FINAL REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: GLOB2013F

Product name(s): Observer

Chemical active substance:

Zoxamide, 450 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

Applicant: Globachem NV

Submission date: January 2024

Update: August 2024 rev. 01

MS Finalisation date: 19/12/2024

Version history

When	What
January 2024	Initial dossier submission by applicant for approval of new product
April 2024	Dossier sent for evaluation
July 2024	Applicant revision 01 to address zRMS initial comments
August 2024 Rev. 01	Addition of PL surrogate crop to cover surface water scenarios in vine Addition of a fall-back GAP in Table 8.1.1, correction of typo in Table 8.9-22 and sorting Step 4 calculations as per zRMS suggestion
September 2024	zRMS finalised evaluation
December 2024	zRMS finalised evaluation after commenting period

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zRMS comments:
The text highlighted in grey was provided by the evaluator.

8 Fate and behaviour in the environment (KCP 9)

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**				**Application rate**			PHI (days)	Remarks: e.g. g safener/ synergist per ha	**Conclusion**
					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	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max			Groundwater
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL, CZ, HU, IE, RO, SK	Seed, ware and starch potato (SOLTU)	F	*Phytophthora infestans* (PHYTIN)	Downward spraying	BBCH 21-79	a) 3 b) 3	7	a) 0.3 b) 0.9	a) 0.135 b) 0.405	150-300	7		
2	PL, CZ, HU, IE, RO, SK	Table and wine grape (VITVI)	F	*Plasmopara viticola* (PLASVI)	Air assisted	BBCH 13-52	a) 2 b) 2	8-10	a) 0.3 b) 0.6	a) 0.135 b) 0.270	100-1000	28		
3	PL, CZ, HU, IE, RO, SK	Table and wine grape (VITVI)	F	*Phytophthora infestans* (PHYTIN)	Air assisted	BBCH 53-83	a) 2 b) 2	8-10	a) 0.368 b) 0.736	a) 0.166 b) 0.332	100-1000	28		
4	PL, CZ, HU, IE, RO, SK	Seed, ware and starch potato (SOLTU)	F	*Phytophthora infestans* (PHYTIN)	Downward spraying	BBCH 21-79	a) 3 b) 3	7	a) 0.29 b) 0.87	a) 0.130 b) 0.390	150-300	7		

* 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

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

Table 8.1-2: Assessed (critical) uses during approval of zoxamide concerning the Section Environmental Fate

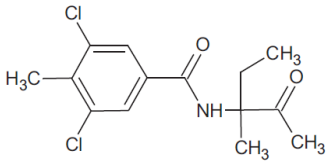
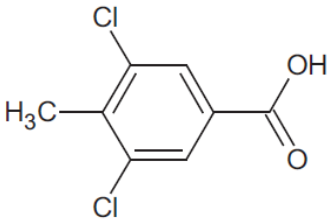
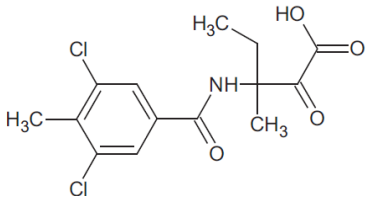
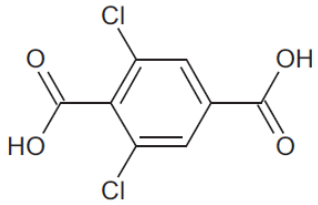
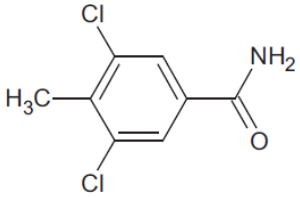
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: 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	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
1	NEU, CEU, SEU	Potato	F	potato late blight *Phytophtora infestans*	broadcast with spray boom	BBCH 20-80	a) 5 b) 5	8	a) 0.75 b) 3.75	a) 0.180 b) 0.900	1000	7	-

* 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 zoxamide potentially relevant for exposure assessment

Metabolite	Molar mass	Chemical structure	Maximum observed occurence in compartements	Exposue assessment required due to
RH-127450	302.15		Soil: 15.1% Water/Sediment: 39.3%	PEC_{gw}: leaching potential to groundwater PEC_{soil}: risk for soil organisms $PEC_{sw/sed}$: risk for aquatic organisms
RH-24549	205		Soil: 33.8% Water/Sediment: 5%	PEC_{gw}: leaching potential to groundwater PEC_{soil}: risk for soil organisms $PEC_{sw/sed}$: risk for aquatic organisms
RH-163353	332.15		Soil: 15% Water/Sediment: 20.6%	PEC_{gw}: leaching potential to groundwater PEC_{soil}: risk for soil organisms $PEC_{sw/sed}$: risk for aquatic organisms
RH-141455	235.02		Soil: 8.4% Water/Sediment: 2.1%	PEC_{gw}: leaching potential to groundwater PEC_{soil}: risk for soil organisms $PEC_{sw/sed}$: risk for aquatic organisms
RH-139432	204.06		Soil: 4.9% Water/Sediment: 42.4%	$PEC_{sw/sed}$: risk for aquatic organisms

8.3 Rate of degradation in soil (KCP 9.1.1)

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

8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

8.3.1.1 Zoxamide and its metabolites

The rate of degradation in soil of zoxamide and its metabolites was evaluated during the Annex I Renewal. No additional studies have been performed.

The fate and behaviour of zoxamide and its metabolites in soil is discussed in detail in the corresponding document of the EU review dossier where the study references can be found (EFSA Journal 2017;15(9):4980).

The geometric mean DT_{50} value of laboratory aerobic topsoil values normalized to 20°C and pF2 moisture content is:
Zoxamide: 5.5 days (n= 8 values).
RH-127450: 5.2 days (n= 7 values).
RH-24549: 5.4 days (n= 5 values).
RH-163353: 10.8 days (n= 6 values).
RH-141455: 19.6 days (n= 4 values).

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

Soil	DT_{50} (days)	DT_{90} (days)	Temp	Model	Kinetic parameters	χ^2 error (%)	T-Corr.	Moist Corr.	DT_{50} normalised to 20°C & pF2
England silt loam 20°C 50%MWHC	3.9	13	20˚C	SFO	k: 0.1779	5.68	1.00	0.84	3.28
France loam 20°C 50%MWHC	1.99	6.62	20˚C	SFO	k: 0.3479	7.02	1.00	0.94	1.87
Italy clay loam 20°C 50%MWHC	2.37	7.87	20˚C	SFO	k: 0.2927	6.06	1.00	0.83	1.97
Germany sandy loam 20°C 50%MWHC	2.71	9.01	20˚C	SFO	k: 0.2556	4.65	1.00	0.99	2.68[1]
Germany sandy loam 20°C 100%FC	2.22	7.38	20˚C	SFO	k: 0.3119	6.72	1.00	1.00	2.22
Germany sandy loam 10°C 50%MWHC	7.29	24.2	10˚C	SFO	k: 0.0951	6.78	0.39	0.99	2.81[1]
Pennsylvania silt loam	7.75	98.1	25˚C	DFOP (persistence)	k1:0.635				

25°C 75%FC	29.5[2]	-		DFOP (modelling)	k2:0.01774 g:0.4299	9.2	1.57	0.74	34.27
Ohio loamy sand 25°C 75%FC	13.6	115	25°C	DFOP (persistence)	k1:0.1581 k2:0.01477 g:0.4531				
	28.4	-		SFO (modelling)		13.5	1.57	0.71	31.66
Geometric mean									**5.5**

Table 8.3-2: Summary of aerobic degradation rates for RH-127450 - laboratory studies

Soil	**DT_{50} (days)**	**Temp**	**Model**	**χ^2 error (%)**	**T-Corr.**	**Moist Corr.**	**DT_{50} normalised to 20°C & pF2**	**FF***
England silt loam 20°C 50%MWHC	14.9	20°C	SFO-SFO	9.61	1.00	0.84	12.52	0.22
France loam 20°C 50%MWHC	3.8	20°C	SFO-SFO	8.63	1.00	0.94	3.57	0.21
Italy clay loam 20°C 50%MWHC	1.99	20°C	SFO-SFO	20.1	1.00	0.83	1.65	0.21
Germany sandy loam 20°C 50%MWHC	6.66	20°C	SFO-SFO	19.3	1.00	0.99	6.59[1]	0.18[1]
Germany sandy loam 20°C 100%FC	5.79	20°C	SFO-SFO	23.9	1.00	1.00	5.79	0.19
Germany sandy loam 10°C 50%MWHC	18.7	10°C	SFO-SFO	16.9	0.39	0.99	7.22[1]	0.17[1]
Ohio loam sand 25°C 75%FC	8.27	25°C	SFO-SFO	17.7	1.57	0.71	9.22	0.38
Geometric mean							**5.2**	**-**
Arithmetic mean							**-**	**0.24**

* formation fraction from zoxamide;
[1] values which were not used for calculation of geometric/arithmetic mean values

Table 8.3-3: Summary of aerobic degradation rates for RH-24549 - laboratory studies

Soil	**DT_{50} (days)**	**Temp**	**Model**	**χ^2 error (%)**	**T-Corr.**	**Moist Corr.**	**DT_{50} normalised to 20°C & pF2**	**FF***
France loam 20°C 50%MWHC	6.32	20°C	SFO-SFO	23.2	1.00	0.94	5.94	0.19
Italy clay loam 20°C 50%MWHC	8.45	20°C	SFO-SFO	24.2	1.00	0.83	7.01	0.47
Germany sandy loam 20°C 50%MWHC	5.78	20°C	SFO-SFO	30.7	1.00	0.99	5.72[1]	0.17[1]
Germany sandy loam 20°C 100%FC	3.07	20°C	SFO-SFO	16	1.00	1.00	3.07	0.27
Ohio loamy sand 25°C 75%FC	6.13	25°C	SFO-SFO	16.1	1.57	0.71	6.83	0.57

Geometric mean		**5.4**	**-**
Arithmetic mean		**-**	**0.38**

* formation fraction from zoxamide;
[1] values which were not used for calculation of geometric/arithmetic mean values

Table 8.3-4: Summary of aerobic degradation rates for RH-163353 - laboratory studies

Soil	**DT_{50} (days)**	**Temp**	**Model**	**χ^2 error (%)**	**T-Corr.**	**Moist Corr.**	**DT_{50} normalised to 20°C & pF2**	**FF***
England silt loam 20°C 50%MWHC	49.7	20˚C	SFO-SFO	7.38	1.00	0.84	41.75	0.10
France loam 20°C 50%MWHC	6.65	20˚C	SFO-SFO	25.2	1.00	0.94	6.25	0.20
Italy clay loam 20°C 50%MWHC	6.4	20˚C	SFO-SFO	7.2	1.00	0.83	5.31	0.23
Germany sandy loam 20°C 50%MWHC	5.62	20˚C	SFO-SFO	17.2	1.00	0.99	5.56[1]	0.29[1]
Germany sandy loam 20°C 100%FC	9.96	20˚C	SFO-SFO	13.8	1.00	1.00	9.96	0.18
Germany sandy loam 10°C 50%MWHC	55.6	10˚C	SFO-SFO	17.5	0.39	0.99	21.47[1]	0.15[1]
Geometric mean							**10.8**	**-**
Arithmetic mean							**-**	**0.18**

* formation fraction from zoxamide;
[1] values which were not used for calculation of geometric/arithmetic mean values

Table 8.3-5: Summary of aerobic degradation rates for RH-141455 - laboratory studies

Soil	**DT_{50} (days)**	**Temp**	**Model**	**χ^2 error (%)**	**T-Corr**	**Moist Corr**	**DT_{50} normalised to 20°C & pF2**	**FF**
Germany sandy loam 20°C 50%MWHC	88.5	20˚C	SFO-SFO	18.2	1.00	0.99	87.62	1[1] (default)
Speyer 2.2	12	20˚C	SFO	6.95	1.00	1.00	12.00	-[2]
Speyer 2.3	11.1	20˚C	SFO	5.77	1.00	0.86	9.54	-[2]
Speyer 6S	31.7	20˚C	SFO	6.8	1.00	0.46	14.72	-[2]
Geometric mean							**19.6**	**-**

[1] from RH-24549 [2] study conducted with metabolite (RH-141455)

For the full datasets, reference is made to the final RAR of zoxamide, Vol. 3 CA B8.

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

Studies on anaerobic degradation in soil with the formulation were not performed since it is possible to extrapolate from data obtained for the active substance.
The fate and behaviour of zoxamide and its metabolites in soil is discussed in detail in the corresponding document of the EU renewal dossier where the study references can be found. Reference is made to the EFSA Journal 2017;15(9):4980 and the final RAR of zoxamide.

8.4 Field studies (KCP 9.1.1.2)

The rate of degradation in soil of zoxamide and its metabolites in field studies was evaluated during the Annex I Renewal of zoxamide. Reference is made to the EFSA Journal 2017;15(9):4980 and the final RAR of zoxamide.

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

Studies on field dissipation rates with the formulation were not performed since it is possible to extrapolate from data obtained with the active substance. Reference is made to the EFSA Journal 2017;15(9):4980 and the final RAR of zoxamide.

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

Soil accumulation tests were not performed since based on the ready decline of the active substance observed in the field dissipation trials, zoxamide is not expected to accumulate in soil following normal agricultural use.

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 Zoxamide and its metabolites

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

Zoxamide							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Huntsburg, Ohio, USA	Loam	1.27	7.2	10.35	815	0.896	Y/ EFSA Journal 2017;15(9):4980
Concord, Ohio, USA	Silty clay loam	1.77	4.8	25.33	1431	0.963	Y/ EFSA Journal 2017;15(9):4980

Zoxamide							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Madison, Ohio, USA	Sandy loam	1.1	6.7	15.23	1385	0.953	Y/ EFSA Journal 2017;15(9):4980
Newtown, Pennsylvania, USA	Silty loam	1.04	6.8	12.44	1196	1.067	Y/ EFSA Journal 2017;15(9):4980
				Mean / Geometric mean	1207/1179	0.970	

Table 8.5-2: Summary of soil adsorption/desorption for RH-127450

RH-127450							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Borstel/Germany	Loamy sand	1.05	6.1	12.14	1156	-	Y/ EFSA Journal 2017;15(9):4980
Egerkingen/ Switzerland	Clay	2.82	5.0	11.4	404	0.603	Y/ EFSA Journal 2017;15(9):4980
Vetroz/Switzerland	Silt loam	4.05	7.3	18.12	447	0.448	Y/ EFSA Journal 2017;15(9):4980
				Mean / Geometric mean	669/593	0.9*	

* no reliable mean value of 1/n could be achieved therefore a value of 0.9 is considered appropriate for the modelling

Table 8.5-3: Summary of soil adsorption/desorption for RH-24549

RH-24549							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Iowa/USA	Sandy loam	1.3	5.2	4.0	307.43	0.791	Y/ EFSA Journal 2017;15(9):4980
Illinois/USA	Silty clay loam	2.4	7.3	3.6	150.16	0.833	Y/ EFSA Journal 2017;15(9):4980
Ohio/USA	Silt loam	2.0	7.6	1.8	90.55**	0.811	Y/ EFSA Journal 2017;15(9):4980

RH-24549							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
				Mean / Geometric mean	-*	-*	

*adsorption of RH-24549 is pH dependent **the worst case Kfoc is considered appropriate for modelling

Table 8.5-4: Summary of soil adsorption/desorption for RH-163353

RH-163353							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Borstel/Germany	Loamy sand	1.22	6.1	0.6	50*	1.0*	Y/ EFSA Journal 2017;15(9):4980
Egerkingen/ Switzerland	Clay	3.17	5.4	2.4	75	0.833	Y/ EFSA Journal 2017;15(9):4980
Vetroz/Switzerland	Silt loam	4.79	7.2	3.8	79	0.844	Y/ EFSA Journal 2017;15(9):4980
				Mean / Geometric mean	68/67	0.892	

*Koc derived from a K_d from the screening study therefore a default 1/n value of 1.0 is assumed

Table 8.5-5: Summary of soil adsorption/desorption for RH-141455

RH-141455							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kd (mL/g)**	**Koc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Speyer 2.2	loamy sand	1.87	5.5	0.06	3.1*	1.0*	Y/ EFSA Journal 2017;15(9):4980
Speyer 2.3	sandy loam	0.94	6.8	0.03	3.3*	1.0*	Y/ EFSA Journal 2017;15(9):4980
Speyer 6S	clay	1.64	7.1	0.03	2.1*	1.0*	Y/ EFSA Journal 2017;15(9):4980
				Mean / Geometric mean	2.8/2.8	1.0	

*Koc derived from a Kd from the screening study therefore a default 1/n value of 1.0 is assumed

8.5.2 Column leaching (KCP 9.1.2.1)

A 3-day aged column leaching study, performed in one sandy loam soil with 59.1% sand content and relatively low %oc content (pH 7.4, 1.2 %oc) showed 68.6-74.4 %AR in the top 0-5 cm layer and only 1.8-2.3 %AR in the leachate. Zoxamide and major metabolite RH-127450 were only detectable in the 0-5 and 0-10 cm layers respectively. Results indicate a slightly greater potential for leaching of metabolites RH-24549 and RH-163353, however levels were <10% AR in the 0-5 cm layer and non-detectable in the 20-30cm layers.
Due to the short half lives of zoxamide and major soil metabolites RH-24549, RH-127450 and RH-163353, and the low to moderate mobility through soil, it is considered highly unlikely that these compounds will leach to groundwater.

