R2	stream	0.066	Drift	1.09
	R3	stream	0.070	Drift	0.345
	R4	stream	0.050	Drift	0.315
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.065	Drift	0.028
	R2	stream	0.057	Drift	2.13
	R3	stream	0.061	Drift	0.746
	R4	stream	0.064	Runoff	0.658
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	0.075	Drift	0.030
	R2	stream	0.067	Drift	1.21
	R3	stream	0.070	Drift	0.520
	R4	stream	0.049	Drift	0.288
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.066	Drift	0.034
	R2	stream	0.058	Drift	2.58
	R3	stream	0.061	Drift	1.15
	R4	stream	0.052	Runoff	0.628
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	0.075	Drift	0.024
	R2	stream	0.067	Drift	2.65
	R3	stream	0.070	Drift	0.999
	R4	stream	0.050	Drift	0.356
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.066	Drift	0.035
	R2	stream	0.058	Drift	6.17
	R3	stream	0.061	Drift	1.96

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
	R4	stream	0.053	Runoff	0.593

Table A 251: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 11	D3	ditch	0.076	Drift	0.056
	D4	pond	0.003	Drift	0.020
	D4	stream	0.058	Drift	0.004
	D6 1 st	ditch	0.076	Drift	0.080
	D6 2 nd	ditch	0.073	Drift	0.012
	R1	pond	0.004	Runoff	0.122
	R1	stream	0.050	Drift	0.278
	R2	stream	0.066	Drift	1.14
	R3	stream	0.070	Drift	0.097
	R4	stream	0.049	Drift	0.183
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	0.066	Drift	0.075
	D4	pond	0.004	Drift	0.034
	D4	stream	0.050	Drift	0.007
	D6 1 st	ditch	0.067	Drift	0.168
	D6 2 nd	ditch	0.070	Drift	0.257
	R1	pond	0.009	Runoff	0.241
	R1	stream	0.043	Drift	0.590
	R2	stream	0.061	Drift	2.18
	R3	stream	0.061	Drift	0.216
	R4	stream	0.062	Runoff	0.437
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 49	D3	ditch	0.076	Drift	0.057
	D4	pond	0.003	Drift	0.023
	D4	stream	0.054	Drift	0.002
	D6 1 st	ditch	0.076	Drift	0.205
	D6 2 nd	ditch	0.076	Drift	0.109
	R1	pond	0.007	Runoff	0.143
	R1	stream	0.049	Drift	0.418
	R2	stream	0.067	Drift	1.40
	R3	stream	0.070	Drift	0.171

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
	R4	stream	0.048	Drift	0.389
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	0.066	Drift	0.075
	D4	pond	0.004	Drift	0.040
	D4	stream	0.051	Drift	0.006
	D6 1 st	ditch	0.074	Drift	0.314
	D6 2 nd	ditch	0.066	Drift	0.107
	R1	pond	0.016	Runoff	0.306
	R1	stream	0.043	Drift	1.06
	R2	stream	0.058	Drift	2.48
	R3	stream	0.061	Drift	0.257
	R4	stream	0.056	Runoff	0.640

Table A 252: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Hops, 1 × 12 g a.s./ha BBCH 21	R1	pond	0.031	Drift	0.221
	R1	stream	0.451	Drift	0.068
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.036	Drift	0.320
	R1	stream	0.373	Drift	0.059
Hops, 1 × 12 g a.s./ha BBCH 51	R1	pond	0.032	Drift	0.220
	R1	stream	0.440	Drift	0.040
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.036	Drift	0.315
	R1	stream	0.373	Drift	0.048
Hops, 1 × 12 g a.s./ha BBCH 89	R1	pond	0.031	Drift	0.233
	R1	stream	0.452	Drift	0.073
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.034	Drift	0.324
	R1	stream	0.383	Drift	0.074

Table A 253: FOCUS Application dates and global maximum timing of vegetables, leafy

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
	D3 1 st	ditch	4-May-92	-	4-May-92
	D3 2 nd	ditch	18-Aug-92	-	18-Aug-92

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D4	pond	18-May-85	-	18-May-85
	D4	stream	18-May-85	-	18-May-85
	D6	ditch	25-Aug-86	-	25-Aug-86
	R1 1 st	pond	26-Apr-84	-	14-Sep-84
	R1 2 nd	pond	20-Aug-78	-	31-Dec-78
	R1 1 st	stream	26-Apr-84	-	26-Apr-84
	R1 2 nd	stream	20-Aug-78	-	20-Aug-78
	R2 1 st	stream	22-Mar-77	-	22-Mar-77
	R2 2 nd	stream	5-Aug-89	-	5-Aug-89
	R3 1 st	stream	10-Mar-80	-	10-Mar-80
	R3 2 nd	stream	25-Jun-75	-	25-Jun-75
	R4 1 st	stream	8-Mar-84	-	8-Mar-84
	R4 2 nd	stream	23-Jun-85	-	23-Jun-85
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	4-May-92	14-May-92	14-May-92
	D3 2 nd	ditch	18-Aug-92	26-Aug-92	26-Aug-92
	D4	pond	18-May-85	29-May-85	29-May-85
	D4	stream	18-May-85	29-May-85	29-May-85
	D6	ditch	25-Aug-86	1-Sep-86	1-Sep-86
	R1 1 st	pond	26-Apr-84	3-May-84	14-Sep-84
	R1 2 nd	pond	20-Aug-78	2-Sep-78	31-Dec-78
	R1 1 st	stream	26-Apr-84	3-May-84	26-Apr-84
	R1 2 nd	stream	20-Aug-78	2-Sep-78	2-Sep-78
	R2 1 st	stream	21-Mar-77	30-Mar-77	30-Mar-77
	R2 2 nd	stream	5-Aug-89	12-Aug-89	12-Aug-89
	R3 1 st	stream	10-Mar-80	28-Mar-80	28-Mar-80
	R3 2 nd	stream	25-Jun-75	6-Jul-75	6-Jul-75
	R4 1 st	stream	8-Mar-84	3-Apr-84	12-Apr-84
	R4 2 nd	stream	23-Jun-85	30-Jun-85	5-Jul-85
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	25-Jun-92	-	25-Jun-92
	D3 2 nd	ditch	19-Sep-92	-	19-Sep-92
	D4	pond	27-Aug-85	-	27-Aug-85
	D4	stream	27-Aug-85	-	27-Aug-85
	D6	ditch	31-Oct-86	-	31-Oct-86
	R1 1 st	pond	29-Jun-78	-	31-Dec-78
	R1 2 nd	pond	19-Sep-78	-	31-Dec-78
	R1 1 st	stream	29-Jun-78	-	29-Jun-78
	R1 2 nd	stream	19-Sep-78	-	19-Sep-78