8.5.3 Lysimeter studies (KCP 9.1.2.2)

Lysimeter studies were not required for zoxamide (EFSA Journal 2017;15(9):4980).

8.5.4 Field leaching studies (KCP 9.1.2.3)

Field leaching studies were not required for zoxamide (EFSA Journal 2017;15(9):4980).

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.

The rate of degradation in water/sediment of zoxamide and its metabolites was evaluated during the Annex I Inclusion. No additional studies have been performed.
The first order DT_{50} values of in the water phase and in the whole system were calculated to be (geometric mean of 2 values):
Zoxamide: $DT_{50whole\_system}$ = 6.4 days.
RH-127450: $DT_{50whole\_system}$ = 237 days.

Parent	Max in sediment 30.2% AR at day 7 (pond, 10°C). At 20°C max in sediment 23.1% AR at day 7 (pond).									
Water / sediment system	pH water phase	pH sed	T. °C	DT_{50}-DT_{90} whole sys.	x^2 err	DT_{50}-DT_{90} water	x^2 err	DT_{50}-DT_{90} sed	x^2 err	Method of calculation
River	8.39	7.4	20	6.4/21.1	5.921	FOCUS P-II calculations not performed				FOCUS SFO
Pond	8.09	7.0	20	6.3/20.9	6.044					FOCUS SFO
River	8.34	7.4	10	10.4/34.7	2.59					FOCUS SFO

Pond	8.12	7.0	10	19.4/64.6	3.424		FOCUS SFO
Mean (of 20°C systems)				6.4/-			

RH-127450	Max in water 17.1% AR at day 28 (river, 10°C), max in sediment 23.1 % AR at day 56 (river, 10°C) and max in total system 39.3% AR at day 56 (river, 10°C). At 20°C max in water 12.8% AR at day 14 (river), max in sediment 22.1% AR at day 56 (pond) and max in total system 30.0% AR at day 28 (river).								
Water / sediment system	pH water phase	pH sed	T. °C	DT_{50}-DT_{90} whole sys.	x^2 err	DT_{50}-DT_{90} water	x^2 err	DT_{50}-DT_{90} sed	x^2 err	Method of calculation
River	8.39	7.4	20	148.4/493.1	16.271	FOCUS P-II calculations not performed				FOCUS SFO
Pond	8.09	7.0	20	326.1/1083	7.265					FOCUS SFO
River	8.34	7.4	10	-	-					FOCUS SFO
Pond	8.12	7.0	10	123/408.7	20.12					FOCUS SFO
Mean (of 20°C systems)				237/-	Formation fraction 0.24 to 0.33 from parent					

Other metabolites detected at >10% AR:
RH-163353 – max in water 15.8% AR at day 28 (river, 20°C), max in sediment 13.8% AR at day 106 (pond, 10°C) and max in total system 28.0% AR at day 106 (river, 10°C). At 20°C max in sediment 7.4% AR at day 106 (river) and max in total system 20.6% AR at day 56 (river).
For the full datasets, reference is made to the final RAR of zoxamide, Vol. 3 CA B8.

8.7 Predicted Environmental Concentrations in soil (PEC_{soil}) (KCP 9.1.3)

zRMS Comments:	Calculations of PEC_S for active substance, its metabolites and formulation used for potatoes and wine and table grapes were submitted. The used endpoints (DT_{50}) for active substance and its metabolites were agreed at the EU level. The risk envelope approach for vines and potatoes was accepted. In PECs assessment the single and multiple applications were taken into consideration. The maximum PEC_S values for active substance, its metabolites and formulation are presented in following table:

Crop	**Potatoes**	**Vines**

Compound	PECs ini	PECs ini	
	mg/kg		
Zoxamide	0.1481	0.1452	
RH-127450	0.0219	0.0206	
RH-24549	0.0279	0.0281	
RH-163353	0.0291	0.0252	
RH-141455	0.0120	0.0102	
Formulation	0.1815	0.2269	

These values will be used in further risk assessment.

8.7.1 Justification for new endpoints

No other endpoints than the ones agreed during the EU Review were used for the calculation of predicted environmental concentrations in soil.

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

Table 8.7-1: Input parameters related to application for PEC_{soil} calculations

Use No.	1	2**
Crop	Potatoes	Grape
Application rate (g as/ha)	zoxamide: 135 g/ha	zoxamide: 2x135 g/ha
Number of applications/interval	3/7	2/8
Crop interception (%)	60%*	50%*
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm	5 cm
Soil bulk density (g/cm^3)	1.5	1.5
Models/tools used for calculation	Excel***	Excel***

*Crop interception values are taken from the " Generic Guidance for Tier 1 FOCUS Ground Water Assessments Version2.2".
** Use 2 was selected as worst-case, since considering an interception of 50% at BBCH13, the effective application rate is 67.5 g/ha, otherwise in Use 3 (2x166 g a.i./ha) it would be 66.4, considering 60% interception at BBCH53 or 41.5, considering 85% interception at BBCH83.
***Formulas used in Excel:

PECs, ini = [A * (1-fint)]/(100 * d * bd)
where:
A = application rate
fint = fraction intercepted by plant cover
d = depth of the soil
bd = bulk soil density (g/cm^3)

The actual PECs at specific times (t) are calculated with the formulas below:

SFO kinetics	DFOP kinetics
$PECs, actual = PECs,ini * e^{-k.t}$ where: $k = ln(2)/DT_{50}$ t: time period The maximum ('moving window') time weighted average (TWA) PEC values are found by calculating a set of TWA PECs over a time window that is moved along the time axis. The average PEC within a day is calculated by: $PECtwa = PECs,ini * (1 - e^{-k*t})/(k*t)$	PECs, actual = PECs,ini * g * e-k1.t + PECs,ini * (1-g) * e-k2.t where: g = fraction applied to compartment 1 $k1 = ln(2)/DT_{50}$ compartment 1 $k2= ln(2)/DT_{50}$ compartment 2 t: time period The maximum ('moving window') time weighted average (TWA) PEC values are found by calculating a set of TWA PECs over a time window that is moved along the time axis. The average PEC within a day is calculated by: $PECtwa = PECs,ini * g * (1 - e^{-k1*t})/(k1*t)$ $+ PECs,ini * (1-g) * (1 - e^{-k2*t})/(k2*t)$

Table 8.7-2: Input parameter for active substance(s) and relevant metabolite(s) for PEC_{soil} calculation

Compound	Molecular weight (g/mol)	Max. occurrence (%)	DT50 (days)	Value in accordance to EU endpoint y/n/ Reference
Zoxamide	336.65	-	13.6 (DFOP, k1=0.1581, k2=0.01477, g=0.4531)	Y/ EFSA Journal 2017;15(9):4980
RH-127450	302.15	15.1	14.9 (SFO)	Y/ EFSA Journal 2017;15(9):4980
RH-24549	205	33.8	8.45 (SFO)	Y/ EFSA Journal 2017;15(9):4980
RH-163353	332.15	15	49.7 (SFO)	Y/ EFSA Journal 2017;15(9):4980
RH-141455	235.02	8.4	88.5 (SFO)	Y/ EFSA Journal 2017;15(9):4980

8.7.2.1 Zoxamide and its metabolites

Table 8.7-3: PEC_{soil} for zoxamide

PEC_{soil} (mg/kg)		Potato				Grape			
		Single application		Multiple applications		Single application		Multiple applications	
		Actual	TWA	Actual	TWA	Actual	TWA	Actual	TWA
Initial		0.0720	-	0.1481	-	0.09000	-	0.1452	-
Short term	24h	0.0667	0.0693	0.1424	0.1371	0.08332	0.08658	0.1345	0.1397
	2d	0.0620	0.0668	0.1373	0.1275	0.07751	0.08346	0.1251	0.1347

	4d	0.0545	0.0624	0.1284	0.1120	0.06806	0.07802	0.1098	0.1259
Long term	7d	0.0463	0.0571	0.1175	0.0952	0.05787	0.07143	0.0934	0.1153
	14d	0.0356	0.0487	0.1001	0.0732	0.04448	0.06087	0.0718	0.0982
	21d	0.0301	0.0433	0.0891	0.0618	0.03757	0.05416	0.0606	0.0874
	28d	0.0264	0.0395	0.0813	0.0544	0.03304	0.04941	0.0533	0.0797
	50d	0.0188	0.0320	0.0657	0.0387	0.02353	0.03996	0.0380	0.0645
	100d	0.0090	0.0226	0.0466	0.0185	0.01124	0.02830	0.0181	0.0457

PEC_{soil} of metabolites

Table 8.7-4: PEC_{soil} for RH-127450

PEC_{soil} (mg/kg)		Potato				Grape			
		Single application		Multiple applications		Single application		Multiple applications	
		Actual	TWA	Actual	TWA	Actual	TWA	Actual	TWA
Initial		0.0098	-	0.0219	-	0.01220	-	0.0206	-
Short term	24h	0.0093	0.0096	0.0209	0.0214	0.01165	0.01192	0.0197	0.0201
	2d	0.0089	0.0094	0.0200	0.0209	0.01112	0.01165	0.0188	0.0197
	4d	0.0081	0.0089	0.0182	0.0200	0.01013	0.01113	0.0171	0.0188
Long term	7d	0.0071	0.0084	0.0158	0.0187	0.00881	0.01041	0.0149	0.0176
	14d	0.0051	0.0072	0.0114	0.0161	0.00636	0.00897	0.0107	0.0151
	21d	0.0037	0.0062	0.0082	0.0140	0.00459	0.00779	0.0078	0.0132
	28d	0.0027	0.0055	0.0060	0.0122	0.00332	0.00682	0.0056	0.0115
	50d	0.0010	0.0038	0.0021	0.0085	0.00119	0.00473	0.0020	0.0080
	100d	0.0001	0.0021	0.0002	0.0047	0.00012	0.00260	0.0002	0.0044

Table 8.7-5: PEC_{soil} for RH-24549

PEC_{soil} (mg/kg)		Potato				Grape			
		Single application		Multiple applications		Single application		Multiple applications	
		Actual	TWA	Actual	TWA	Actual	TWA	Actual	TWA
Initial		0.0148	-	0.0279	-	0.01853	-	0.0281	-
Short term	24h	0.0137	0.0142	0.0257	0.0268	0.01707	0.01779	0.0259	0.0270
	2d	0.0126	0.0137	0.0236	0.0257	0.01572	0.01709	0.0239	0.0260
	4d	0.0107	0.0126	0.0201	0.0238	0.01334	0.01579	0.0203	0.0240
Long term	7d	0.0084	0.0113	0.0157	0.0212	0.01043	0.01409	0.0158	0.0214
	14d	0.0047	0.0088	0.0088	0.0166	0.00588	0.01102	0.0089	0.0167
	21d	0.0026	0.0071	0.0050	0.0133	0.00331	0.00883	0.0050	0.0134
	28d	0.0015	0.0058	0.0028	0.0109	0.00186	0.00725	0.0028	0.0110

	50d	0.0002	0.0036	0.0005	0.0067	0.00031	0.00444	0.0005	0.0067
	100d	0.0000	0.0018	0.0000	0.0034	0.00001	0.00226	0.0000	0.0034

Table 8.7-6: PEC_{soil} for RH-163353

PEC_{soil} (mg/kg)		Potato				Grape			
		Single application		Multiple applications		Single application		Multiple applications	
		Actual	TWA	Actual	TWA	Actual	TWA	Actual	TWA
Initial		0.0107	-	0.0291	-	0.01332	-	0.0252	-
Short term	24h	0.0105	0.0106	0.0287	0.0289	0.01314	0.01323	0.0249	0.0251
	2d	0.0104	0.0105	0.0283	0.0287	0.01295	0.01314	0.0245	0.0249
	4d	0.0101	0.0104	0.0275	0.0283	0.01260	0.01296	0.0239	0.0245
Long term	7d	0.0097	0.0102	0.0264	0.0277	0.01208	0.01269	0.0229	0.0240
	14d	0.0088	0.0097	0.0239	0.0264	0.01096	0.01210	0.0208	0.0229
	21d	0.0080	0.0092	0.0217	0.0252	0.00994	0.01155	0.0188	0.0219
	28d	0.0072	0.0088	0.0197	0.0241	0.00901	0.01103	0.0171	0.0209
	50d	0.0053	0.0077	0.0145	0.0209	0.00663	0.00959	0.0126	0.0182
	100d	0.0026	0.0057	0.0072	0.0157	0.00330	0.00718	0.0063	0.0136

Table 8.7-7: PEC_{soil} for RH-141455

PEC_{soil} (mg/kg)		Potato				Grape			
		Single application		Multiple applications		Single application		Multiple applications	
		Actual	TWA	Actual	TWA	Actual	TWA	Actual	TWA
Initial		0.0042	-	0.0120	-	0.00528	-	0.0102	-
Short term	24h	0.0042	0.0042	0.0119	0.0120	0.00524	0.00526	0.0102	0.0102
	2d	0.0042	0.0042	0.0118	0.0119	0.00520	0.00524	0.0101	0.0102
	4d	0.0041	0.0042	0.0116	0.0118	0.00512	0.00520	0.0099	0.0101
Long term	7d	0.0040	0.0041	0.0114	0.0117	0.00500	0.00514	0.0097	0.0100
	14d	0.0038	0.0040	0.0108	0.0114	0.00473	0.00500	0.0092	0.0097
	21d	0.0036	0.0039	0.0102	0.0111	0.00448	0.00487	0.0087	0.0094
	28d	0.0034	0.0038	0.0096	0.0108	0.00424	0.00474	0.0082	0.0092
	50d	0.0029	0.0035	0.0081	0.0099	0.00357	0.00437	0.0069	0.0085
	100d	0.0019	0.0029	0.0055	0.0083	0.00241	0.00366	0.0047	0.0071

8.7.2.2 PEC_{soil} of GLOB2013F

Table 8.7-8: PEC_{soil} for GLOB2013F on potato

Active substance/ reparation	Application rate (g/ha)	PEC_{act} (mg/kg)	Tillage depth (cm)
GLOB2013F	340.38*	0.1815	5

*considering product density of 1.1346 g/cm^3

Table 8.7-9: PEC_{soil} for GLOB2013F on grape

Active substance/ reparation	Application rate (g/ha)	PEC_{act} (mg/kg)	Tillage depth (cm)
GLOB2013F	340.38*	0.22692	5

*considering product density of 1.1346 g/cm^3

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

zRMS Comments:	The submitted PECgw assessment was accepted. The application dates were accepted, the early and late applications were taken into consideration. The recommended FOCUS models were used: FOCUS PELMO and FOCUS PEARL. The uptake factor PUF of 0 was considered. **Zoxamide**. All used endpoints were agreed at the EU level, the arithmetic and geometric mean of Kfoc was used in PECgw assessment (LoEP, 2017 and EFSA, 2014, respectively); the geometric mean represents a worse case. The maximum PECgw values for active substance and their metabolites, except RH-141455, were below the trigger value of 0.1 µg/L. For RH-141455, the max PECgw value of 2.921 µg/L (Hamburg scenario, early application in potatoes) was assessed, and its relevance will be discussed in Section 10. The Jokioinen scenario with max PECgw of 4.652 µg/L is not relevant for Central Zone.

8.8.1 Justification for new endpoints

No other endpoints than the ones agreed during the EU Review were used for the calculation of predicted environmental concentrations in ground water.

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

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

Use No.	1	2	3
Crop	Potato	Grape	Grape
Application rate (g as/ha)	Zoxamide: 135 g/ha	Zoxamide: 135 g/ha	Zoxamide: 166 g/ha
Number of applications/interval (d)	3/7d	2/8d	2/8d
Relative application date	First set: 1st application: At BBCH21 2nd application: 7 days after the 1st 3rd application: 14 days after the 1st Second set: 1st application: 14 days before BBCH79 2nd application: 7 days before BBCH79 3rd application: At BBCH79	1st application: At BBCH13 2nd application: 8 days after the 1st	First set: 1st application: At BBCH53 2nd application: 8 days after the 1st Second set: 1st application: 8 days before BBCH83 2nd application: At BBCH83
Crop interception (%)	First set: 60% Second set: 85%	50%	First set: 60% Second set: 75%
Frequency of application	annual	annual	annual
Models used for calculation	FOCUS PELMO 6.6.4, FOCUS PEARL 5.5.5	FOCUS PELMO 6.6.4, FOCUS PEARL 5.5.5	FOCUS PELMO 6.6.4, FOCUS PEARL 5.5.5

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

Crop	Scenario	Selected absolute Application date			Respective Julian day		
		1st	2nd	3rd	1st	2nd	3rd
potato (set 1: Early, starting from BBCH 21)	Châteaudun	13-May	20-May	27-May	133	140	147
	Hamburg	30-May	06-Jun	13-Jun	150	157	164
	Jokioinen	29-Jun	06-Jul	13-Jul	180	187	194
	Kremsmünster	30-May	06-Jun	13-Jun	150	157	164
	Okehampton	22-May	29-May	05-Jun	142	149	156
	Piacenza	02-May	09-May	16-May	122	129	136
	Porto	06-Apr	13-Apr	20-Apr	96	103	110
	Sevilla	17-Feb	24-Feb	03-Mar	48	55	62
	Thiva	18-Mar	25-Mar	01-Apr	77	84	91
potato (set 2: Late, ending at BBCH 79)	Châteaudun	20-Jul	27-Jul	03-Aug	201	208	215
	Hamburg	11-Aug	18-Aug	25-Aug	223	230	237
	Jokioinen	01-Sep	08-Sep	15-Sep	244	251	258
	Kremsmünster	11-Aug	18-Aug	25-Aug	223	230	237
	Okehampton	31-Jul	07-Aug	14-Aug	212	219	226
	Piacenza	21-Jul	28-Jul	04-Aug	202	209	216
	Porto	26-May	02-Jun	09-Jun	146	153	160
	Sevilla	25-Apr	02-May	09-May	115	122	129

	Thiva	13-Jun	20-Jun	27-Jun	164	171	178
Vines (starting at BBCH13, 135g/ha)	Châteaudun	14-Apr	22-Apr	-	104	112	-
	Hamburg	09-May	17-May	-	129	137	-
	Kremsmünster	09-May	17-May	-	129	137	-
	Piacenza	14-Apr	22-Apr	-	104	112	-
	Porto	30-Mar	07-Apr	-	89	97	-
	Sevilla	09-Apr	17-Apr	-	99	107	-
	Thiva	27-Mar	04-Apr	-	86	94	-
Vines (starting at BBCH53, 166 g/ha)	Châteaudun	24-May	01-Jun	-	144	152	-
	Hamburg	03-Jun	11-Jun	-	154	162	-
	Kremsmünster	03-Jun	11-Jun	-	154	162	-
	Piacenza	24-May	01-Jun	-	144	152	-
	Porto	14-May	22-May	-	134	142	-
	Sevilla	04-May	12-May	-	124	132	-
	Thiva	01-May	09-May	-	121	129	-
Vines (ending at BBCH83, 166 g/ha)	Châteaudun	21-Sep	29-Sep	-	264	272	-
	Hamburg	15-Sep	23-Sep	-	258	266	-
	Kremsmünster	15-Sep	23-Sep	-	258	266	-
	Piacenza	21-Sep	29-Sep	-	264	272	-
	Porto	01-Sep	09-Sep	-	244	252	-
	Sevilla	24-Sep	02-Oct	-	267	275	-
	Thiva	03-Sep	11-Sep	-	246	254	-

Table 8.8-3: Input parameters related to active substance zoxamide and its metabolites for PEC_{gw} calculations

Compound	Zoxamide	RH- 127450	RH-24549	RH- 163353	RH-141455	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	336.65	302.15	205	332.15	235.02	Y/ EFSA Journal 2017;15(9):4980
Water solubility (mg/L) at 20°C:	0.681	1000	1000	1000	1000	Y/ EFSA Journal 2017;15(9):4980
Saturated vapour pressure (Pa) at 25°C :	$<1.3\times10^{-5}$	0	0	0	0	Y/ EFSA Journal 2017;15(9):4980
Henry's Law constant ($Pa/m^3/mol^{-1}$) (20 to 25°C)	$<6.59\times10^{-3}$	0	0	0	0	Y/ EFSA Journal 2017;15(9):4980
Henry's Law constant ($Pa/m^3/mol^{-1}$) (30 to 35°C)	$<1.318\times10^{-2}$	0	0	0	0	Calculated automatically by PELMO
DT_{50} in soil (d)	5.5	5.2	5.4	10.8	19.6	Y/ EFSA Journal 2017;15(9):4

Compound	Zoxamide	RH- 127450	RH-24549	RH- 163353	RH-141455	Value in accordance with EU endpoint y/n/ Reference*
						980
K_{foc} (mL/g)/K_{fom}	1207/700	669/388	90.5/52.5	68/39	2.8/1.6	Y/ EFSA Journal 2017;15(9):4980
K_{foc} (mL/g)/K_{fom} *	1179/684	593/344	90.5/52.5	67/39	2.8/1.6	N/ EFSA Journal 2017;15(9):4980 (Geometric mean used in accordance with EFSA Journal 2014;12(5):3662)
1/n	0.969	0.9	0.811	0.892	1	Y/ EFSA Journal 2017;15(9):4980
Plant uptake factor	0	0	0	0	0	Y/ EFSA Journal 2017;15(9):4980
Formation fraction	-	0.24 (from zoxamide)	0.38 (from zoxamide)	0.18 (from zoxamide)	1 (from RH-24549)	Y/ EFSA Journal 2017;15(9):4980

*Dataset used as an alternative to address MS where EU agreed endpoints are not accepted.

Table 8.8-4: PEC_{gw} for zoxamide and its metabolites on potato and grape (with FOCUS PEARL 5.5.5) - using the EU agreed endpoints

Crop	Scenario	80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)				
		zoxamide	RH-127450	RH-24549	RH-163353	RH-141455
potato early (from BBCH21)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.888
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.921
	Jokioinen	<0.001	<0.001	<0.001	<0.001	4.652
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.304
	Okehampton	<0.001	<0.001	<0.001	<0.001	1.230
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.358
	Porto	<0.001	<0.001	<0.001	<0.001	0.172

	Sevilla	<0.001	<0.001	<0.001	<0.001	0.032
	Thiva	<0.001	<0.001	<0.001	<0.001	0.194
potato late (till BBCH79)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.383
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.104
	Jokioinen	<0.001	<0.001	<0.001	<0.001	1.977
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.829
	Okehampton	<0.001	<0.001	<0.001	<0.001	0.909
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.372
	Porto	<0.001	<0.001	<0.001	<0.001	0.048
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.011
	Thiva	<0.001	<0.001	<0.001	<0.001	0.071
Vines BBCH 13	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.090
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.757
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.977
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.465
	Porto	<0.001	<0.001	<0.001	<0.001	0.339
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.424
	Thiva	<0.001	<0.001	<0.001	<0.001	0.200
Vines BBCH 53	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.115
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.994
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.971
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.467
	Porto	<0.001	<0.001	<0.001	<0.001	0.233
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.425
	Thiva	<0.001	<0.001	<0.001	<0.001	0.253
Vines BBCH 83	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.191
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.426
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.186
	Piacenza	<0.001	<0.001	<0.001	<0.001	1.513
	Porto	<0.001	<0.001	<0.001	<0.001	0.897
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.835
	Thiva	<0.001	<0.001	<0.001	<0.001	0.625

Table 8.8-5: PEC_{gw} for zoxamide and its metabolites on potato and grape (with FOCUS PELMO 6.6.4) - using the EU agreed endpoints

Crop	Scenario	80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)				
		zoxamide	RH-127450	RH-24549	RH-163353	RH-141455
potato early (from BBCH21)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.745
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.856
	Jokioinen	<0.001	<0.001	<0.001	<0.001	4.384
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.328
	Okehampton	<0.001	<0.001	<0.001	<0.001	1.259
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.397
	Porto	<0.001	<0.001	<0.001	<0.001	0.302
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.070
	Thiva	<0.001	<0.001	<0.001	<0.001	0.182
potato late (till BBCH79)	Châteaudun	<0.001	<0.001	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.583
	Jokioinen	<0.001	<0.001	<0.001	<0.001	2.037
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.966
	Okehampton	<0.001	<0.001	<0.001	<0.001	0.900
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.343
	Porto	<0.001	<0.001	<0.001	<0.001	0.156
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.021
	Thiva	<0.001	<0.001	<0.001	<0.001	0.047
Vines BBCH 13	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.061
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.721
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.369
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.799
	Porto	<0.001	<0.001	<0.001	<0.001	0.667
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.257
	Thiva	<0.001	<0.001	<0.001	<0.001	0.270
Vines BBCH 53	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.946
	Hamburg	<0.001	<0.001	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.459
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.555
	Porto	<0.001	<0.001	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001	<0.001	<0.001

Vines BBCH 83	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.131
	Hamburg	<0.001	<0.001	<0.001	<0.001	3.224
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.441
	Piacenza	<0.001	<0.001	<0.001	<0.001	1.762
	Porto	<0.001	<0.001	<0.001	<0.001	1.128
	Sevilla	<0.001	<0.001	<0.001	<0.001	1.125
	Thiva	<0.001	<0.001	<0.001	<0.001	0.775

Table 8.8-6: PEC_{gw} for zoxamide and its metabolites on potato and grape (with FOCUS PEARL 5.5.5) - using the geomean Koc

Crop	Scenario	80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)				
		zoxamide	RH-127450	RH-24549	RH-163353	RH-141455
potato early (from BBCH21)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.888
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.921
	Jokioinen	<0.001	<0.001	<0.001	<0.001	4.652
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.304
	Okehampton	<0.001	<0.001	<0.001	<0.001	1.230
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.358
	Porto	<0.001	<0.001	<0.001	<0.001	0.172
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.032
	Thiva	<0.001	<0.001	<0.001	<0.001	0.195
potato late (till BBCH79)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.383
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.104
	Jokioinen	<0.001	<0.001	<0.001	<0.001	1.977
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.829
	Okehampton	<0.001	<0.001	<0.001	<0.001	0.909
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.372
	Porto	<0.001	<0.001	<0.001	<0.001	0.048
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.011
	Thiva	<0.001	<0.001	<0.001	<0.001	0.071
Vines BBCH 13	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.091
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.757
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.977
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.465
	Porto	<0.001	<0.001	<0.001	<0.001	0.339
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.424

	Thiva	<0.001	<0.001	<0.001	<0.001	0.200
Vines BBCH 53	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.115
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.994
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.971
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.467
	Porto	<0.001	<0.001	<0.001	<0.001	0.293
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.426
	Thiva	<0.001	<0.001	<0.001	<0.001	0.253
Vines BBCH 83	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.192
	Hamburg	<0.001	<0.001	<0.001	<0.001	2.426
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.189
	Piacenza	<0.001	<0.001	<0.001	<0.001	1.513
	Porto	<0.001	<0.001	<0.001	<0.001	0.897
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.835
	Thiva	<0.001	<0.001	<0.001	<0.001	0.625

Table 8.8-7: PEC_{gw} for zoxamide and its metabolites on potato and grape (with FOCUS PELMO 6.6.4) - using the geomean Koc

Crop	Scenario	80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)				
		zoxamide	RH-127450	RH-24549	RH-163353	RH-141455
potato early (from BBCH21)	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.745
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.854
	Jokioinen	<0.001	<0.001	<0.001	<0.001	4.381
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.327
	Okehampton	<0.001	<0.001	<0.001	<0.001	1.258
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.397
	Porto	<0.001	<0.001	<0.001	<0.001	0.302
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.07
	Thiva	<0.001	<0.001	<0.001	<0.001	0.182
potato late (till BBCH79)	Châteaudun	<0.001	<0.001	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.582
	Jokioinen	<0.001	<0.001	<0.001	<0.001	2.037
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	0.966
	Okehampton	<0.001	<0.001	<0.001	<0.001	0.900
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.343
	Porto	<0.001	<0.001	<0.001	<0.001	0.156
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.020

	Thiva	<0.001	<0.001	<0.001	<0.001	0.047
Vines BBCH 13	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.061
	Hamburg	<0.001	<0.001	<0.001	<0.001	1.720
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.369
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.799
	Porto	<0.001	<0.001	<0.001	<0.001	0.667
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.257
	Thiva	<0.001	<0.001	<0.001	<0.001	0.270
Vines BBCH 53	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.946
	Hamburg	<0.001	<0.001	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.459
	Piacenza	<0.001	<0.001	<0.001	<0.001	0.555
	Porto	<0.001	<0.001	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001	<0.001	<0.001
Vines BBCH 83	Châteaudun	<0.001	<0.001	<0.001	<0.001	1.130
	Hamburg	<0.001	<0.001	<0.001	<0.001	3.224
	Kremsmünster	<0.001	<0.001	<0.001	<0.001	1.441
	Piacenza	<0.001	<0.001	<0.001	<0.001	1.760
	Porto	<0.001	<0.001	<0.001	<0.001	1.124
	Sevilla	<0.001	<0.001	<0.001	<0.001	1.119
	Thiva	<0.001	<0.001	<0.001	<0.001	0.773

8.9 Predicted Environmental Concentrations in surface water (PEC_{sw}) (KCP 9.2.5)

zRMS Comments:	The PECsw/sed assessment for active substances and their metabolites was accepted. STEP 1 & 2 and STEP 3 and Step4 were used for PECsw and PECsed assessment. Most of used endpoints for active substances and their metabolites were agreed at the EU level. In the list of endpoints for active substances and its metabolites for Kfoc the only arithmetic mean is available, but for calculations of PECsw for active substance and its metabolites the geometric Kfoc values were used. This approach was accepted as it represents a worse case. The application dates are accepted. **Zoxamide:** The Applicant submitted calculations PECsw/sed for two scenarios Set 1 and Set 2 for early and late application and single and multiple applications.