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
	R2 1 st	stream	4-Jun-89	-	4-Jun-89
	R2 2 nd	stream	24-Oct-77	-	24-Oct-77
	R3 1 st	stream	18-May-80	-	18-May-80
	R3 2 nd	stream	28-Aug-75	-	28-Aug-75
	R4 1 st	stream	4-May-84	-	4-May-84
	R4 2 nd	stream	19-Aug-85	-	19-Aug-85
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	14-Jun-92	25-Jun-92	25-Jun-92
	D3 2 nd	ditch	17-Sep-92	24-Sep-92	24-Sep-92
	D4	pond	27-Aug-85	10-Sep-85	10-Sep-85
	D4	stream	27-Aug-85	10-Sep-85	10-Sep-85
	D6	ditch	25-Oct-86	1-Nov-86	25-Oct-86
	R1 1 st	pond	29-Jun-78	11-Jul-78	31-Dec-78
	R1 2 nd	pond	19-Sep-78	6-Oct-78	31-Dec-78
	R1 1 st	stream	29-Jun-78	11-Jul-78	29-Jun-78
	R1 2 nd	stream	19-Sep-78	6-Oct-78	19-Sep-78
	R2 1 st	stream	25-May-77	3-Jun-77	3-Jun-77
	R2 2 nd	stream	11-Oct-77	24-Oct-77	24-Oct-77
	R3 1 st	stream	25-Apr-80	18-May-80	25-Apr-80
	R3 2 nd	stream	12-Aug-75	19-Aug-75	19-Aug-75
	R4 1 st	stream	25-Apr-84	4-May-84	18-May-84
	R4 2 nd	stream	12-Aug-85	19-Aug-85	24-Aug-85

Table A 254: FOCUS Application dates and global maximum timing of vegetables, fruiting

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	23-Apr-86	-	23-Apr-86
	R2	stream	22-Mar-77	-	22-Mar-77
	R3	stream	18-May-80	-	18-May-80
	R4	stream	23-Apr-84	-	23-Apr-84
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	23-Apr-86	7-May-86	7-May-86
	R2	stream	22-Mar-77	22-Apr-77	22-Apr-77
	R3	stream	18-May-80	1-Jun-80	1-Jun-80
	R4	stream	23-Apr-84	4-May-84	9-May-84
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	19-May-86	-	19-May-86
	R2	stream	20-May-77	-	20-May-77
	R3	stream	18-Jun-75	-	18-Jun-75
	R4	stream	27-May-84	-	27-May-84

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	19-May-86	31-May-86	19-May-86
	R2	stream	20-May-77	27-May-77	27-May-77
	R3	stream	18-Jun-75	25-Jun-75	25-Jun-75
	R4	stream	27-May-84	6-Jun-84	14-Jun-84
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	17-Jul-86	-	17-Jul-86
	R2	stream	5-Aug-89	-	5-Aug-89
	R3	stream	30-Jul-75	-	30-Jul-75
	R4	stream	23-Jun-85	-	23-Jun-85
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	6-Jul-86	17-Jul-86	6-Jul-86
	R2	stream	5-Aug-89	12-Aug-89	12-Aug-89
	R3	stream	24-Jul-75	31-Jul-75	31-Jul-75
	R4	stream	12-Jun-85	23-Jun-85	28-Jun-85

Table A 255: FOCUS Application dates and global maximum timing of vegetables, bulb

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 11	D3	ditch	4-May-92	-	4-May-92
	D4	pond	12-May-85	-	12-May-85
	D4	stream	12-May-85	-	12-May-85
	D6 1 st	ditch	16-May-86	-	16-May-86
	D6 2 nd	ditch	6-Nov-86	-	6-Nov-86
	R1	pond	28-Apr-84	-	2-Feb-85
	R1	stream	28-Apr-84	-	28-Apr-84
	R2	stream	22-Mar-77	-	22-Mar-77
	R3	stream	10-Mar-80	-	10-Mar-80
	R4	stream	9-Mar-84	-	9-Mar-84
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	4-May-92	16-May-92	16-May-92
	D4	pond	12-May-85	24-May-85	24-May-85
	D4	stream	12-May-85	24-May-85	12-May-85
	D6 1 st	ditch	16-May-86	28-May-86	28-May-86
	D6 2 nd	ditch	1-Dec-86	13-Dec-86	13-Dec-86
	R1	pond	28-Apr-84	10-May-84	2-Feb-85
	R1	stream	28-Apr-84	10-May-84	28-Apr-84
	R2	stream	14-Mar-77	26-Mar-77	26-Mar-77
	R3	stream	10-Mar-80	28-Mar-80	28-Mar-80
	R4	stream	9-Mar-84	3-Apr-84	11-Apr-84

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 49	D3	ditch	4-Aug-92	-	4-Aug-92
	D4	pond	27-Aug-85	-	27-Aug-85
	D4	stream	27-Aug-85	-	27-Aug-85
	D6 1 st	ditch	1-Jul-86	-	1-Jul-86
	D6 2 nd	ditch	14-Mar-86	-	14-Mar-86
	R1	pond	28-Jul-78	-	31-Dec-78
	R1	stream	28-Jul-78	-	28-Jul-78
	R2	stream	7-May-77	-	7-May-77
	R3	stream	18-May-80	-	18-May-80
	R4	stream	7-May-84	-	7-May-84
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	24-Jul-92	5-Aug-92	5-Aug-92
	D4	pond	27-Aug-85	10-Sep-85	10-Sep-85
	D4	stream	27-Aug-85	10-Sep-85	10-Sep-85
	D6 1 st	ditch	19-Jun-86	1-Jul-86	1-Jul-86
	D6 2 nd	ditch	27-Feb-86	14-Mar-86	14-Mar-86
	R1	pond	28-Jul-78	20-Aug-78	31-Dec-78
	R1	stream	28-Jul-78	20-Aug-78	20-Aug-78
	R2	stream	22-Apr-77	7-May-77	7-May-77
	R3	stream	22-Apr-80	18-May-80	22-Apr-80
	R4	stream	20-Apr-84	7-May-84	12-May-84

Table A 256: FOCUS Application dates and global maximum timing of hops

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Hops, 1 × 12 g a.s./ha BBCH 21	R1	pond	13-Jun-84	-	13-Jun-84
	R1	stream	13-Jun-84	-	13-Jun-84
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	15-May-84	31-May-84	31-May-84
	R1	stream	15-May-84	31-May-84	31-May-84
Hops, 1 × 12 g a.s./ha BBCH 51	R1	pond	11-Jul-78	-	11-Jul-78
	R1	stream	11-Jul-78	-	11-Jul-78
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	11-Jul-78	28-Jul-78	28-Jul-78
	R1	stream	11-Jul-78	28-Jul-78	28-Jul-78
Hops, 1 × 12 g a.s./ha BBCH 89	D6	ditch	20-Aug-78	-	20-Aug-78
	R1	pond	20-Aug-78	-	20-Aug-78
	D6	ditch	28-Jul-78	20-Aug-78	20-Aug-78

Application scenario	Scenario	Water body	Application date		Date of global maximum
			1 st application	2 nd application	
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	28-Jul-78	20-Aug-78	20-Aug-78

Table A 257: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy - maximum over single and multiple applications

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.076*	Drift	0.077
	D3 2 nd	ditch	0.076*	Drift	0.081
	D4	pond	0.004	Drift	0.035
	D4	stream	0.060*	Drift	0.007
	D6	ditch	0.074*	Drift	0.030
	R1 1 st	pond	0.015	Runoff	0.358
	R1 2 nd	pond	0.016	Runoff	0.371
	R1 1 st	stream	0.050*	Drift	2.02
	R1 2 nd	stream	0.050*	Drift	1.10
	R2 1 st	stream	0.066*	Drift	2.76
	R2 2 nd	stream	0.067*	Drift	5.55
	R3 1 st	stream	0.070*	Drift	2.02
	R3 2 nd	stream	0.070*	Drift	1.03
	R4 1 st	stream	0.056	Runoff	0.516
	R4 2 nd	stream	0.061	Runoff	0.382
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.076*	Drift	0.077
	D3 2 nd	ditch	0.075*	Drift	0.056
	D4	pond	0.004	Drift	0.038
	D4	stream	0.054*	Drift	0.004
	D6	ditch	0.072*	Drift	0.033
	R1 1 st	pond	0.015	Runoff	0.365
	R1 2 nd	pond	0.017	Runoff	0.392
	R1 1 st	stream	0.050*	Drift	1.65
	R1 2 nd	stream	0.050*	Drift	1.58
	R2 1 st	stream	0.067*	Drift	3.21
	R2 2 nd	stream	0.066*	Drift	6.44
	R3 1 st	stream	0.070*	Drift	4.34
	R3 2 nd	stream	0.070*	Drift	2.32

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
	R4 1 st	stream	0.051	Runoff	1.04
	R4 2 nd	stream	0.051	Runoff	1.39

^a values resulting from single applications are marked with *

Table A 258: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting - maximum over single and multiple applications

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.074*	Drift	0.028
	R2	stream	0.066*	Drift	2.13
	R3	stream	0.070*	Drift	0.746
	R4	stream	0.064	Runoff	0.658
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.075*	Drift	0.034
	R2	stream	0.067*	Drift	2.58
	R3	stream	0.070*	Drift	1.15
	R4	stream	0.052	Runoff	0.628
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.075*	Drift	0.035
	R2	stream	0.067*	Drift	6.17
	R3	stream	0.070*	Drift	1.96
	R4	stream	0.053	Runoff	0.593

^a values resulting from single applications are marked with *

Table A 259: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb - maximum over single and multiple applications

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	0.076*	Drift	0.075
	D4	pond	0.004	Drift	0.034
	D4	stream	0.058*	Drift	0.007
	D6 1 st	ditch	0.076*	Drift	0.168
	D6 2 nd	ditch	0.073*	Drift	0.257
	R1	pond	0.009	Runoff	0.241
	R1	stream	0.050*	Drift	0.590
	R2	stream	0.066*	Drift	2.18
	R3	stream	0.070*	Drift	0.216
	R4	stream	0.062	Runoff	0.437

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	0.076*	Drift	0.075
	D4	pond	0.004	Drift	0.040
	D4	stream	0.054*	Drift	0.006
	D6 1 st	ditch	0.076*	Drift	0.314
	D6 2 nd	ditch	0.076*	Drift	0.109*
	R1	pond	0.016	Runoff	0.306
	R1	stream	0.049*	Drift	1.06
	R2	stream	0.067*	Drift	2.48
	R3	stream	0.070*	Drift	0.257
	R4	stream	0.056	Runoff	0.640

^a values resulting from single applications are marked with *

Table A 260: FOCUS Step 3 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops - maximum over single and multiple applications

Application scenario	Scenario	Water body	Max PEC _{SW} (µg/L) ^a	Dominant entry route	Max PEC _{SED} (µg/kg) ^a
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.036	Drift	0.320
	R1	stream	0.451*	Drift	0.068*
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.036	Drift	0.315
	R1	stream	0.440*	Drift	0.048
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.034	Drift	0.324
	R1	stream	0.452*	Drift	0.074

^a values resulting from single applications are marked with *

Table A 261: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D3 2 nd	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D4	pond	0.002	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.001	Drift	0.001	Drift
	D4	stream	0.022	Drift	-	-	0.012	Drift	-	-	0.012	Drift	0.008	Drift	0.006	Drift
	D6	ditch	0.020	Drift	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage	0.012	Drainage
	R1 1 st	pond	0.005	Runoff	0.003	Runoff	0.007	Runoff	0.003	Drift	0.003	Runoff	0.002	Runoff	0.002	Runoff
	R1 2 nd	pond	0.005	Runoff	0.004	Drift	0.008	Runoff	0.003	Drift	0.003	Runoff	0.003	Runoff	0.002	Runoff
	R1 1 st	stream	0.018	Drift	0.050	Drift	0.019	Runoff	0.050	Drift	0.010	Drift	0.007	Runoff	0.005	Drift
	R1 2 nd	stream	0.018	Drift	0.050	Drift	0.016	Runoff	0.050	Drift	0.010	Drift	0.007	Drift	0.005	Drift
	R2 1 st	stream	0.024	Drift	0.066	Drift	0.013	Drift	0.066	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R2 2 nd	stream	0.024	Drift	0.067	Drift	0.013	Drift	0.067	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3 1 st	stream	0.026	Drift	0.070	Drift	0.020	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R3 2 nd	stream	0.026	Drift	0.070	Drift	0.018	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4 1 st	stream	0.019	Runoff	0.050	Drift	0.029	Runoff	0.050	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	R4 2 nd	stream	0.021	Runoff	0.050	Drift	0.032	Runoff	0.050	Drift	0.015	Runoff	0.011	Runoff	0.008	Runoff
Vegetables,	D3 1 st	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry
leafy, 2 × 12 g a.s./ha BBCH 11	D3 2 nd	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.002	Drainage
	D4	stream	0.019	Drift	-	-	0.010	Drift	-	-	0.010	Drift	0.008	Drainage	0.008	Drainage
	D6	ditch	0.025	Drainage	-	-	0.025	Drainage	-	-	0.025	Drainage	0.025	Drainage	0.025	Drainage
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.004	Drift	0.006	Runoff	0.005	Runoff	0.003	Runoff
	R1 2 nd	pond	0.010	Runoff	0.007	Runoff	0.016	Runoff	0.004	Drift	0.007	Runoff	0.005	Runoff	0.004	Runoff
	R1 1 st	stream	0.026	Runoff	0.043	Drift	0.040	Runoff	0.043	Drift	0.018	Runoff	0.014	Runoff	0.009	Runoff
	R1 2 nd	stream	0.021	Runoff	0.043	Drift	0.032	Runoff	0.043	Drift	0.014	Runoff	0.011	Runoff	0.008	Runoff
	R2 1 st	stream	0.020	Drift	0.057	Drift	0.014	Runoff	0.057	Drift	0.010	Drift	0.007	Drift	0.005	Drift
	R2 2 nd	stream	0.020	Drift	0.058	Drift	0.011	Drift	0.058	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R3 1 st	stream	0.023	Runoff	0.061	Drift	0.036	Runoff	0.061	Drift	0.016	Runoff	0.013	Runoff	0.009	Runoff
	R3 2 nd	stream	0.022	Runoff	0.061	Drift	0.034	Runoff	0.061	Drift	0.016	Runoff	0.012	Runoff	0.008	Runoff
	R4 1 st	stream	0.037	Runoff	0.043	Drift	0.056	Runoff	0.043	Drift	0.026	Runoff	0.020	Runoff	0.013	Runoff
	R4 2 nd	stream	0.040	Runoff	0.043	Drift	0.061	Runoff	0.043	Drift	0.028	Runoff	0.021	Runoff	0.015	Runoff
Vegetables, leafy, 1 × 12 g a.s./ha	D3 1 st	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D3 2 nd	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D4	pond	0.002	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.001	Drift	0.001	Drift