In Step 4 mitigation measures were proposed. Two options of mitigation measures were submitted: based on Landscape & Mitigation guidance and based on VFSmod assessment. The max PECsw for Central Zone considering D3, D4, D5, R1 and R3 scenarios for EU agreed Kfoc and geometric mean of Kfoc are presented in the tables below:

Crop	Application rate g a.s./ha	Mitigation measures L&M	max PECsw µg/L	Mitigation measures VFSmod	max PECsw µg/L
potato (early) the EU agreed endpoints	1 x 135	5 m VFS + 5 m NSS	0.3465 R1 stream	na*	na
	3 x 135	10 m VFS + 10 m NSS	0.3436 R3 stream	5 m VFS + 5 m NSS	0.2075 R3 stream
potato (early) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS	0.2467 R1 stream	5 m VFS + 5 m NSS	0.2909 R3 stream
	3 x 135	15 m VFS + 15 m NSS	0.2693 R3 stream	5 m VFS + 5 m NSS	0.2075 R3 stream
potato (late) the EU agreed endpoints	1 x 135	10 m VFS + 10 m NSS	0.2788 R1 stream	5 m VFS + 5 m NSS	0.2065 R1 stream
	3 x 135	10 m VFS + 10 m NSS	0.3303 R1 stream	5 m VFS + 5 m NSS	0.2079 R3 stream
potato (late) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS	0.2848 R1 stream	5 m VFS + 5 m NSS	0.2915 R3 stream
	3 x 135	10 m VFS + 10 m NSS	0.3368 R1 stream	5 m VFS + 5 m NSS	0.2079 R3 stream

na – not available

Crop	Application rate g a.s./ha	Mitigation measures L&M	max PECsw µg/L	Mitigation measures VFSmod	max PECsw µg/L
potato (early) the geom mean of Kfoc	3 x 130	10 m VFS + 10 m NSS	0.3370 R3 stream	5 m VFS + 5 m NSS	0.2075 R3 stream

Crop	Application rate g a.s./ha	Mitigation measures L&M	max PECsw µg/L	Mitigation measures VFSmod	max PECsw µg/L
vine (BBCH13) the EU agreed endpoints	1 x 135	10 m VFS + 10 m NSS	0.3189 R3 stream	5 m VFS + 5 m NSS + 50% DRT	0.2848 R3 stream
	2 x 135	10 m VFS + 10 m NSS	0.3189 R3 stream	5 m VFS + 5 m NSS + 50% DRT	0.2557 R3 stream
vine (BBCH13) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS	0.3253 R3 stream	5 m VFS + 5 m NSS + 50% DRT	0.2848 R3 stream
	2 x 135	10 m VFS + 10 m NSS	0.3253 R3 stream	5 m VFS + 5 m NSS + 50% DRT	0.2557 R3 stream
vine (late) the EU agreed endpoints	1 x 135	10 m VFS + 10 m NSS + 75% DRT	0.3145 R4 stream	5 m VFS + 5 m NSS + 90% DRT	0.2168 R3 stream

	2 x 135	10 m VFS + 10 m NSS + 50% DRT	0.3393 R3 stream	5 m VFS + 5 m NSS + 90% DRT	0.1914 R3 stream
vine (late) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS + 75% DRT	0.3174 R4 stream	5 m VFS + 5 m NSS + 90% DRT	0.2168 R3 stream
	2 x 135	10 m VFS + 10 m NSS + 50% DRT	0.3393 R3 stream	5 m VFS + 5 m NSS + 90% DRT	0.1915 R3 stream

In case of PL national requirements (geometric mean of Kfoc and R1 scenario), the surrogate crop for vines was used. The proposed mitigation measures are presented in the table below:

Crop	Application rate g a.s./ha	Mitigation measures L&M	max PECsw µg/L	Mitigation measures VFSmod	max PECsw µg/L
pome fruits (BBCH13) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS	0.1434 R1 stream	5 m VFS + 5 m NSS + 50% DRT	0.2034 R1 stream
	2 x 135	10 m VFS + NSS	0.1245 R1 stream	5 m VFS + 5 m NSS + 50% DRT	0.1827 R1 stream
pome fruits (BBCH53) the geom mean of Kfoc	1 x 135	10 m VFS + 10 m NSS + 50% DRT	0.2772 R1 stream	5 m VFS + 5 m NSS + 90% DRT	0.1557 R1 stream
	2 x 135	10 m VFS + 10 m NSS + 50% DRT	0.2424 R1 stream	5 m VFS + 5 m NSS + 75% DRT	0.3372 R1 stream

Metabolites of zoxamide. In Step 2, the North Europe scenario was taken into account as representative for Central Europe. The PECsw for metabolites (based on single and multiple application) are presented in Tables 8.9-43 to 8.9-82.

Formulation. The PECsw for the formulation GLOB2013F submitted by the Applicant was accepted.

The relevant mitigation measure will be recommended in ecotoxicological section.

8.9.1 Justification for new endpoints

No other endpoints than the ones agreed during the EU Review were used for the calculation of predicted environmental concentrations in surface water.

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

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

Plant protection product	GLOB2013F

Use No.	1	2	3
Crop	Potato	Grape	Grape
Application rate (kg as/ha)	zoxamide: 0.135 kg/ha	zoxamide : 135 g/ha	zoxamide : 166 g/ha
Number of applications/interval (d)	3 / 7d	2/8d	2/8d
Application period (step 2)	Oct-Feb March-May June-Sep		
Crop interception (Step 2)	Average crop cover	Minimal crop cover (worst case at BBCH13, also covers later stages because the effective application rate is higher at BBCH13)	
Application window (Step 3)	Set 1 (early): windows starting at BBCH 21 Set 2 (late): windows ending at BBCH79 Length: 44 d*	1st application: At BBCH13 2nd application: 8 days after the 1st Length: 38d* Crop selection at Step 3: Vines, early (PL specific SW scenarios: pome/stone fruit, early - modified drift loading values to those of vines, early)	First set: 1st application: At BBCH53 2nd application: 8 days after the 1st Second set: 1st application: 8 days before BBCH83 2nd application: At BBCH83 Length: 38d* Crop selection at Step 3: Vines, late (PL specific SW scenarios: pome/stone fruit, late - modified drift loading values to those of vines, late)
Application method	Ground spray	Air blast	Air blast
CAM (Chemical application method)	CAM2 (foliar)		
Soil depth (cm)	4		
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 SWAN v5.0.1		

* As recommended in FOCUS [30 + (application number-1)*interval] days]*

Table 8.9-2: FOCUS Step 3 Scenario related input parameters for $PEC_{sw/sed}$ calculations for the application of GLOB2013F

Crop	Scenario	Application window used in modelling		Respective Julian dates	
		start	end	start	end
Potato (early)	D3 Ditch	30-May	13-Jul	150	194
	D4 Pond/Stream	17-Jun	31-Jul	168	212
	D6 Ditch (1st)	24-Apr	07-Jun	114	158
	D6 Ditch (2nd)	21-Aug	04-Oct	233	277
	R1 Pond/Stream	20-May	03-Jul	140	184
	R2 Stream	06-Apr	20-May	96	140
	R3 Stream	24-Apr	07-Jun	114	158

Potato (early) single application	D3 Ditch	30-May	29-Jun	150	180
	D4 Pond/Stream	17-Jun	17-Jul	168	198
	D6 Ditch (1st)	24-Apr	24-May	114	144
	D6 Ditch (2nd)	21-Aug	20-Sep	233	263
	R1 Pond/Stream	20-May	19-Jun	140	170
	R2 Stream	06-Apr	06-May	96	126
	R3 Stream	24-Apr	24-May	114	144
Potato (late)	D3 Ditch	12-Jul	25-Aug	193	237
	D4 Pond/Stream	29-Jul	11-Sep	210	254
	D6 Ditch (1st)	15-May	28-Jun	135	179
	D6 Ditch (2nd)	21-Sep	04-Nov	264	308
	R1 Pond/Stream	29-Jun	12-Aug	180	224
	R2 Stream	26-Apr	09-Jun	116	160
	R3 Stream	15-Jun	29-Jul	166	210
Potato (late) single application	D3 Ditch	26-Jul	25-Aug	207	237
	D4 Pond/Stream	12-Aug	11-Sep	224	254
	D6 Ditch (1st)	29-May	28-Jun	149	179
	D6 Ditch (2nd)	05-Oct	04-Nov	278	308
	R1 Pond/Stream	13-Jul	12-Aug	194	224
	R2 Stream	10-May	09-Jun	130	160
	R3 Stream	29-Jun	29-Jul	180	210
Vines BBCH 13	D6 Ditch	11-Feb	21-Mar	42	80
	R1 Pond/Stream	24-Apr	01-Jun	114	152
	R2 Stream	30-Mar	07-May	89	127
	R3 Stream	14-Apr	22-May	104	142
	R4 Stream	24-Mar	01-May	83	121
Vines BBCH 13 single application	D6 Ditch	11-Feb	13-Mar	42	72
	R1 Pond/Stream	24-Apr	24-May	114	144
	R2 Stream	30-Mar	29-Apr	89	119
	R3 Stream	14-Apr	14-May	104	134
	R4 Stream	24-Mar	23-Apr	83	113
Vines BBCH 53	D6 Ditch	12-Mar	19-Apr	71	109
	R1 Pond/Stream	19-May	26-Jun	139	177
	R2 Stream	14-May	21-Jun	134	172
	R3 Stream	24-May	01-Jul	144	182
	R4 Stream	07-May	14-Jun	127	165
Vines BBCH 53 single application	D6 Ditch	12-Mar	11-Apr	71	101
	R1 Pond/Stream	19-May	18-Jun	139	169
	R2 Stream	14-May	13-Jun	134	164
	R3 Stream	24-May	23-Jun	144	174
	R4 Stream	07-May	06-Jun	127	157
Vines BBCH 83	D6 Ditch	27-Jul	03-Sep	208	246
	R1 Pond/Stream	11-Aug	18-Sep	223	261
	R2 Stream	02-Aug	09-Sep	214	252
	R3 Stream	22-Aug	29-Sep	234	272
	R4 Stream	22-Jul	29-Aug	203	241
Vines BBCH 83 single application	D6 Ditch	04-Aug	03-Sep	216	246
	R1 Pond/Stream	19-Aug	18-Sep	231	261
	R2 Stream	10-Aug	09-Sep	222	252
	R3 Stream	30-Aug	29-Sep	242	272
	R4 Stream	30-Jul	29-Aug	211	241
Vines BBCH 13 (pome/stone fruit)*	D3 Ditch	22-Apr	30-May	112	150
	D4 Pond/Stream	27-Apr	04-Jun	117	155
	R1 Pond/Stream	22-Apr	30-May	112	150
	D3 Ditch	22-Apr	22-May	112	142

Vines BBCH 13 single application (pome/stone fruit)*	D4 Pond/Stream	27-Apr	27-May	117	147
	R1 Pond/Stream	22-Apr	22-May	112	142
Vines BBCH 53 (pome/stone fruit)*	D3 Ditch	30-May	07-Jul	150	188
	D4 Pond/Stream	03-Jun	11-Jul	154	192
	R1 Pond/Stream	30-May	07-Jul	150	188
Vines BBCH 53 single application (pome/stone fruit)*	D3 Ditch	30-May	29-Jun	150	180
	D4 Pond/Stream	03-Jun	03-Jul	154	184
	R1 Pond/Stream	30-May	29-Jun	150	180
Vines BBCH 83 (pome/stone fruit)*	D3 Ditch	11-Aug	18-Sep	223	261
	D4 Pond/Stream	12-Aug	19-Sep	224	262
	R1 Pond/Stream	11-Aug	18-Sep	223	261
Vines BBCH 83 single application (pome/stone fruit)*	D3 Ditch	19-Aug	18-Sep	231	261
	D4 Pond/Stream	20-Aug	19-Sep	232	262
	R1 Pond/Stream	19-Aug	18-Sep	231	261

*Surrogate crop to cover PL scenarios D3, D4, R1. Dates chosen in AppDate to reflect the exact BBCH stages (13, 53, 83) like in vine.

8.9.2.1 Zoxamide and its metabolites

Table 8.9-3: Input parameters related to active substance zoxamide and its metabolites for $PEC_{sw/sed}$ calculations STEP 1/2 and 3/4

Compound	Zoxamide	RH-127450	RH-24549	RH-163353	RH-141455	RH-139432	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	336.65	302.15	205	332.15	235.02	204.06	Y/ EFSA Journal 2017;15(9) :4980
Saturated vapour pressure (Pa)	1.3 x10^{-5}	0	0	0	0	0	Y/ EFSA Journal 2017;15(9):4980
Water solubility (mg/L)	0.681	1000	1000	1000	1000	1000	Y/ EFSA Journal 2017;15(9):4980
Diffusion coefficient in water (m^2/d)	not required for Step 1+2/ 4.3 x 10^{-5}						default
Diffusion coefficient in air (m^2/d)	not required for Step 1+2/ 0.43						default
Kfoc (mL/g)/Kfom	1207/700	669/388	90.55/52.5	68/39	2.8/1.6	10	Y/ EFSA Journal 2017;15(9):4980

Compound	Zoxamide	RH-127450	RH-24549	RH-163353	RH-141455	RH-139432	Value in accordance to EU endpoint y/n/ Reference
Kfoc (mL/g)/Kfom **	1179/684	593/344	90.5/52.5	67/39	2.8/1.6	10	N/ EFSA Journal 2017;15(9):4980 (Geometric mean used in accordance with EFSA Journal 2014;12(5):3662)
Freundlich Exponent 1/n	0.969	0.9 (default)	0.811	0.892	1	1	Y/ EFSA Journal 2017;15(9):4980
Plant Uptake	not required for Step 1+2/ 0 for step 3+4 (when performed)						default
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)						default
$DT_{50,soil}$ (d)	5.5	5.2	5.4	10.8	19.6	1000	Y/ EFSA Journal 2017;15(9):4980
$DT_{50,water}$ (d)	(step3-4)* set 1: 1000 set 2: 6.4	Set 1: 1000 Set 2: 237	1000	1000	1000	1000	Y/ EFSA Journal 2017;15(9):4980
$DT_{50,sed}$ (d)	(step 3-4)* set 1: 6.4 set 2: 1000	Set 1: 237 Set 2: 1000	1000	1000	1000	1000	Y/ EFSA Journal 2017;15(9):4980
$DT_{50,whole\ system}$ (d)	6.4	237	1000	1000	1000	1000	Y/ EFSA Journal 2017;15(9):4980
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 15.1 Total system: 39.3	Soil:33.8 Total system: 5	Soil:15 Total system: 20.6	Soil:8.4 Total system: 2.1	Soil:4.9 Total system: 42.4	Y/ EFSA Journal 2017;15(9):4980
Formation fraction / precursor (Step 3):	-	Soil: 0.24 Water: 0.38 Sediment:	Soil: 0.38 Water: 1 Sediment: 1	Soil: 0.18 Water: 1 Sediment: 1	Soil: 1 (default) Water: 1 Sediment:	Soil: 1 (default) Water: 1 Sediment:	Y/ EFSA Journal 2017;15(9):4980

Compound	Zoxamide	RH-127450	RH-24549	RH-163353	RH-141455	RH-139432	Value in accordance to EU endpoint y/n/ Reference
		1			1	1	

* For zoxamide with Kfoc between 100 and 2000, 2 sets of simulations were conducted:
1) Ascribing the whole system DT_{50} volume (6.4d) to the sediment compartment and a default value (1000d) to the water compartment
2) Ascribing the whole system DT_{50} (6.4d) to the water compartment and a default value (1000d) to the sediment compartment
**Dataset used as an alternative to address MS where EU agreed endpoints are not accepted.

$PEC_{sw/sed}$

Table 8.9-4: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for zoxamide following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	**18.4873**	runoff/drainage	12.4801	7.0094	208.1566
Step 2						
Northern Europe	March-May	**1.4308**	runoff	0.9532	0.535	15.6931
	June-Sept	**1.4308**	runoff	0.9532	0.535	15.6931
	Oct-Feb	**2.9934**	runoff	2.0497	1.152	34.5535
Southern Europe	March-May	**2.4726**	runoff	1.6842	0.9464	28.2667
	June-Sept	**1.9517**	runoff	1.3187	0.7407	21.9799
	Oct-Feb	**2.4726**	runoff	1.6842	0.9464	28.2667
Step 3 (early)						
Set 1						
D3	ditch	**0.7069**	Drift	0.1045	0.03498	0.338
D4	pond	0.02855	Drift	0.02618	0.02335	0.0579
D4	stream	**0.5522**	Drift	0.003133	0.001045	0.01663
D6	ditch	**0.699**	Drift	0.04609	0.01539	0.1864
D6	ditch	**0.6936**	Drift	0.03006	0.01003	0.1288
R1	pond	0.05828	Run-off	0.05452	0.04896	0.1326
R1	stream	**0.5313**	Run-off	0.06333	0.02591	0.6817
R2	stream	**0.6475**	Drift	0.0103	0.007331	0.09612
R3	stream	**0.6902**	Drift	0.03417	0.0117	0.1513
Set 2						
D3	ditch	**0.7069**	Drift	0.09941	0.03343	0.342
D4	pond	0.02855	Drift	0.02139	0.01353	0.05072
D4	stream	**0.5522**	Drift	0.003129	0.001043	0.01667

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D6	ditch	**0.699**	Drift	0.04529	0.01516	0.1883
D6	ditch	**0.6936**	Drift	0.02914	0.009749	0.1315
R1	pond	0.04746	Run-off	0.03631	0.02609	0.1182
R1	stream	**0.5308**	Run-off	0.06327	0.02588	0.712
R2	stream	**0.6475**	Drift	0.01029	0.00732	0.1161
R3	stream	**0.6902**	Drift	0.03389	0.01161	0.1521
Step 3 (late)						
Set 1						
D3	ditch	**0.7072**	Drift	0.1109	0.03713	0.3466
D4	pond	0.02854	Drift	0.02609	0.02339	0.06492
D4	stream	**0.5315**	Drift	0.002471	0.000824	0.01314
D6	ditch	**0.7025**	Drift	0.06083	0.02031	0.2257
D6	ditch	**0.7072**	Drift	0.1154	0.03871	0.3607
R1	pond	0.05129	Run-off	0.04783	0.04279	0.1094
R1	stream	**0.6144**	Run-off	0.05902	0.01973	0.5161
R2	stream	**0.6577**	Drift	0.01273	0.007561	0.5028
R3	stream	**0.6916**	Drift	0.09933	0.03907	0.7378
Set 2						
D3	ditch	**0.7072**	Drift	0.1042	0.03509	0.3512
D4	pond	0.02854	Drift	0.02066	0.01377	0.05005
D4	stream	**0.5315**	Drift	0.002468	0.000823	0.01318
D6	ditch	**0.7025**	Drift	0.05799	0.01946	0.2301
D6	ditch	**0.7072**	Drift	0.1089	0.03675	0.3651
R1	pond	0.04261	Run-off	0.03141	0.02239	0.09541
R1	stream	**0.6137**	Run-off	0.05883	0.01971	0.5363
R2	stream	**0.6577**	Drift	0.01276	0.007548	0.5278
R3	stream	**0.6916**	Drift	0.09759	0.03872	0.83

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-5: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for zoxamide following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	**55.4620**	runoff/drainage	37.4403	21.0281	624.4699
Step 2						
Northern Europe	March-May	**2.1328**	runoff/drainage	1.4339	0.8052	23.7972
	June-Sept	**2.1328**	runoff/drainage	1.4339	0.8052	23.7972
	Oct-Feb	**4.6098**	runoff/drainage	3.172	1.7832	53.6941
Southern Europe	March-May	**3.7841**	runoff/drainage	2.5926	1.4572	43.7285
	June-Sept	**2.9585**	runoff/drainage	2.0133	1.1312	33.7628
	Oct-Feb	**3.7841**	runoff/drainage	2.5926	1.4572	43.7285
Step 3 (early)						
Set 1						
D3	ditch	**0.5139**	Drift	0.07883	0.052	0.2782
D4	pond	0.05267	Drift	0.04917	0.04359	0.115
D4	stream	**0.4128**	Drift	0.002919	0.002526	0.01731
D6	ditch	**0.5119**	Drift	0.05264	0.02554	0.1999
D6	ditch	**0.5079**	Drift	0.03309	0.01916	0.14
R1	pond	0.09206	Drift	0.08644	0.07851	0.2106
R1	stream	**0.7032**	Run-off	0.09415	0.03508	0.8344
R2	stream	**0.4759**	Drift	0.04433	0.02606	0.404
R3	stream	**0.7574**	Run-off	0.09395	0.0518	0.3967
Set 2						
D3	ditch	**0.5142**	Drift	0.0744	0.04944	0.3699
D4	pond	0.03696	Drift	0.02693	0.02181	0.09551
D4	stream	**0.4128**	Drift	0.002914	0.002522	0.0188
D6	ditch	**0.5119**	Drift	0.05064	0.0248	0.2384
D6	ditch	**0.5079**	Drift	0.03203	0.01866	0.1761
R1	pond	0.06533	Drift	0.05336	0.03598	0.1845
R1	stream	**0.7026**	Run-off	0.094	0.03497	0.8795
R2	stream	**0.476**	Drift	0.04427	0.02603	0.4721
R3	stream	**0.7562**	Run-off	0.09335	0.05134	0.5331
Step 3 (late)						
Set 1						
D3	ditch	**0.5146**	Drift	0.09584	0.06079	0.3028
D4	pond	0.05265	Drift	0.04961	0.0453	0.1377

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D4	stream	**0.4265**	Drift	0.00399	0.00288	0.02409
D6	ditch	**0.5118**	Drift	0.05267	0.04686	0.2
D6	ditch	**0.5141**	Drift	0.0833	0.06072	0.2949
R1	pond	0.1558	Run-off	0.147	0.1413	0.3781
R1	stream	**0.7277**	Run-off	0.1249	0.06701	1.42
R2	stream	**0.4758**	Drift	0.03456	0.01872	0.6821
R3	stream	**0.6643**	Run-off	0.1123	0.0893	0.9933
Set 2						
D3	ditch	**0.515**	Drift	0.08936	0.057	0.4025
D4	pond	0.03877	Drift	0.03079	0.02483	0.1078
D4	stream	**0.4265**	Drift	0.003983	0.002875	0.02633
D6	ditch	**0.5118**	Drift	0.05061	0.04505	0.2491
D6	ditch	**0.5145**	Drift	0.07891	0.05763	0.3615
R1	pond	0.1152	Drift	0.09425	0.07108	0.3201
R1	stream	**0.7269**	Run-off	0.1245	0.06687	1.688
R2	stream	**0.4758**	Drift	0.0345	0.01871	0.8487
R3	stream	**0.6632**	Run-off	0.1113	0.08873	1.849

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-6: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for zoxamide following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	**18.7377**	runoff/drainage	12.6600	7.1107	206.2792
Step 2						
Northern Europe	March-May	**1.4506**	runoff	0.9670	0.5428	15.5445
	June-Sept	**1.4506**	runoff	0.9670	0.5428	15.5445
	Oct-Feb	**3.0359**	runoff	2.0794	1.1687	34.2348
Southern Europe	March-May	**2.5075**	runoff	1.7086	0.9601	28.0047
	June-Sept	**1.9791**	runoff	1.3378	0.7514	21.7746
	Oct-Feb	**2.5075**	runoff	1.7086	0.9601	28.0047
Step 3 (early)						
Set 1						
D3	ditch	**0.707**	Drift	0.1046	0.03499	0.336

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D4	pond	0.02855	Drift	0.0262	0.02338	0.05737
D4	stream	**0.5522**	Drift	0.003133	0.001045	0.01662
D6	ditch	**0.699**	Drift	0.0461	0.01539	0.1856
D6	ditch	**0.6936**	Drift	0.03007	0.01003	0.1284
R1	pond	0.05905	Run-off	0.05526	0.04965	0.1327
R1	stream	**0.5427**	Run-off	0.06469	0.02636	0.6808
R2	stream	**0.6475**	Drift	0.01054	0.007439	0.09666
R3	stream	**0.6903**	Drift	0.03417	0.01171	0.1508
Set 2						
D3	ditch	**0.707**	Drift	0.09943	0.03343	0.3399
D4	pond	0.02855	Drift	0.0214	0.01354	0.05018
D4	stream	**0.5522**	Drift	0.003129	0.001043	0.01666
D6	ditch	**0.699**	Drift	0.0453	0.01516	0.1875
D6	ditch	**0.6936**	Drift	0.02915	0.009749	0.1311
R1	pond	0.0482	Run-off	0.03687	0.02638	0.1181
R1	stream	**0.5422**	Run-off	0.06463	0.02633	0.7109
R2	stream	**0.6475**	Drift	0.01053	0.007428	0.116
R3	stream	**0.6903**	Drift	0.03389	0.01162	0.1516
Step 3 (late)						
Set 1						
D3	ditch	**0.7073**	Drift	0.111	0.03714	0.3445
D4	pond	0.02854	Drift	0.02611	0.02342	0.06433
D4	stream	**0.5315**	Drift	0.002471	0.000824	0.01313
D6	ditch	**0.7025**	Drift	0.06084	0.02032	0.2247
D6	ditch	**0.7072**	Drift	0.1154	0.03872	0.3585
R1	pond	0.05187	Run-off	0.04839	0.04331	0.1094
R1	stream	**0.6276**	Run-off	0.06005	0.02008	0.5161
R2	stream	**0.6577**	Drift	0.01301	0.007653	0.4979
R3	stream	**0.6916**	Drift	0.1007	0.03964	0.7355
Set 2						
D3	ditch	**0.7073**	Drift	0.1042	0.03509	0.349
D4	pond	0.02854	Drift	0.02067	0.01378	0.04952
D4	stream	**0.5315**	Drift	0.002468	0.000823	0.01317
D6	ditch	**0.7025**	Drift	0.05799	0.01946	0.229
D6	ditch	**0.7072**	Drift	0.1089	0.03676	0.3627

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R1	pond	0.04318	Run-off	0.03183	0.02262	0.09523
R1	stream	**0.6269**	Run-off	0.05986	0.02005	0.5361
R2	stream	**0.6577**	Drift	0.01303	0.00764	0.5226
R3	stream	**0.6916**	Drift	0.09894	0.03928	0.8271

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-7: FOCUS Step 3 PEC_{sw} and PEC_{sed} for zoxamide following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	**56.2130**	drainage/runoff	37.9799	21.3320	618.8375
Step 2						
Northern Europe	March-May	**2.1626**	drainage/runoff	1.4546	0.8169	23.5738
	June-Sept	**2.1626**	drainage/runoff	1.4546	0.8169	23.5738
	Oct-Feb	**4.6755**	drainage/runoff	3.2180	1.8091	53.2010
Southern Europe	March-May	**3.8379**	drainage/runoff	2.6302	1.4783	43.3253
	June-Sept	**3.0002**	drainage/runoff	2.0424	1.1476	33.4495
	Oct-Feb	**3.8379**	drainage/runoff	2.6302	1.4783	43.3253
Step 3 (early)						
Set 1						
D3	ditch	**0.5139**	Drift	0.07886	0.05201	0.2764
D4	pond	0.05271	Drift	0.04923	0.04367	0.114
D4	stream	**0.4128**	Drift	0.002919	0.002526	0.01727
D6	ditch	**0.5119**	Drift	0.05265	0.02555	0.1989
D6	ditch	**0.5079**	Drift	0.03309	0.01917	0.1394
R1	pond	0.09303	Drift	0.08739	0.07944	0.2104
R1	stream	**0.7179**	Run-off	0.0959	0.03575	0.8327
R2	stream	**0.4759**	Drift	0.04516	0.02655	0.4051
R3	stream	**0.7734**	Run-off	0.09592	0.05253	0.3998
Set 2						
D3	ditch	**0.5142**	Drift	0.07442	0.04944	0.3669
D4	pond	0.03698	Drift	0.02695	0.02183	0.09449
D4	stream	**0.4129**	Drift	0.002914	0.002522	0.01872
D6	ditch	**0.512**	Drift	0.05065	0.0248	0.2369

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D6	ditch	**0.5079**	Drift	0.03203	0.01866	0.175
R1	pond	0.06609	Drift	0.05409	0.03644	0.184
R1	stream	**0.7172**	Run-off	0.09574	0.03564	0.8775
R2	stream	**0.476**	Drift	0.0451	0.02653	0.4729
R3	stream	**0.7722**	Run-off	0.0953	0.05206	0.5311
Step 3 (late)						
Set 1						
D3	ditch	**0.5147**	Drift	0.09588	0.06081	0.3008
D4	pond	0.0527	Drift	0.04967	0.04538	0.1366
D4	stream	**0.4265**	Drift	0.00399	0.00288	0.02403
D6	ditch	**0.5118**	Drift	0.05268	0.04687	0.1989
D6	ditch	**0.5141**	Drift	0.08332	0.06073	0.293
R1	pond	0.1583	Run-off	0.1493	0.1435	0.3796
R1	stream	**0.7422**	Run-off	0.1274	0.06822	1.396
R2	stream	**0.4758**	Drift	0.03518	0.01904	0.6739
R3	stream	**0.6781**	Run-off	0.1141	0.09081	0.9886
Set 2						
D3	ditch	**0.515**	Drift	0.08938	0.05701	0.3992
D4	pond	0.03879	Drift	0.03081	0.02485	0.1067
D4	stream	**0.4265**	Drift	0.003983	0.002876	0.02624
D6	ditch	**0.5118**	Drift	0.05061	0.04506	0.2473
D6	ditch	**0.5145**	Drift	0.07893	0.05764	0.3587
R1	pond	0.1168	Drift	0.09568	0.07217	0.32
R1	stream	**0.7414**	Run-off	0.127	0.06807	1.661
R2	stream	**0.4758**	Drift	0.03512	0.01902	0.8389
R3	stream	**0.677**	Run-off	0.113	0.09022	1.834