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry
BBCH 49	D4	stream	0.020	Drift	-	-	0.010	Drift	-	-	0.010	Drift	0.007	Drift	0.005	Drift
	D6	ditch	0.019	Drift	-	-	0.010	Drift	-	-	0.010	Drift	0.007	Drift	0.007	Drainage
	R1 1 st	pond	0.005	Runoff	0.004	Runoff	0.007	Runoff	0.003	Drift	0.003	Runoff	0.002	Runoff	0.002	Runoff
	R1 2 nd	pond	0.006	Runoff	0.004	Runoff	0.009	Runoff	0.003	Drift	0.004	Runoff	0.003	Runoff	0.002	Runoff
	R1 1 st	stream	0.018	Drift	0.050	Drift	0.019	Runoff	0.050	Drift	0.010	Drift	0.007	Drift	0.005	Drift
	R1 2 nd	stream	0.018	Drift	0.050	Drift	0.015	Runoff	0.050	Drift	0.010	Drift	0.007	Drift	0.005	Drift
	R2 1 st	stream	0.024	Drift	0.067	Drift	0.013	Drift	0.067	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R2 2 nd	stream	0.024	Drift	0.066	Drift	0.013	Drift	0.066	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3 1 st	stream	0.026	Drift	0.070	Drift	0.014	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R3 2 nd	stream	0.026	Drift	0.070	Drift	0.014	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4 1 st	stream	0.018	Drift	0.049	Drift	0.025	Runoff	0.049	Drift	0.011	Runoff	0.009	Runoff	0.006	Runoff
	R4 2 nd	stream	0.018	Drift	0.050	Drift	0.025	Runoff	0.050	Drift	0.011	Runoff	0.009	Runoff	0.006	Runoff
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D3 2 nd	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.001	Drift
	D4	stream	0.018	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D6	ditch	0.020	Drainage	-	-	0.020	Drainage	-	-	0.020	Drainage	0.020	Drainage	0.020	Drainage

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.005	Drift	0.006	Runoff	0.005	Runoff	0.003	Runoff
	R1 2 nd	pond	0.011	Runoff	0.008	Runoff	0.016	Runoff	0.004	Runoff	0.007	Runoff	0.006	Runoff	0.004	Runoff
	R1 1 st	stream	0.024	Runoff	0.043	Drift	0.037	Runoff	0.043	Drift	0.017	Runoff	0.013	Runoff	0.009	Runoff
	R1 2 nd	stream	0.019	Runoff	0.043	Drift	0.028	Runoff	0.043	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	R2 1 st	stream	0.020	Drift	0.058	Drift	0.011	Drift	0.058	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R2 2 nd	stream	0.020	Drift	0.057	Drift	0.011	Drift	0.057	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R3 1 st	stream	0.022	Drift	0.061	Drift	0.028	Runoff	0.061	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	R3 2 nd	stream	0.022	Runoff	0.061	Drift	0.034	Runoff	0.061	Drift	0.015	Runoff	0.012	Runoff	0.008	Runoff
	R4 1 st	stream	0.033	Runoff	0.043	Drift	0.051	Runoff	0.043	Drift	0.023	Runoff	0.018	Runoff	0.012	Runoff
	R4 2 nd	stream	0.033	Runoff	0.043	Drift	0.051	Runoff	0.043	Drift	0.023	Runoff	0.018	Runoff	0.012	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 262: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drainage
	R2	stream	0.024	Drift	0.066	Drift	0.013	Drift	0.066	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3	stream	0.026	Drift	0.070	Drift	0.020	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4	stream	0.023	Runoff	0.050	Drift	0.035	Runoff	0.050	Drift	0.016	Runoff	0.012	Runoff	0.008	Runoff
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.017	Drift	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage	0.012	Drainage
	R2	stream	0.020	Drift	0.057	Drift	0.011	Runoff	0.057	Drift	0.010	Drift	0.007	Drift	0.005	Drift
	R3	stream	0.022	Runoff	0.061	Drift	0.033	Runoff	0.061	Drift	0.015	Runoff	0.012	Runoff	0.008	Runoff
	R4	stream	0.041	Runoff	0.043	Drift	0.064	Runoff	0.043	Drift	0.029	Runoff	0.022	Runoff	0.015	Runoff
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	R2	stream	0.024	Drift	0.067	Drift	0.013	Drift	0.067	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3	stream	0.026	Drift	0.070	Drift	0.014	Drift	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4	stream	0.018	Drift	0.049	Drift	0.024	Runoff	0.049	Drift	0.011	Runoff	0.009	Runoff	0.006	Runoff
Vegetables, fruiting, 2 × 12	D6	ditch	0.017	Drift	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage	0.012	Drainage
	R2	stream	0.020	Drift	0.058	Drift	0.011	Runoff	0.058	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R3	stream	0.022	Drift	0.061	Drift	0.029	Runoff	0.061	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry
g a.s./ha BBCH 51	R4	stream	0.034	Runoff	0.043	Drift	0.052	Runoff	0.043	Drift	0.024	Runoff	0.018	Runoff	0.012	Runoff
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drainage
	R2	stream	0.024	Drift	0.067	Drift	0.013	Drift	0.067	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3	stream	0.026	Drift	0.070	Drift	0.014	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4	stream	0.018	Drift	0.050	Drift	0.026	Runoff	0.050	Drift	0.012	Runoff	0.009	Runoff	0.006	Runoff
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.017	Drift	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage	0.013	Drainage
	R2	stream	0.020	Drift	0.058	Drift	0.011	Drift	0.058	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R3	stream	0.022	Drift	0.061	Drift	0.031	Runoff	0.061	Drift	0.014	Runoff	0.011	Runoff	0.007	Runoff
	R4	stream	0.035	Runoff	0.043	Drift	0.053	Runoff	0.043	Drift	0.024	Runoff	0.018	Runoff	0.013	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 263: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 11	D3	ditch	0.020	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D4	pond	0.002	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.001	Drift	0.001	Drift
	D4	stream	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.008	Drift	0.006	Drift
	D6 1 st	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.007	Drainage
	D6 2 nd	ditch	0.020	Drift	-	-	0.018	Drainage	-	-	0.018	Drainage	0.018	Drainage	0.018	Drainage
	R1	pond	0.003	Runoff	0.003	Drift	0.004	Runoff	0.003	Drift	0.002	Runoff	0.001	Drift	0.001	Drift
	R1	stream	0.018	Drift	0.050	Drift	0.021	Runoff	0.050	Drift	0.010	Drift	0.007	Runoff	0.005	Drift
	R2	stream	0.024	Drift	0.066	Drift	0.013	Drift	0.066	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3	stream	0.026	Drift	0.070	Drift	0.020	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4	stream	0.023	Runoff	0.049	Drift	0.035	Runoff	0.049	Drift	0.016	Runoff	0.012	Runoff	0.008	Runoff
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drainage	0.002	Drainage
	D4	stream	0.018	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.008	Drainage	0.008	Drainage
	D6 1 st	ditch	0.017	Drift	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage	0.013	Drainage
	D6 2 nd	ditch	0.029	Drainage	-	-	0.029	Drainage	-	-	0.029	Drainage	0.029	Drainage	0.029	Drainage
	R1	pond	0.005	Runoff	0.004	Runoff	0.009	Runoff	0.004	Drift	0.004	Runoff	0.003	Runoff	0.002	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
	R1	stream	0.028	Runoff	0.043	Drift	0.042	Runoff	0.043	Drift	0.019	Runoff	0.015	Runoff	0.010	Runoff
	R2	stream	0.023	Drift	0.058	Drift	0.015	Drift	0.058	Drift	0.012	Drift	0.008	Drift	0.006	Drift
	R3	stream	0.025	Runoff	0.061	Drift	0.038	Runoff	0.061	Drift	0.017	Runoff	0.013	Runoff	0.009	Runoff
	R4	stream	0.040	Runoff	0.043	Drift	0.062	Runoff	0.043	Drift	0.028	Runoff	0.021	Runoff	0.015	Runoff
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 49	D3	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D4	pond	0.002	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.001	Drift	0.001	Drift
	D4	stream	0.020	Drift	-	-	0.010	Drift	-	-	0.010	Drift	0.007	Drift	0.005	Drift
	D6 1 st	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.006	Drift
	D6 2 nd	ditch	0.021	Drift	-	-	0.011	Drift	-	-	0.011	Drift	0.007	Drift	0.007	Drainage
	R1	pond	0.005	Runoff	0.003	Runoff	0.007	Runoff	0.003	Drift	0.003	Runoff	0.002	Runoff	0.002	Runoff
	R1	stream	0.018	Drift	0.049	Drift	0.014	Runoff	0.049	Drift	0.010	Drift	0.006	Drift	0.005	Drift
	R2	stream	0.024	Drift	0.067	Drift	0.013	Drift	0.067	Drift	0.013	Drift	0.009	Drift	0.007	Drift
	R3	stream	0.026	Drift	0.070	Drift	0.017	Runoff	0.070	Drift	0.014	Drift	0.009	Drift	0.007	Drift
	R4	stream	0.019	Runoff	0.048	Drift	0.030	Runoff	0.048	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	D3	ditch	0.017	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.005	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.002	Drainage
	D4	stream	0.018	Drift	-	-	0.009	Drift	-	-	0.009	Drift	0.006	Drift	0.006	Drainage