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-8: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for zoxamide following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	**18.4603**	drainage/runoff	12.4716	7.0049	208.1566

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 2						
Northern Europe	March-May	**1.6307**	runoff	1.0946	0.6146	18.1400
	June-Sept	**1.6307**	runoff	1.0946	0.6146	18.1400
	Oct-Feb	**3.5058**	runoff	2.4103	1.3550	40.7724
Southern Europe	March-May	**2.8808**	runoff	1.9718	1.1082	33.2283
	June-Sept	**2.2558**	runoff	1.5332	0.8614	25.6841
	Oct-Feb	**2.8808**	runoff	1.9718	1.1082	33.2283
Step 3	set 1, BBCH13					
D6	ditch	**0.7537**	Drift	0.05127	0.01723	0.2075
R1	pond	0.02601	Drift	0.02393	0.02144	0.06214
R1	stream	**0.5556**	Drift	0.01282	0.004572	0.06356
R2	stream	**0.7381**	Drift	0.008672	0.002892	0.04438
R3	stream	**0.786**	Drift	0.1329	0.0449	0.4776
R4	stream	**0.5554**	Drift	0.01272	0.004241	0.06312
Step 3	set 2, BBCH13					
D6	ditch	**0.7537**	Drift	0.05068	0.01713	0.2088
R1	pond	0.02601	Drift	0.02123	0.01492	0.05461
R1	stream	**0.5556**	Drift	0.01278	0.004563	0.06372
R2	stream	**0.7381**	Drift	0.00865	0.002885	0.04455
R3	stream	**0.786**	Drift	0.1323	0.04479	0.4983
R4	stream	**0.5554**	Drift	0.01268	0.00423	0.06327
Step 3	set 1, BBCH53					
D6	ditch	**2.835**	Drift	0.8267	0.2799	2.135
R1	pond	0.1013	Drift	0.0931	0.08666	0.2213
R1	stream	**2.083**	Drift	0.05819	0.03881	0.3394
R2	stream	**2.788**	Drift	0.04043	0.01782	0.2034
R3	stream	**2.942**	Drift	0.1573	0.05247	0.672
R4	stream	**2.047**	Drift	0.1632	0.06695	0.6525
Step 3	set 2, BBCH53					
D6	ditch	**2.835**	Drift	0.7799	0.2658	2.14
R1	pond	0.1013	Drift	0.07458	0.04945	0.1816
R1	stream	**2.083**	Drift	0.05797	0.03861	0.3773
R2	stream	**2.788**	Drift	0.04031	0.01778	0.2041
R3	stream	**2.942**	Drift	0.1543	0.05157	0.6801

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC$_{sed}$ (µg/kg)
R4	stream	**2.047**	Drift	0.163	0.06684	0.7007
Step 3	set 1, BBCH83					
D6	ditch	**2.846**	Drift	2.107	0.8996	2.98
R1	pond	0.1013	Drift	0.09306	0.0831	0.2129
R1	stream	**2.088**	Drift	0.06273	0.02092	0.2988
R2	stream	**2.798**	Drift	0.04287	0.01429	0.2133
R3	stream	**2.942**	Drift	0.1571	0.08274	0.6667
R4	stream	**2.087**	Drift	0.0624	0.0208	0.2939
Step 3	set 2, BBCH83					
D6	ditch	**2.846**	Drift	1.37	0.5315	2.738
R1	pond	0.1013	Drift	0.07275	0.04523	0.1631
R1	stream	**2.088**	Drift	0.06219	0.02075	0.301
R2	stream	**2.798**	Drift	0.04257	0.0142	0.2154
R3	stream	**2.942**	Drift	0.1534	0.0815	0.6763
R4	stream	**2.087**	Drift	0.0614	0.02049	0.2974

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-9: FOCUS Step 1, 2 and 3 PEC$_{sw}$ and PEC$_{sed}$ for zoxamide following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 1	---	**36.9207**	drainage/runoff	24.9433	14.0098	416.3132
Step 2						
Northern Europe	March-May	**2.2059**	drainage/runoff	1.4828	0.8327	24.6044
	June-Sept	**2.2059**	drainage/runoff	1.4828	0.8327	24.6044
	Oct-Feb	**4.7652**	drainage/runoff	3.2786	1.8432	55.4948
Southern Europe	March-May	**3.9121**	drainage/runoff	2.6800	1.5063	45.1980
	June-Sept	**3.0590**	drainage/runoff	2.0814	1.1695	34.9012
	Oct-Feb	**3.9121**	drainage/runoff	2.6800	1.5063	45.1980
Step 3	set 1, BBCH13					
D6	ditch	**0.698**	Drift	0.2027	0.08288	0.5491
R1	pond	0.03988	Drift	0.03719	0.0345	0.1088
R1	stream	**0.5033**	Drift	0.02487	0.01436	0.1325
R2	stream	**0.6786**	Drift	0.009842	0.0059	0.05253

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R3	stream	**0.7151**	Drift	0.1313	0.05406	0.4744
R4	stream	**0.5071**	Drift	0.08451	0.03288	0.3271
Step 3	set 2, BBCH13					
D6	ditch	**0.6982**	Drift	0.1914	0.07897	0.5725
R1	pond	0.03272	Drift	0.02614	0.0193	0.09088
R1	stream	**0.5033**	Drift	0.0248	0.01432	0.1426
R2	stream	**0.6786**	Drift	0.009811	0.005883	0.05682
R3	stream	**0.7153**	Drift	0.1309	0.05388	0.4941
R4	stream	**0.5071**	Drift	0.0844	0.0328	0.3547
Step 3	set 1, BBCH53					
D6	ditch	**2.505**	Drift	0.7304	0.2473	1.889
R1	pond	0.1582	Drift	0.1475	0.1368	0.3662
R1	stream	**1.837**	Drift	0.07597	0.04245	0.4209
R2	stream	**2.46**	Drift	0.08797	0.04122	0.6068
R3	stream	**2.596**	Drift	0.1387	0.09251	0.6207
R4	stream	**1.806**	Drift	0.1632	0.07649	0.6505
Step 3	set 2, BBCH53					
D6	ditch	**2.505**	Drift	0.6891	0.2348	2.099
R1	pond	0.1208	Drift	0.09034	0.06746	0.2918
R1	stream	**1.837**	Drift	0.07568	0.04225	0.475
R2	stream	**2.46**	Drift	0.08776	0.04111	0.6683
R3	stream	**2.596**	Drift	0.1362	0.09085	0.7154
R4	stream	**1.806**	Drift	0.163	0.07634	0.6966
Step 3	set 1, BBCH83					
D6	ditch	**3.35**	Drift	2.218	1.569	3.771
R1	pond	0.1435	Drift	0.1339	0.1209	0.3703
R1	stream	**1.842**	Drift	0.05535	0.01846	0.2698
R2	stream	**2.469**	Drift	0.03782	0.02521	0.2052
R3	stream	**2.596**	Drift	0.2224	0.07774	0.6009
R4	stream	**1.841**	Drift	0.09927	0.05145	0.4432
Step 3	set 2, BBCH83					
D6	ditch	**2.834**	Drift	1.343	0.9469	4.095
R1	pond	0.09871	Drift	0.07531	0.05063	0.2586
R1	stream	**1.842**	Drift	0.05498	0.01835	0.3005

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R2	stream	**2.469**	Drift	0.03757	0.02505	0.2354
R3	stream	**2.596**	Drift	0.2174	0.0767	0.8059
R4	stream	**1.841**	Drift	0.0988	0.05109	0.5365

Values in **bold** exceed the trigger of 0.348 µg/L

Table 8.9-10: FOCUS Step 1,2 and 3 PEC_{sw} and PEC_{sed} for zoxamide following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	18.7107	drainage/runoff	12.6514	7.1061	206.2792
Step 2						
Northern Europe	March-May	1.6534	runoff	1.1104	0.6235	17.9695
	June-Sept	1.6534	runoff	1.1104	0.6235	17.9695
	Oct-Feb	3.5558	runoff	2.4453	1.3746	40.3978
Southern Europe	March-May	2.9217	runoff	2.0003	1.1243	32.9217
	June-Sept	2.2876	runoff	1.5554	0.8739	25.4456
	Oct-Feb	2.9217	runoff	2.0003	1.1243	32.9217
Step 3	set 1, BBCH13					
D6	ditch	**0.7537**	Drift	0.05128	0.01723	0.2067
R1	pond	0.02601	Drift	0.02394	0.02146	0.06159
R1	stream	**0.5556**	Drift	0.01282	0.004643	0.06346
R2	stream	**0.7381**	Drift	0.008672	0.002892	0.04433
R3	stream	**0.786**	Drift	0.1349	0.04558	0.4826
R4	stream	**0.5554**	Drift	0.01272	0.004241	0.06302
Step 3	set 2, BBCH13					
D6	ditch	**0.7537**	Drift	0.05069	0.01712	0.208
R1	pond	0.02601	Drift	0.02124	0.01493	0.05404
R1	stream	**0.5556**	Drift	0.01278	0.004633	0.06362
R2	stream	**0.7381**	Drift	0.00865	0.002885	0.0445
R3	stream	**0.786**	Drift	0.1343	0.04547	0.5032
R4	stream	**0.5554**	Drift	0.01268	0.00423	0.06317
Step 3	set 1, BBCH53					
D6	ditch	**2.835**	Drift	0.8271	0.28	2.119

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R1	pond	0.1013	Drift	0.09315	0.08684	0.2195
R1	stream	**2.083**	Drift	0.05942	0.03922	0.3424
R2	stream	**2.788**	Drift	0.04044	0.01791	0.2032
R3	stream	**2.943**	Drift	0.1573	0.05247	0.67
R4	stream	**2.047**	Drift	0.1651	0.06758	0.6526
Step 3	set 2, BBCH53					
D6	ditch	**2.835**	Drift	0.7803	0.2658	2.123
R1	pond	0.1013	Drift	0.07462	0.04954	0.1799
R1	stream	**2.083**	Drift	0.0592	0.03902	0.3799
R2	stream	**2.788**	Drift	0.04031	0.01787	0.2038
R3	stream	**2.943**	Drift	0.1543	0.05158	0.6778
R4	stream	**2.047**	Drift	0.1649	0.06747	0.7006
Step 3	set 1, BBCH83					
D6	ditch	**2.846**	Drift	2.11	0.9012	2.957
R1	pond	0.1013	Drift	0.09311	0.0832	0.211
R1	stream	**2.088**	Drift	0.06273	0.02092	0.2981
R2	stream	**2.798**	Drift	0.04287	0.01429	0.213
R3	stream	**2.943**	Drift	0.1572	0.08315	0.6647
R4	stream	**2.087**	Drift	0.0624	0.02081	0.2934
Step 3	set 2, BBCH83					
D6	ditch	**2.846**	Drift	1.371	0.5318	2.712
R1	pond	0.1013	Drift	0.07279	0.04527	0.1614
R1	stream	**2.088**	Drift	0.06219	0.02075	0.3004
R2	stream	**2.798**	Drift	0.04257	0.0142	0.2151
R3	stream	**2.943**	Drift	0.1534	0.0819	0.674
R4	stream	**2.087**	Drift	0.06141	0.02049	0.2968

Table 8.9-11: FOCUS Step 1,2 and 3 PECsw and PECsed for zoxamide following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	37.4213	drainage/runoff	25.3028	14.2123	412.5583
Step 2						

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Northern Europe	March-May	2.2367	drainage/runoff	1.5042	0.8447	24.3734
	June-Sept	2.2367	drainage/runoff	1.5042	0.8447	24.3734
	Oct-Feb	4.8331	drainage/runoff	3.3261	1.8699	54.9852
Southern Europe	March-May	3.9677	drainage/runoff	2.7188	1.5282	44.7812
	June-Sept	3.1022	drainage/runoff	2.1115	1.1864	34.5773
	Oct-Feb	3.9677	drainage/runoff	2.7188	1.5282	44.7812
Step 3	set 1, BBCH13					
D6	ditch	**0.6981**	Drift	0.2028	0.08293	0.5449
R1	pond	0.03991	Drift	0.03723	0.03458	0.1079
R1	stream	**0.5033**	Drift	0.02535	0.01455	0.1341
R2	stream	**0.6786**	Drift	0.009842	0.0059	0.05244
R3	stream	**0.7218**	Run-off	0.1334	0.05473	0.4794
R4	stream	**0.5071**	Drift	0.08539	0.03317	0.3271
Step 3	set 2, BBCH13					
D6	ditch	**0.6982**	Drift	0.1915	0.079	0.5678
R1	pond	0.03273	Drift	0.02616	0.01932	0.08998
R1	stream	**0.5033**	Drift	0.02526	0.01451	0.1441
R2	stream	**0.6786**	Drift	0.009812	0.005884	0.05666
R3	stream	**0.7202**	Run-off	0.1329	0.05456	0.499
R4	stream	**0.5071**	Drift	0.08528	0.03309	0.3545
Step 3	set 1, BBCH53					
D6	ditch	**2.505**	Drift	0.7308	0.2474	1.874
R1	pond	0.1583	Drift	0.1477	0.1371	0.3632
R1	stream	**1.837**	Drift	0.07759	0.04299	0.425
R2	stream	**2.46**	Drift	0.08912	0.0416	0.6059
R3	stream	**2.596**	Drift	0.1388	0.09252	0.6186
R4	stream	**1.806**	Drift	0.1651	0.07713	0.6506
Step 3	set 2, BBCH53					
D6	ditch	**2.505**	Drift	0.6894	0.2349	2.08
R1	pond	0.1209	Drift	0.0904	0.06751	0.2889
R1	stream	**1.837**	Drift	0.0773	0.04279	0.4787
R2	stream	**2.46**	Drift	0.08891	0.04149	0.6668
R3	stream	**2.596**	Drift	0.1362	0.09085	0.712
R4	stream	**1.806**	Drift	0.1649	0.07698	0.6965

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 3	set 1, BBCH83					
D6	ditch	**3.352**	Drift	2.222	1.571	3.741
R1	pond	0.1437	Drift	0.1341	0.1211	0.3672
R1	stream	**1.842**	Drift	0.05535	0.01846	0.2692
R2	stream	**2.469**	Drift	0.03782	0.02522	0.2047
R3	stream	**2.596**	Drift	0.2242	0.07816	0.5991
R4	stream	**1.841**	Drift	0.1011	0.05208	0.4482
Step 3	set 2, BBCH83					
D6	ditch	**2.834**	Drift	1.344	0.9476	4.054
R1	pond	0.09872	Drift	0.07535	0.05067	0.2558
R1	stream	**1.842**	Drift	0.05498	0.01835	0.2995
R2	stream	**2.469**	Drift	0.03757	0.02505	0.2346
R3	stream	**2.596**	Drift	0.2191	0.07712	0.8023
R4	stream	**1.841**	Drift	0.1007	0.05171	0.5408