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D6 1 st	ditch	0.019	Drift	-	-	0.010	Drift	-	-	0.010	Drift	0.008	Drainage	0.008	Drainage
	D6 2 nd	ditch	0.017	Drift	-	-	0.016	Drainage	-	-	0.016	Drainage	0.016	Drainage	0.016	Drainage
	R1	pond	0.010	Runoff	0.007	Runoff	0.015	Runoff	0.004	Runoff	0.007	Runoff	0.005	Runoff	0.003	Runoff
	R1	stream	0.019	Runoff	0.043	Drift	0.030	Runoff	0.043	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	R2	stream	0.020	Drift	0.058	Drift	0.011	Runoff	0.058	Drift	0.011	Drift	0.007	Drift	0.005	Drift
	R3	stream	0.021	Drift	0.061	Drift	0.032	Runoff	0.061	Drift	0.014	Runoff	0.011	Runoff	0.008	Runoff
	R4	stream	0.037	Runoff	0.043	Drift	0.056	Runoff	0.043	Drift	0.025	Runoff	0.019	Runoff	0.013	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

Table A 264: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops

Mitigation options												
Vegetative strip (m)			5 ^a		-		10-12 ^b		15 ^c		-	
No spray buffer (m)			5		10		10		15		20	
Nozzle reduction (%)			-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry	PEC _{SW} (µg/L)	Dominant route of entry
Hops, 1 × 12 g a.s./ha BBCH 21	R1	pond	0.035	Drift	0.020	Drift	0.020	Drift	0.011	Drift	0.006	Drift
	R1	stream	0.368	Drift	0.192	Drift	0.192	Drift	0.127	Drift	0.058	Drift
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.042	Drift	0.022	Drift	0.022	Drift	0.012	Drift	0.007	Drift
	R1	stream	0.293	Drift	0.134	Drift	0.134	Drift	0.082	Drift	0.038	Drift
Hops, 1 × 12 g a.s./ha BBCH 51	R1	pond	0.036	Drift	0.020	Drift	0.020	Drift	0.011	Drift	0.007	Drift
	R1	stream	0.359	Drift	0.187	Drift	0.187	Drift	0.123	Drift	0.056	Drift
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.041	Drift	0.022	Drift	0.022	Drift	0.012	Drift	0.007	Drift
	R1	stream	0.293	Drift	0.134	Drift	0.134	Drift	0.082	Drift	0.038	Drift
Hops, 1 × 12 g a.s./ha BBCH 89	R1	pond	0.035	Drift	0.020	Drift	0.020	Drift	0.011	Drift	0.006	Drift
	R1	stream	0.369	Drift	0.192	Drift	0.192	Drift	0.127	Drift	0.058	Drift
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.039	Drift	0.021	Drift	0.021	Drift	0.011	Drift	0.007	Drift
	R1	stream	0.301	Drift	0.138	Drift	0.138	Drift	0.084	Drift	0.039	Drift

Mitigation options								
Vegetative strip (m)		18-20 ^d		-		-		
No spray buffer (m)		20		20		30		
Nozzle reduction (%)		-		50		-		
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry	PEC _{sw} (µg/L)	Dominant route of entry
Hops, 1 × 12 g a.s./ha BBCH 21	R1	pond	0.006	Drift	0.003	Drift	0.003	Drift
	R1	stream	0.058	Drift	0.029	Drift	0.019	Drift
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.007	Drift	0.004	Drift	0.003	Drift
	R1	stream	0.037	Drift	0.019	Drift	0.018	Runoff
Hops, 1 × 12 g a.s./ha BBCH 51	R1	pond	0.006	Drift	0.003	Drift	0.003	Drift
	R1	stream	0.056	Drift	0.028	Drift	0.018	Drift
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.007	Drift	0.004	Drift	0.003	Drift
	R1	stream	0.037	Drift	0.019	Drift	0.017	Runoff
Hops, 1 × 12 g a.s./ha BBCH 89	R1	pond	0.006	Drift	0.003	Drift	0.003	Drift
	R1	stream	0.058	Drift	0.029	Drift	0.019	Drift
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.006	Drift	0.003	Drift	0.003	Drift
	R1	stream	0.039	Drift	0.019	Drift	0.017	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^dequivalent to 80% runoff mitigation

Table A 265: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy – VFSTMod

Mitigation option				
Vegetative strip (m)			VFSTMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1 1 st	pond	0.003	Drift
	R1 2 nd	pond	0.003	Drift
	R1 1 st	stream	0.050	Drift
	R1 2 nd	stream	0.050	Drift
	R2 1 st	stream	0.066	Drift
	R2 2 nd	stream	0.067	Drift
	R3 1 st	stream	0.070	Drift
	R3 2 nd	stream	0.070	Drift
	R4 1 st	stream	0.050	Drift
	R4 2 nd	stream	0.050	Drift
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1 1 st	pond	0.004	Drift
	R1 2 nd	pond	0.004	Drift
	R1 1 st	stream	0.043	Drift
	R1 2 nd	stream	0.043	Drift
	R2 1 st	stream	0.057	Drift
	R2 2 nd	stream	0.058	Drift
	R3 1 st	stream	0.061	Drift
	R3 2 nd	stream	0.061	Drift
	R4 1 st	stream	0.043	Drift
	R4 2 nd	stream	0.043	Drift

Mitigation option				
Vegetative strip (m)			VFSMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1 1 st	pond	0.003	Drift
	R1 2 nd	pond	0.003	Drift
	R1 1 st	stream	0.050	Drift
	R1 2 nd	stream	0.050	Drift
	R2 1 st	stream	0.067	Drift
	R2 2 nd	stream	0.066	Drift
	R3 1 st	stream	0.070	Drift
	R3 2 nd	stream	0.070	Drift
	R4 1 st	stream	0.049	Drift
	R4 2 nd	stream	0.050	Drift
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	-	-
	D3 2 nd	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6	ditch	-	-
	R1 1 st	pond	0.005	Drift
	R1 2 nd	pond	0.004	Drift
	R1 1 st	stream	0.043	Drift
	R1 2 nd	stream	0.043	Drift
	R2 1 st	stream	0.058	Drift
	R2 2 nd	stream	0.057	Drift
	R3 1 st	stream	0.061	Drift
	R3 2 nd	stream	0.061	Drift
	R4 1 st	stream	0.043	Drift
	R4 2 nd	stream	0.043	Drift