Table 8.9-12: FOCUS Step 3 PECsw and PECsed for zoxamide following a single application of GLOB2013F to grape - Surrogate crop pome/stone fruit for PL - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 3	set 1, BBCH13					
D3	ditch	**0.7624**	Drift	0.1243	0.04175	0.3989
D4	pond	0.02602	Drift	0.02404	0.02176	0.06499
D4	stream	**0.6715**	Drift	0.006045	0.002015	0.03158
R1	pond	0.02601	Drift	0.02393	0.02146	0.06199
R1	stream	**0.5565**	Drift	0.01342	0.004476	0.06619
Step 3	set 2, BBCH13					
D3	ditch	**0.7624**	Drift	0.1212	0.04085	0.4011
D4	pond	0.02602	Drift	0.02165	0.01554	0.05699
D4	stream	**0.6715**	Drift	0.00604	0.002014	0.03162
R1	pond	0.02601	Drift	0.02123	0.01493	0.05466
R1	stream	**0.5565**	Drift	0.01338	0.004462	0.06636
Step 3	set 1, BBCH53					

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D3	ditch	**2.832**	Drift	0.6978	0.2347	1.815
D4	pond	0.1013	Drift	0.09388	0.08536	0.2231
D4	stream	**2.631**	Drift	0.04559	0.01521	0.2271
R1	pond	0.1013	Drift	0.0931	0.08492	0.2147
R1	stream	**2.084**	Drift	0.05963	0.03521	0.2864
Step 3	set 2, BBCH53					
D3	ditch	**2.832**	Drift	0.6416	0.2176	1.828
D4	pond	0.1013	Drift	0.07664	0.05039	0.1809
D4	stream	**2.631**	Drift	0.04541	0.01515	0.2281
R1	pond	0.1013	Drift	0.07459	0.04826	0.176
R1	stream	**2.084**	Drift	0.0592	0.03499	0.2942
Step 3	set 1, BBCH83					
D3	ditch	**2.844**	Drift	1.63	0.633	2.736
D4	pond	0.1014	Drift	0.09378	0.08518	0.2342
D4	stream	**2.665**	Drift	0.05702	0.01901	0.2793
R1	pond	0.1013	Drift	0.09306	0.0831	0.2129
R1	stream	**2.088**	Drift	0.06273	0.02092	0.2988
Step 3	set 2, BBCH83					
D3	ditch	**2.844**	Drift	1.311	0.4975	2.683
D4	pond	0.1014	Drift	0.0742	0.04992	0.178
D4	stream	**2.665**	Drift	0.05667	0.0189	0.2809
R1	pond	0.1013	Drift	0.07275	0.04523	0.1631
R1	stream	**2.088**	Drift	0.06219	0.02075	0.301

Table 8.9-13: FOCUS Step 3 PECsw and PECsed for zoxamide following a single application of GLOB2013F to grape - Surrogate crop pome/stone fruit for PL - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 3	set 1, BBCH13					
D3	ditch	**0.7625**	Drift	0.1244	0.04175	0.3963
D4	pond	0.02602	Drift	0.02405	0.02178	0.0644
D4	stream	**0.6715**	Drift	0.006045	0.002015	0.03155

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R1	pond	0.02601	Drift	0.02395	0.02148	0.06142
R1	stream	**0.5565**	Drift	0.01342	0.004476	0.06609
Step 3	set 2, BBCH13					
D3	ditch	**0.7625**	Drift	0.1213	0.04086	0.3985
D4	pond	0.02602	Drift	0.02166	0.01555	0.05639
D4	stream	**0.6715**	Drift	0.00604	0.002014	0.03159
R1	pond	0.02601	Drift	0.02124	0.01495	0.05409
R1	stream	**0.5565**	Drift	0.01338	0.004463	0.06624
Step 3	set 1, BBCH53					
D3	ditch	**2.832**	Drift	0.6981	0.2348	1.802
D4	pond	0.1013	Drift	0.09393	0.08546	0.221
D4	stream	**2.631**	Drift	0.0456	0.01521	0.2268
R1	pond	0.1013	Drift	0.09315	0.08506	0.2129
R1	stream	**2.084**	Drift	0.05964	0.03553	0.2859
Step 3	set 2, BBCH53					
D3	ditch	**2.832**	Drift	0.6419	0.2177	1.814
D4	pond	0.1013	Drift	0.07668	0.05043	0.179
D4	stream	**2.631**	Drift	0.04541	0.01515	0.2278
R1	pond	0.1013	Drift	0.07462	0.04832	0.1743
R1	stream	**2.084**	Drift	0.0592	0.03531	0.2963
Step 3	set 1, BBCH83					
D3	ditch	**2.844**	Drift	1.632	0.6337	2.713
D4	pond	0.1014	Drift	0.09383	0.08528	0.2321
D4	stream	**2.665**	Drift	0.05702	0.01901	0.2788
R1	pond	0.1013	Drift	0.09311	0.0832	0.211
R1	stream	**2.088**	Drift	0.06273	0.02092	0.2981
Step 3	set 2, BBCH83					
D3	ditch	**2.844**	Drift	1.312	0.4978	2.658
D4	pond	0.1014	Drift	0.07423	0.04996	0.1761
D4	stream	**2.665**	Drift	0.05667	0.0189	0.2804
R1	pond	0.1013	Drift	0.07279	0.04527	0.1614
R1	stream	**2.088**	Drift	0.06219	0.02075	0.3004

Table 8.9-14: FOCUS Step 3 PEC_{sw} and PEC_{sed} for zoxamide following multiple applications of GLOB2013F to grape - Surrogate crop pome/stone fruit for PL - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 3	set 1, BBCH13					
D3	ditch	**0.6959**	Drift	0.124	0.07938	0.428
D4	pond	0.03656	Drift	0.03436	0.0314	0.09254
D4	stream	**0.6357**	Drift	0.009753	0.003253	0.05011
R1	pond	0.03991	Drift	0.03724	0.03406	0.1063
R1	stream	**0.5042**	Drift	0.01743	0.0117	0.09846
Step 3	set 2, BBCH13					
D3	ditch	**0.6961**	Drift	0.1178	0.07646	0.4799
D4	pond	0.02672	Drift	0.02096	0.01393	0.08094
D4	stream	**0.6357**	Drift	0.00973	0.003247	0.05277
R1	pond	0.03274	Drift	0.02617	0.01932	0.08929
R1	stream	**0.5042**	Drift	0.0174	0.01166	0.117
Step 3	set 1, BBCH53					
D3	ditch	**2.509**	Drift	0.6514	0.4252	1.925
D4	pond	0.1456	Drift	0.1369	0.1248	0.3221
D4	stream	**2.403**	Drift	0.09362	0.03123	0.4295
R1	pond	0.1507	Drift	0.1402	0.1254	0.313
R1	stream	**1.842**	Drift	0.05534	0.03377	0.2913
Step 3	set 2, BBCH53					
D3	ditch	**2.512**	Drift	0.5942	0.391	2.254
D4	pond	0.09821	Drift	0.07125	0.04403	0.2543
D4	stream	**2.403**	Drift	0.09256	0.03092	0.4539
R1	pond	0.1034	Drift	0.07295	0.04376	0.2535
R1	stream	**1.842**	Drift	0.05483	0.03353	0.3621
Step 3	set 1, BBCH83					
D3	ditch	**2.899**	Drift	1.77	1.195	3.593
D4	pond	0.1585	Drift	0.1492	0.1369	0.4081
D4	stream	**2.351**	Drift	0.0503	0.02987	0.2464
R1	pond	0.1435	Drift	0.1339	0.1209	0.3703
R1	stream	**1.842**	Drift	0.05535	0.01846	0.2698
Step 3	set 2, BBCH83					
D3	ditch	**2.748**	Drift	1.377	0.926	3.996

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
D4	pond	0.1201	Drift	0.09491	0.06637	0.3089
D4	stream	**2.351**	Drift	0.04999	0.02973	0.2479
R1	pond	0.09871	Drift	0.07531	0.05063	0.2586
R1	stream	**1.842**	Drift	0.05498	0.01835	0.3005

Table 8.9-15: FOCUS Step 3 PECsw and PECsed for zoxamide following multiple applications of GLOB2013F to grape - Surrogate crop pome/stone fruit for PL - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 3	set 1, BBCH13					
D3	ditch	**0.6959**	Drift	0.124	0.0794	0.425
D4	pond	0.0366	Drift	0.03441	0.03147	0.09174
D4	stream	**0.6358**	Drift	0.009754	0.003253	0.05003
R1	pond	0.03994	Drift	0.03728	0.03413	0.1054
R1	stream	**0.5042**	Drift	0.01766	0.01185	0.09913
Step 3	set 2, BBCH13					
D3	ditch	**0.6961**	Drift	0.1178	0.07648	0.4762
D4	pond	0.02672	Drift	0.02097	0.01394	0.08008
D4	stream	**0.6358**	Drift	0.00973	0.003247	0.05266
R1	pond	0.03275	Drift	0.02619	0.01933	0.08837
R1	stream	**0.5042**	Drift	0.01763	0.01181	0.1175
Step 3	set 1, BBCH53					
D3	ditch	**2.509**	Drift	0.6517	0.4254	1.91
D4	pond	0.1458	Drift	0.1371	0.1251	0.3194
D4	stream	**2.403**	Drift	0.09363	0.03124	0.4283
R1	pond	0.1509	Drift	0.1405	0.1257	0.3104
R1	stream	**1.842**	Drift	0.05534	0.03409	0.2907
Step 3	set 2, BBCH53					
D3	ditch	**2.512**	Drift	0.5944	0.3911	2.234
D4	pond	0.09821	Drift	0.07128	0.04406	0.2516
D4	stream	**2.403**	Drift	0.09257	0.03092	0.4525
R1	pond	0.1035	Drift	0.073	0.04381	0.2509

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
R1	stream	**1.842**	Drift	0.05484	0.03385	0.361
Step 3	set 1, BBCH83					
D3	ditch	**2.9**	Drift	1.772	1.197	3.561
D4	pond	0.1586	Drift	0.1494	0.1371	0.4046
D4	stream	**2.351**	Drift	0.0503	0.02987	0.246
R1	pond	0.1437	Drift	0.1341	0.1211	0.3672
R1	stream	**1.842**	Drift	0.05535	0.01846	0.2692
Step 3	set 2, BBCH83					
D3	ditch	**2.748**	Drift	1.378	0.9267	3.955
D4	pond	0.1201	Drift	0.09498	0.06642	0.3056
D4	stream	**2.351**	Drift	0.04999	0.02973	0.2475
R1	pond	0.09872	Drift	0.07535	0.05067	0.2558
R1	stream	**1.842**	Drift	0.05498	0.01835	0.2995

Max. PECsw in Step 3 obtained with set 1 were either higher (up to 0.04479 µg/L, vines BBCH83, multiple applications, R1 pond [or 0.04498 µg/L when geomean Koc is used]) or equal to those obtained with set 2 for the vast majority of scenarios. For the scenarios where max. PECsw obtained with set 2 were higher than those obtained with set 1, the difference is negligible (up to 0.0004 µg/L). Therefore, Step 4 calculations were performed with set 1 only.

For the PL specific scenarios, values obtained with geomean Koc were slightly higher to the ones obtained using the EU agreed endpoints (up to 0.001 µg/L) which is a negligible difference. Furthermore, values obtained with Set 1 were higher to those with Set 2 at the vast majority of scenarios (up to 0.152 µg/L) and only in a few cases were they lower by up to 0.003 µg/L (the difference is negligible). Therefore, Step 4 calculations were performed with zoxamide set 1 and geomean Koc endpoints only.

FOCUS Step 4

The fractional reductions were derived from the FOCUS Landscape and Mitigation Group (FOCUS, 2007) and are presented in the following table.

In addition, FOCUS Step 4 calculations were conducted for the relevant runoff scenarios, considering possible mitigation with vegetated filter strips (VFSMOD) in order to calculate more realistic PEC_{SW} values. In contrast to the solely buffer-width based FOCUS L&M approach (FOCUS 2007), VFSMOD accounts for the key drivers of the runoff reduction mechanism (Munoz-Carpena *et al.*, 2010), such as physical site properties soil, vegetation, rainstorm characteristics and the resulting hydrological response, as well as the distribution of pesticide between the sorbed and dissolved phases.

Table 8.9-16: Fractional reduction in run-off and erosion volumes and fluxes as a function of the bufferzone used during the STEP 4 refinements

Bufferzone	Fractional reduction in			
	Run-off volume	Run-off flux	Erosion volume	Erosion flux
5 meters*	40%	40%	40%	40%
10 meters	60%	60%	85%	85%
15 meters **	70%	70%	90%	90%
20 meters	80%	80%	95%	95%

* values taken from EXPOSIT 3.02

** average between 10 and 20 meters

Furthermore, according to the FOCUS AIR report (2008) an additional input to surface water from dry deposition was considered when spray drift mitigation of surface water exposure was required. The size of this input is determined using the EVA 3.2 model. Zoxamide has a vapour pressure of $<1.3 \times 10^{-5}$ Pa at 20°C which is marginally above the threshold of 1×10^{-5} Pa for substances applied to plants. EVA uses vapour pressure classes to determine the percentage volatilising/depositing over 24hrs. This also takes into account percentage crop cover anticipated since volatilisation from bare soil is less than from plant surfaces. Amount deposited reduces with distance from the treated area.

The amount of zoxamide considered to be evenly deposited over 24h led to the following input in SWAN, by distance from the treated area:

Potato, early (60% interception):
1m 0.0003 mg m^{-2} h^{-1}
5m 0.00024 mg m^{-2} h^{-1}
10m 0.00018 mg m^{-2} h^{-1}
15m 0.00012 mg m^{-2} h^{-1}
20m 0.00006 mg m^{-2} h^{-1}

Potato, late (85% interception):
1m 0.00043 mg m^{-2} h^{-1}
5m 0.00034 mg m^{-2} h^{-1}
10m 0.00026 mg m^{-2} h^{-1}
15m 0.00017 mg m^{-2} h^{-1}
20m 0.00009 mg m^{-2} h^{-1}

Grape, BBCH13 (50% interception):
3m 0.00045 mg m^{-2} h^{-1}
5m 0.00040 mg m^{-2} h^{-1}
10m 0.00030 mg m^{-2} h^{-1}

Grape, BBCH53 (60% interception):
3m 0.00066 mg m^{-2} h^{-1}
5m 0.00059 mg m^{-2} h^{-1}
10m 0.00045 mg m^{-2} h^{-1}

Grape, BBCH83 (75% interception):
3m 0.00082 mg m^{-2} h^{-1}
5m 0.00074 mg m^{-2} h^{-1}
10m 0.00056 mg m^{-2} h^{-1}

Table 8.9-17: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to potato (early) according to the central EU zone GAP according to surface water Step 4 - using the EU agreed endpoints