Table A 266: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting – VFMod

Mitigation options				
Vegetative strip (m)			VFMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	-	-
	R2	stream	0.066	Drift
	R3	stream	0.070	Drift
	R4	stream	0.050	Drift
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	-	-
	R2	stream	0.057	Drift
	R3	stream	0.061	Drift
	R4	stream	0.043	Drift
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	-	-
	R2	stream	0.067	Drift
	R3	stream	0.070	Drift
	R4	stream	0.049	Drift
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	-	-
	R2	stream	0.058	Drift
	R3	stream	0.061	Drift
	R4	stream	0.043	Drift
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	-	-
	R2	stream	0.067	Drift
	R3	stream	0.070	Drift
	R4	stream	0.050	Drift
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	-	-
	R2	stream	0.058	Drift
	R3	stream	0.061	Drift
	R4	stream	0.043	Drift

Table A 267: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb – VFMod

Mitigation options				
Vegetative strip (m)			VFMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6 1 st	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.003	Drift
	R1	stream	0.050	Drift
	R2	stream	0.066	Drift
	R3	stream	0.070	Drift
	R4	stream	0.049	Drift
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6 1 st	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.004	Drift
	R1	stream	0.043	Drift
	R2	stream	0.057	Drift
	R3	stream	0.061	Drift
	R4	stream	0.043	Drift
Vegetables, bulb, 1 × 12 g a.s./ha BBCH 49	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6 1 st	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.003	Drift
	R1	stream	0.049	Drift
	R2	stream	0.067	Drift
	R3	stream	0.070	Drift
	R4	stream	0.048	Drift

Mitigation options				
Vegetative strip (m)			VFSTMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	-	-
	D4	pond	-	-
	D4	stream	-	-
	D6 1 st	ditch	-	-
	D6 2 nd	ditch	-	-
	R1	pond	0.004	Drift
	R1	stream	0.043	Drift
	R2	stream	0.058	Drift
	R3	stream	0.061	Drift
	R4	stream	0.043	Drift

Table A 268: FOCUS Step 4 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops – VFSTMod

Mitigation options				
Vegetative strip (m)			VFSTMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{SW} (µg/L)	Dominant route of entry
Hops, 1 × 12 g a.s./ha BBCH 21	R1	pond	0.031	Drift
	R1	stream	0.451	Drift
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.036	Drift
	R1	stream	0.373	Drift
Hops, 1 × 12 g a.s./ha BBCH 51	R1	pond	0.031	Drift
	R1	stream	0.440	Drift
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.035	Drift
	R1	stream	0.373	Drift
	R1	pond	0.031	Drift

Mitigation options				
Vegetative strip (m)			VFSMod-5m	
No spray buffer (m)			-	
Nozzle reduction (%)			-	
Crop	Scenario	Water body	PEC _{sw} (µg/L)	Dominant route of entry
Hops, 1 × 12 g a.s./ha BBCH 89	R1	stream	0.452	Drift
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.034	Drift
	R1	stream	0.383	Drift

Table A 269: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy – maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.020*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.007*	Drift	0.006*	Drift
	D3 2 nd	ditch	0.021*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.007*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.002	Drainage
	D4	stream	0.022*	Drift	-	-	0.012*	Drift	-	-	0.012*	Drift	0.008*	Drift	0.008	Drainage
	D6	ditch	0.025	Drainage	-	-	0.025	Drainage	-	-	0.025	Drainage	0.025	Drainage	0.025	Drainage
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.004	Drift	0.006	Runoff	0.005	Runoff	0.003	Runoff
	R1 2 nd	pond	0.010	Runoff	0.007	Runoff	0.016	Runoff	0.004	Drift	0.007	Runoff	0.005	Runoff	0.004	Runoff
	R1 1 st	stream	0.026	Runoff	0.050*	Drift	0.040	Runoff	0.050*	Drift	0.018	Runoff	0.014	Runoff	0.009	Runoff
	R1 2 nd	stream	0.021	Runoff	0.050*	Drift	0.032	Runoff	0.050*	Drift	0.014	Runoff	0.011	Runoff	0.008	Runoff
	R2 1 st	stream	0.024*	Drift	0.066*	Drift	0.014	Runoff	0.066*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R2 2 nd	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3 1 st	stream	0.026*	Drift	0.070*	Drift	0.036	Runoff	0.070*	Drift	0.016	Runoff	0.013	Runoff	0.009	Runoff
	R3 2 nd	stream	0.026*	Drift	0.070*	Drift	0.034	Runoff	0.070*	Drift	0.016	Runoff	0.012	Runoff	0.008	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry
	R4 1 st	stream	0.037	Runoff	0.050*	Drift	0.056	Runoff	0.050*	Drift	0.026	Runoff	0.020	Runoff	0.013	Runoff
	R4 2 nd	stream	0.040	Runoff	0.050*	Drift	0.061	Runoff	0.050*	Drift	0.028	Runoff	0.021	Runoff	0.015	Runoff
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.021*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.007*	Drift	0.006*	Drift
	D3 2 nd	ditch	0.020*	Drift	-	-	0.011*	Drift	-	-	0.011*	Drift	0.007*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.001	Drift
	D4	stream	0.020*	Drift	-	-	0.010*	Drift	-	-	0.010*	Drift	0.007*	Drift	0.005*	Drift
	D6	ditch	0.020	Drainage	-	-	0.020	Drainage	-	-	0.020	Drainage	0.020	Drainage	0.020	Drainage
	R1 1 st	pond	0.009	Runoff	0.006	Runoff	0.015	Runoff	0.005	Drift	0.006	Runoff	0.005	Runoff	0.003	Runoff
	R1 2 nd	pond	0.011	Runoff	0.008	Runoff	0.016	Runoff	0.004	Runoff	0.007	Runoff	0.006	Runoff	0.004	Runoff
	R1 1 st	stream	0.024	Runoff	0.050*	Drift	0.037	Runoff	0.050*	Drift	0.017	Runoff	0.013	Runoff	0.009	Runoff
	R1 2 nd	stream	0.019	Runoff	0.050*	Drift	0.028	Runoff	0.050*	Drift	0.013	Runoff	0.01	Runoff	0.007	Runoff
	R2 1 st	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R2 2 nd	stream	0.024*	Drift	0.066*	Drift	0.013*	Drift	0.066*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3 1 st	stream	0.026*	Drift	0.070*	Drift	0.028	Runoff	0.070*	Drift	0.014*	Drift	0.010	Runoff	0.007*	Drift
	R3 2 nd	stream	0.026*	Drift	0.070*	Drift	0.034	Runoff	0.070*	Drift	0.015	Runoff	0.012	Runoff	0.008	Runoff
	R4 1 st	stream	0.033	Runoff	0.049*	Drift	0.051	Runoff	0.049*	Drift	0.023	Runoff	0.018	Runoff	0.012	Runoff

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry
	R4 2 nd	stream	0.033	Runoff	0.050*	Drift	0.051	Runoff	0.050*	Drift	0.023	Runoff	0.018	Runoff	0.012	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^e values resulting from single applications are marked with *

Table A 270: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting – maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.020*	Drift	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage	0.012	Drainage
	R2	stream	0.024*	Drift	0.066*	Drift	0.013*	Drift	0.066*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3	stream	0.026*	Drift	0.070*	Drift	0.033	Runoff	0.070*	Drift	0.015	Runoff	0.012	Runoff	0.008	Runoff
	R4	stream	0.041	Runoff	0.050*	Drift	0.064	Runoff	0.050*	Drift	0.029	Runoff	0.022	Runoff	0.015	Runoff
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.020*	Drift	-	-	0.012	Drainage	-	-	0.012	Drainage	0.012	Drainage	0.012	Drainage
	R2	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3	stream	0.026*	Drift	0.070*	Drift	0.029	Runoff	0.070*	Drift	0.014*	Drift	0.010	Runoff	0.007*	Drift
	R4	stream	0.034	Runoff	0.049*	Drift	0.052	Runoff	0.049*	Drift	0.024	Runoff	0.018	Runoff	0.012	Runoff
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.020*	Drift	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage	0.013	Drainage
	R2	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3	stream	0.026*	Drift	0.070*	Drift	0.031	Runoff	0.070*	Drift	0.014	Runoff	0.011	Runoff	0.007	Runoff
	R4	stream	0.035	Runoff	0.050*	Drift	0.053	Runoff	0.050*	Drift	0.024	Runoff	0.018	Runoff	0.013	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^e values resulting from single applications are marked with *

Table A 271: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb – maximum over single and multiple applications

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	0.020*	Drift	-	-	0.011 *	Drift	-	-	0.011 *	Drift	0.007*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drainage	0.002	Drainage
	D4	stream	0.021 *	Drift	-	-	0.011 *	Drift	-	-	0.011 *	Drift	0.008	Drainage	0.008	Drainage
	D6 1 st	ditch	0.021 *	Drift	-	-	0.013	Drainage	-	-	0.013	Drainage	0.013	Drainage	0.013	Drainage
	D6 2 nd	ditch	0.029	Drainage	-	-	0.029	Drainage	-	-	0.029	Drainage	0.029	Drainage	0.029	Drainage
	R1	pond	0.005	Runoff	0.004	Runoff	0.009	Runoff	0.004	Drift	0.004	Runoff	0.003	Runoff	0.002	Runoff
	R1	stream	0.028	Runoff	0.050*	Drift	0.042	Runoff	0.050*	Drift	0.019	Runoff	0.015	Runoff	0.010	Runoff
	R2	stream	0.024*	Drift	0.066*	Drift	0.015	Drift	0.066*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3	stream	0.026*	Drift	0.070*	Drift	0.038	Runoff	0.070*	Drift	0.017	Runoff	0.013	Runoff	0.009	Runoff
	R4	stream	0.040	Runoff	0.049*	Drift	0.062	Runoff	0.049*	Drift	0.028	Runoff	0.021	Runoff	0.015	Runoff
	D3	ditch	0.021 *	Drift	-	-	0.011 *	Drift	-	-	0.011 *	Drift	0.007*	Drift	0.006*	Drift
	D4	pond	0.003	Drift	-	-	0.002	Drift	-	-	0.002	Drift	0.002	Drift	0.002	Drainage
	D4	stream	0.020*	Drift	-	-	0.010*	Drift	-	-	0.010*	Drift	0.007*	Drift	0.006	Drainage

Mitigation options																
Vegetative strip (m)			5 ^a		10-12 ^b		-		18-20 ^c		10-12 ^b		15 ^d		18-20 ^c	
No spray buffer (m)			5		-		10		-		10		15		20	
Nozzle reduction (%)			-		-		-		-		-		-		-	
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry	PEC _{SW} (µg/L) ^e	Dominant route of entry
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D6 1 st	ditch	0.021 *	Drift	-	-	0.011 *	Drift	-	-	0.011 *	Drift	0.008	Drainage	0.008	Drainage
	D6 2 nd	ditch	0.021 *	Drift	-	-	0.016	Drainage	-	-	0.016	Drainage	0.016	Drainage	0.016	Drainage
	R1	pond	0.010	Runoff	0.007	Runoff	0.015	Runoff	0.004	Runoff	0.007	Runoff	0.005	Runoff	0.003	Runoff
	R1	stream	0.019	Runoff	0.049*	Drift	0.030	Runoff	0.049*	Drift	0.013	Runoff	0.010	Runoff	0.007	Runoff
	R2	stream	0.024*	Drift	0.067*	Drift	0.013*	Drift	0.067*	Drift	0.013*	Drift	0.009*	Drift	0.007*	Drift
	R3	stream	0.026*	Drift	0.070*	Drift	0.032	Runoff	0.070*	Drift	0.014	Runoff	0.011	Runoff	0.008	Runoff
	R4	stream	0.037	Runoff	0.048*	Drift	0.056	Runoff	0.048*	Drift	0.025	Runoff	0.019	Runoff	0.013	Runoff

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c equivalent to 80% runoff mitigation

^d Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^e values resulting from single applications are marked with *

Table A 272: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops – maximum over single and multiple applications

Mitigation options												
Vegetative strip (m)			5 ^a		-		10-12 ^b		15 ^c		-	
No spray buffer (m)			5		10		10		15		20	
Nozzle reduction (%)			-		-		-		-		-	
Crop	Scenario	Water body	PEC _{sw} (µg/L) ^d	Dominant route of entry	PEC _{sw} (µg/L) ^d	Dominant route of entry	PEC _{sw} (µg/L) ^d	Dominant route of entry	PEC _{sw} (µg/L) ^d	Dominant route of entry	PEC _{sw} (µg/L) ^d	Dominant route of entry
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.042	Drift	0.022	Drift	0.022	Drift	0.012	Drift	0.007	Drift
	R1	stream	0.368*	Drift	0.192*	Drift	0.192*	Drift	0.127*	Drift	0.058*	Drift
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.041	Drift	0.022	Drift	0.022	Drift	0.012	Drift	0.007*	Drift
	R1	stream	0.359*	Drift	0.187*	Drift	0.187*	Drift	0.123*	Drift	0.056*	Drift
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.039	Drift	0.021	Drift	0.021	Drift	0.011	Drift	0.007	Drift
	R1	stream	0.369*	Drift	0.192*	Drift	0.192*	Drift	0.127*	Drift	0.058*	Drift
Mitigation options												
Vegetative strip (m)			18-20 ^e		-		-		-			
No spray buffer (m)			20		20		30					
Nozzle reduction (%)			-		50		-					
Crop	Scenario	Water body	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry	PEC _{sw} (µg/L) ^e	Dominant route of entry				
	R1	pond	0.007	Drift	0.004	Drift	0.003	Drift				

Hops, 2 × 12 g a.s./ha BBCH 21	R1	stream	0.058*	Drift	0.029*	Drift	0.019*	Drift
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.007	Drift	0.004	Drift	0.003	Drift
	R1	stream	0.056*	Drift	0.028*	Drift	0.018*	Drift
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.006	Drift	0.003	Drift	0.003	Drift
	R1	stream	0.058*	Drift	0.029*	Drift	0.019*	Drift

^a Austrian-specific reduction measures for soil surface runoff and erosion = 40% (BAES, 2020)

^b equivalent to 60% runoff mitigation

^c Austrian-specific reduction measures for soil surface runoff and erosion = 70% (BAES, 2020)

^d values resulting from single applications are marked with *

^e equivalent to 80% runoff mitigation

Table A 273: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy – VFMod – maximum over single and multiple applications

Mitigation option					
Vegetative strip (m)			VFMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant route of entry	PEC _{SED} (µg/L) ^a
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	-	-	-
	D3 2 nd	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6	ditch	-	-	-
	R1 1 st	pond	0.004	Drift	0.068
	R1 2 nd	pond	0.004	Drift	0.085
	R1 1 st	stream	0.050*	Drift	0.285
	R1 2 nd	stream	0.050*	Drift	0.191
	R2 1 st	stream	0.066*	Drift	0.047
	R2 2 nd	stream	0.067*	Drift	0.268
	R3 1 st	stream	0.070*	Drift	0.624
	R3 2 nd	stream	0.070*	Drift	0.179
	R4 1 st	stream	0.050*	Drift	0.061
	R4 2 nd	stream	0.050*	Drift	0.035
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	-	-	-
	D3 2 nd	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6	ditch	-	-	-
	R1 1 st	pond	0.005	Drift	0.078
	R1 2 nd	pond	0.004	Drift	0.093
	R1 1 st	stream	0.05*	Drift	0.255
	R1 2 nd	stream	0.05*	Drift	0.286
	R2 1 st	stream	0.067*	Drift	0.099*
	R2 2 nd	stream	0.066*	Drift	0.215
	R3 1 st	stream	0.070*	Drift	1.37
	R3 2 nd	stream	0.070*	Drift	0.786
	R4 1 st	stream	0.049*	Drift	0.157

Mitigation option					
Vegetative strip (m)			VFSTMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant route of entry	PEC _{SED} (µg/L) ^a
	R4 2 nd	stream	0.050*	Drift	0.314

^a values resulting from single applications are marked with *

Table A 274: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting – VFSTMod – maximum over single and multiple applications

Mitigation options					
Vegetative strip (m)			VFSTMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant route of entry	PEC _{SED} (µg/L) ^a
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	-	-	-
	R2	stream	0.066*	Drift	0.038
	R3	stream	0.070*	Drift	0.121
	R4	stream	0.050*	Drift	0.088
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	-	-	-
	R2	stream	0.067*	Drift	0.051
	R3	stream	0.070*	Drift	0.211
	R4	stream	0.049*	Drift	0.164
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	-	-	-
	R2	stream	0.067*	Drift	0.272
	R3	stream	0.070*	Drift	0.530
	R4	stream	0.050*	Drift	0.108

^a values resulting from single applications are marked with *

Table A 275: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, bulb – VFMod – maximum over single and multiple applications

Mitigation options					
Vegetative strip (m)			VFMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant route of entry	PEC _{SED} (µg/L) ^a
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 11	D3	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6 1 st	ditch	-	-	-
	D6 2 nd	ditch	-	-	-
	R1	pond	0.004	Drift	0.044
	R1	stream	0.050*	Drift	0.036
	R2	stream	0.066*	Drift	0.026
	R3	stream	0.070*	Drift	0.054
	R4	stream	0.049*	Drift	0.042
Vegetables, bulb, 2 × 12 g a.s./ha BBCH 49	D3	ditch	-	-	-
	D4	pond	-	-	-
	D4	stream	-	-	-
	D6 1 st	ditch	-	-	-
	D6 2 nd	ditch	-	-	-
	R1	pond	0.004	Drift	0.072
	R1	stream	0.049*	Drift	0.187
	R2	stream	0.067*	Drift	0.035
	R3	stream	0.070*	Drift	0.061
	R4	stream	0.048*	Drift	0.142

^a values resulting from single applications are marked with *

Table A 276: FOCUS Step 4 Global Maximum PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to hops – VFMod – maximum over single and multiple applications

Mitigation options					
Vegetative strip (m)			VFMod-5m		
No spray buffer (m)			-		
Nozzle reduction (%)			-		
Crop	Scenario	Water body	PEC _{SW} (µg/L) ^a	Dominant route of entry	PEC _{SED} (µg/L) ^a
Hops, 2 × 12 g a.s./ha BBCH 21	R1	pond	0.036	Drift	0.318
	R1	stream	0.451*	Drift	0.067*
Hops, 2 × 12 g a.s./ha BBCH 51	R1	pond	0.035	Drift	0.310
	R1	stream	0.440*	Drift	0.044
Hops, 2 × 12 g a.s./ha BBCH 89	R1	pond	0.034	Drift	0.319
	R1	stream	0.452*	Drift	0.072*

^a values resulting from single applications are marked with *

Greenhouse uses

Table A 277: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.004	Drift	0.003
	D3 2 nd	ditch	0.004	Drift	0.003
	D4	pond	0.001	Drift	0.012
	D4	stream	0.004	Drainage	0.003
	D6	ditch	0.012	Drainage	0.004
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.004	Drift	0.005
	D3 2 nd	ditch	0.004	Drift	0.005
	D4	pond	0.002	Drift	0.025
	D4	stream	0.008	Drainage	0.007
	D6	ditch	0.025	Drainage	0.008
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.004	Drift	0.003
	D3 2 nd	ditch	0.004	Drift	0.002
	D4	pond	0.001	Drift	0.011

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D4	stream	0.003	Drift	0.002
	D6	ditch	0.007	Drainage	0.002
	D3 1 st	ditch	0.004	Drift	0.005
	D3 2 nd	ditch	0.004	Drift	0.003
	D4	pond	0.002	Drift	0.023
	D4	stream	0.004	Drainage	0.003
	D6	ditch	0.020	Drainage	0.005

Table A 278: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting – 0.1% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	0.006	Drainage	0.002
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.012	Drainage	0.004
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	0.006	Drainage	0.002
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.012	Drainage	0.003
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	0.006	Drainage	0.002
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.013	Drainage	0.004

Table A 279: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, leafy – 0.2% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.008	Drift	0.006
	D3 2 nd	ditch	0.008	Drift	0.006
	D4	pond	0.002	Drift	0.019
	D4	stream	0.007	Drift	0.003
	D6	ditch	0.012	Drainage	0.004
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 11	D3 1 st	ditch	0.008	Drift	0.009
	D3 2 nd	ditch	0.008	Drift	0.010
	D4	pond	0.004	Drift	0.037
	D4	stream	0.008	Drainage	0.007
	D6	ditch	0.025	Drainage	0.008
Vegetables, leafy, 1 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.008	Drift	0.006
	D3 2 nd	ditch	0.008	Drift	0.004
	D4	pond	0.002	Drift	0.020
	D4	stream	0.006	Drift	0.002
	D6	ditch	0.007	Drift	0.002
Vegetables, leafy, 2 × 12 g a.s./ha BBCH 49	D3 1 st	ditch	0.008	Drift	0.009
	D3 2 nd	ditch	0.008	Drift	0.007
	D4	pond	0.004	Drift	0.041
	D4	stream	0.007	Drift	0.003
	D6	ditch	0.020	Drainage	0.006

Table A 280: FOCUS Step 3 PEC_{SW} and PEC_{SED} for oxathiapiprolin following application to vegetables, fruiting – 0.2% drift

Application scenario	Scenario	Water body	PEC _{SW} (µg/L)	Dominant Route of Entry	PEC _{SED} (µg/kg)
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 11	D6	ditch	0.008	Drift	0.002
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 11	D6	ditch	0.012	Drainage	0.004
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 51	D6	ditch	0.008	Drift	0.003

Application scenario	Scenario	Water body	PEC_{sw} (µg/L)	Dominant Route of Entry	PEC_{sed} (µg/kg)
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 51	D6	ditch	0.012	Drainage	0.004
Vegetables, fruiting, 1 × 12 g a.s./ha BBCH 89	D6	ditch	0.008	Drift	0.003
Vegetables, fruiting, 2 × 12 g a.s./ha BBCH 89	D6	ditch	0.013	Drainage	0.004