PEC_{sw} (µg/L)	Scenario	STEP 4 Zoxamide					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 VFSMOD
	No spray buffer (m)	1	5	10	5	10	5
None	D3 ditch	-	0.2317	0.1229	-	-	-
50%		**0.4274**	0.1158	0.06143	-	-	-
75%		0.2137	0.05791	0.03084	-	-	-
90%		0.08547	0.02691	0.01668	-	-	-
None	D4 pond	-	0.02741	0.01979	-	-	-
50%		0.02479	0.01509	0.01094	-	-	-
75%		0.01413	0.008933	0.006508	-	-	-
90%		0.007735	0.005239	0.003853	-	-	-
None	D4 stream	-	0.2332	0.1239	-	-	-
50%		**0.4297**	0.117	0.06219	-	-	-
75%		0.2153	0.05886	0.03137	-	-	-
90%		0.08667	0.02398	0.01288	-	-	-
None	D6 ditch	-	0.2291	0.1215	-	-	-
50%		**0.4226**	0.1145	0.06074	-	-	-
75%		0.2113	0.05726	0.03037	-	-	-
90%		0.08451	0.02291	0.0125	-	-	-
None	D6 ditch	-	0.2291	0.1215	-	-	-
50%		**0.4226**	0.1145	0.06074	-	-	-
75%		0.2113	0.05726	0.03037	-	-	-
90%		0.08451	0.02291	0.0125	-	-	-
None	R1 pond	-	0.05812	0.05157	0.04447	0.03102	-
50%		0.05586	0.04752	0.04396	0.03382	0.02334	-
75%		0.0467	0.04223	0.04016	0.02851	0.01951	-
90%		0.0412	0.03906	0.03788	0.02532	0.01721	-
None	R1 stream	-	**0.5313**	**0.5313**	0.3465	0.2415	-
50%		**0.5313**	**0.5313**	**0.5313**	0.3465	0.2415	-
75%		**0.5313**	**0.5313**	**0.5313**	0.3465	0.2415	-
90%		**0.5313**	**0.5313**	**0.5313**	0.3465	0.2415	-
None	R2 stream	-	0.2743	0.1459	0.2743	0.1459	-
50%		**0.505**	0.1454	0.1454	0.138	0.07357	-
75%		0.2536	0.1454	0.1454	0.09378	0.06495	-
90%		0.1454	0.1454	0.1454	0.09378	0.06495	-
None	R3 stream	-	0.2909	0.1544	0.2909	0.1544	-
50%		**0.5364**	0.1457	0.1303	0.1457	0.07762	-

75%		0.2684	0.1303	0.1303	0.08452	0.05888	-
90%		0.1303	0.1303	0.1303	0.08452	0.05888	-

Table 8.9-18: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to potato (early) according to the central EU zone GAP according to surface water Step 4 - using the EU agreed endpoints

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 VFSMOD
	No spray buffer (m)	1	5	10	5	10	5
None	D3 ditch	-	0.165	0.08652	-	-	-
50%		0.3118	0.08251	0.04326	-	-	-
75%		0.1559	0.04157	0.02362	-	-	-
90%		0.06236	0.02273	0.01504	-	-	-
None	D4 pond	-	0.05312	0.03817	-	-	-
50%		0.04941	0.03021	0.02182	-	-	-
75%		0.02927	0.01875	0.01365	-	-	-
90%		0.01719	0.01189	0.008748	-	-	-
None	D4 stream	-	0.172	0.09037	-	-	-
50%		0.3243	0.08645	0.04553	-	-	-
75%		0.1628	0.04369	0.02312	-	-	-
90%		0.06582	0.01803	0.009665	-	-	-
None	D6 ditch	-	0.1644	0.08617	-	-	-
50%		0.3106	0.08218	0.04309	-	-	-
75%		0.1553	0.04109	0.02204	-	-	-
90%		0.06211	0.01937	0.01186	-	-	-
None	D6 ditch	-	0.1644	0.08617	-	-	-
50%		0.3106	0.08218	0.04309	-	-	-
75%		0.1553	0.04109	0.02204	-	-	-
90%		0.06211	0.01937	0.01186	-	-	-
None	R1 pond	-	0.09177	0.07786	0.07505	0.05266	-
50%		0.08831	0.07043	0.06262	0.05366	0.03737	-
75%		0.06955	0.05977	0.05501	0.04297	0.02973	-
90%		0.05831	0.05337	0.05118	0.03656	0.02515	-
None	R1 stream	-	**0.7032**	**0.7032**	**0.4587**	0.3197	0.148
50%		**0.7032**	**0.7032**	**0.7032**	**0.4587**	0.3197	0.07495
75%		**0.7032**	**0.7032**	**0.7032**	**0.4587**	0.3197	0.03864
90%		**0.7032**	**0.7032**	**0.7032**	**0.4587**	0.3197	0.02072
None	R2 stream	-	**0.4198**	**0.4198**	0.2704	0.1871	-
50%		**0.4198**	**0.4198**	**0.4198**	0.2704	0.1871	-

75%		**0.4198**	**0.4198**	**0.4198**	0.2704	0.1871	-
90%		**0.4198**	**0.4198**	**0.4198**	0.2704	0.1871	-
None	R3 stream	-	**0.7574**	**0.7574**	**0.4938**	0.3436	0.2075
50%		**0.7574**	**0.7574**	**0.7574**	**0.4938**	0.3436	0.1043
75%		**0.7574**	**0.7574**	**0.7574**	**0.4938**	0.3436	0.05345
90%		**0.7574**	**0.7574**	**0.7574**	**0.4938**	0.3436	0.04508

Table 8.9-19: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to potato (late) according to the central EU zone GAP according to surface water Step 4 - using the EU agreed endpoints

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 VFSMOD
	No spray buffer (m)	1	5	10	5	10	5
None	D3 ditch	-	0.2318	0.1229	-	-	-
50%		**0.4276**	0.1159	0.06145	-	-	-
75%		0.2138	0.05859	0.03388	-	-	-
90%		0.08551	0.03242	0.02189	-	-	-
None	D4 pond	-	0.02853	0.02069	-	-	-
50%		0.02626	0.01622	0.01185	-	-	-
75%		0.01562	0.01008	0.007425	-	-	-
90%		0.009229	0.00639	0.004774	-	-	-
None	D4 stream	-	0.2246	0.1193	-	-	-
50%		**0.4138**	0.1127	0.05996	-	-	-
75%		0.2074	0.05677	0.0303	-	-	-
90%		0.08359	0.0232	0.0125	-	-	-
None	D6 ditch	-	0.2302	0.1221	-	-	-
50%		**0.4247**	0.1151	0.06104	-	-	-
75%		0.2124	0.05755	0.03052	-	-	-
90%		0.08494	0.02554	0.01545	-	-	-
None	D6 ditch	-	0.2302	0.1221	-	-	-
50%		**0.4247**	0.1151	0.06104	-	-	-
75%		0.2124	0.05755	0.03052	-	-	-
90%		0.08494	0.02554	0.01545	-	-	-
None	R1 pond	-	0.05216	0.04503	0.0418	0.02942	-
50%		0.05009	0.04095	0.03698	0.03055	0.02133	-
75%		0.0404	0.03536	0.03295	0.02494	0.01729	-
90%		0.03458	0.032	0.03054	0.02157	0.01486	-
None	R1 stream	-	**0.6144**	**0.6144**	**0.4003**	0.2788	0.2065
50%		**0.6144**	**0.6144**	**0.6144**	**0.4003**	0.2788	0.1046

75%		**0.6144**	**0.6144**	**0.6144**	**0.4003**	0.2788	0.05364
90%		**0.6144**	**0.6144**	**0.6144**	**0.4003**	0.2788	0.02307
None	R2 stream	-	0.2797	0.149	0.2797	0.149	-
50%		**0.5142**	0.1412	0.0819	0.1412	0.07553	-
75%		0.2589	0.0819	0.0819	0.072	0.03883	-
90%		0.1056	0.0819	0.0819	0.05346	0.03729	-
None	R3 stream	-	**0.4894**	**0.4894**	0.3197	0.2232	-
50%		**0.5375**	**0.4894**	**0.4894**	0.3197	0.2232	-
75%		**0.4894**	**0.4894**	**0.4894**	0.3197	0.2232	-
90%		**0.4894**	**0.4894**	**0.4894**	0.3197	0.2232	-

Table 8.9-20: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to potato (late) according to the central EU zone GAP according to surface water Step 4 - using the EU agreed endpoints

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 VFSMOD
	No spray buffer (m)	1	5	10	5	10	5
None	D3 ditch	-	0.1653	0.08665	-	-	-
50%		0.3123	0.08263	0.04543	-	-	-
75%		0.1561	0.04768	0.02976	-	-	-
90%		0.06794	0.03159	0.02169	-	-	-
None	D4 pond	-	0.05632	0.04072	-	-	-
50%		0.05351	0.03334	0.02432	-	-	-
75%		0.03332	0.02186	0.01613	-	-	-
90%		0.02121	0.01498	0.01122	-	-	-
None	D4 stream	-	0.1784	0.09392	-	-	-
50%		0.336	0.09003	0.04759	-	-	-
75%		0.1691	0.04585	0.02444	-	-	-
90%		0.06891	0.01934	0.01464	-	-	-
None	D6 ditch	-	0.1643	0.08617	-	-	-
50%		0.3106	0.08217	0.04308	-	-	-
75%		0.1553	0.04198	0.0239	-	-	-
90%		0.0621	0.02251	0.01484	-	-	-
None	D6 ditch	-	0.1643	0.08617	-	-	-
50%		0.3106	0.08217	0.04308	-	-	-
75%		0.1553	0.04198	0.0239	-	-	-
90%		0.0621	0.02251	0.01484	-	-	-
None	R1 pond	-	0.1586	0.1494	0.1127	0.07818	-
50%		0.157	0.1451	0.1397	0.09595	0.06552	-

75%		0.145	0.1383	0.1349	0.08909	0.0606	-
90%		0.1379	0.1342	0.132	0.08498	0.05765	-
None	R1 stream	-	**0.7277**	**0.7277**	**0.474**	0.3303	0.1488
50%		**0.7277**	**0.7277**	**0.7277**	**0.474**	0.3303	0.1263
75%		**0.7277**	**0.7277**	**0.7277**	**0.474**	0.3303	0.1263
90%		**0.7277**	**0.7277**	**0.7277**	**0.474**	0.3303	0.1263
None	R2 stream	-	0.3092	0.3092	0.1999	0.1378	-
50%		**0.376**	0.3092	0.3092	0.1992	0.1378	-
75%		0.3092	0.3092	0.3092	0.1992	0.1378	-
90%		0.3092	0.3092	0.3092	0.1992	0.1378	-
None	R3 stream	-	**0.6643**	**0.6643**	**0.4341**	0.3028	0.2079
50%		**0.6643**	**0.6643**	**0.6643**	**0.4341**	0.3028	0.1056
75%		**0.6643**	**0.6643**	**0.6643**	**0.4341**	0.3028	0.1044
90%		**0.6643**	**0.6643**	**0.6643**	**0.4341**	0.3028	0.1044

Table 8.9-21: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to potato (early) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**		
Nozzle reduction	Vegetative strip (m) (R scenarios only)	10	15	5 VFSMOD
	No spray buffer (m)	10	15	5
None	D3 ditch	0.1229	-	0.2317
None	D4 pond	0.01979	-	0.02741
None	D4 stream	0.1239	-	0.2332
None	D6 ditch	0.1215	-	0.2291
None	D6 ditch	0.1206	-	0.2273
None	R1 pond	0.03134	-	0.02747
None	R1 stream	0.2467	-	0.2073
None	R2 stream	0.1459	-	0.2743
None	R3 stream	0.1544	-	0.2909

Table 8.9-22: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to potato (early) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**			**3×130 g a.s/ha***
Nozzle reduction	Vegetative strip (m) (R scenarios only)	10	15	5 VFSMOD	10

	No spray buffer (m)	10	15	5	10
None	D3 ditch	0.08652	0.05868	0.165	0.0833
None	D4 pond	0.03821	0.02959	0.05317	0.03698
None	D4 stream	0.09037	0.06129	0.172	0.08705
None	D6 ditch	0.08618	0.05844	0.1644	0.08297
None	D6 ditch	0.0855	0.05799	0.1631	0.08297
None	R1 pond	0.05307	0.04071	0.05084	0.05126
None	R1 stream	0.3264	0.2505	0.148	0.314
None	R2 stream	0.1912	0.1462	0.199	0.184
None	R3 stream	**0.3512**	0.2693	0.2075	0.3377

*additionally run in order to demonstrate a safe use at 10m VFS when R3 scenario is relevant

Table 8.9-23: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to potato (late) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**		
Nozzle reduction	Vegetative strip (m) (R scenarios only)	10	15	5 VFSMOD
	No spray buffer (m)	10	15	5
None	D3 ditch	0.1229	-	0.2318
None	D4 pond	0.02069	-	0.02853
None	D4 stream	0.1193	-	0.2246
None	D6 ditch	0.1221	-	0.2303
None	D6 ditch	0.1229	-	0.2318
None	R1 pond	0.02967	-	0.02862
None	R1 stream	0.2848	-	0.2065
None	R2 stream	0.149	-	0.2797
None	R3 stream	0.228	-	0.2915

Table 8.9-24: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to potato (late) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PEC_{sw} (µg/L)	**Scenario**	**STEP 4 Zoxamide**		
Nozzle reduction	Vegetative strip (m) (R scenarios only)	10	15	5 VFSMOD
	No spray buffer (m)	10	15	5
None	D3 ditch	0.08665	-	0.1653
None	D4 pond	0.04076	-	0.05637

None	D4 stream	0.09392	-	0.1784
None	D6 ditch	0.08617	-	0.1644
None	D6 ditch	0.1852	-	0.1852
None	R1 pond	0.0791	-	0.06745
None	R1 stream	0.3368	-	0.1488
None	R2 stream	0.1409	-	0.1999
None	R3 stream	0.3092	-	0.2079

Table 8.9-25: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH13) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**0.9375**	**0.4494**	0.1582	-	-	-
50%		**0.4689**	0.2247	0.07909	-	-	-
75%		0.2344	0.1123	0.03954	-	-	-
90%		0.09375	0.04494	0.01735	-	-	-
None	R1 pond	0.04959	0.03404	0.01931	0.03404	0.01931	0.03404
50%		0.02739	0.01933	0.01139	0.01933	0.01139	0.01933
75%		0.0163	0.01198	0.007432	0.01198	0.007432	0.01198
90%		0.009646	0.007571	0.005057	0.007571	0.005057	0.007571
None	R1 stream	**0.8393**	**0.4034**	0.1431	**0.4034**	0.1431	**0.4034**
50%		**0.4208**	0.203	0.123	0.203	0.07273	0.203
75%		0.2121	0.123	0.123	0.1031	0.05199	0.1031
90%		0.123	0.123	0.123	0.07654	0.05199	0.04314
None	R2 stream	**1.115**	**0.536**	0.1898	**0.536**	0.1898	**0.536**
50%		**0.5592**	0.2694	0.09593	0.2694	0.09593	0.2694
75%		0.2812	0.1361	0.04904	0.1361	0.04904	0.1361
90%		0.1144	0.05613	0.02088	0.05613	0.02088	0.05613
None	R3 stream	**1.185**	**0.7076**	**0.7076**	**0.5686**	0.3189	**0.5686**
50%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.2848
75%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.1442
90%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.0605
None	R4 stream	**0.8391**	**0.4032**	0.143	**0.4032**	0.143	**0.4032**
50%		**0.4207**	0.203	0.07271	0.203	0.07271	0.203
75%		0.212	0.1031	0.04102	0.1031	0.03755	0.1031
90%		0.08692	0.04314	0.04102	0.04314	0.01806	0.04314

Table 8.9-26: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH13) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**0.8747**	**0.4094**	0.1393	-	-	-
50%		**0.4372**	0.2046	0.07718	-	-	-
75%		0.2186	0.1106	0.04886	-	-	-
90%		0.1019	0.06073	0.03205	-	-	-
None	R1 pond	0.07982	0.05408	0.03023	0.05408	0.03023	0.04721
50%		0.04457	0.03117	0.01822	0.03117	0.01822	0.03117
75%		0.02693	0.01973	0.01293	0.01973	0.01221	0.01973
90%		0.01637	0.01339	0.01029	0.01286	0.008616	0.01286
None	R1 stream	**0.7709**	**0.3726**	**0.3726**	**0.3618**	0.1574	**0.5054**
50%		**0.3864**	**0.3726**	**0.3726**	0.2319	0.1574	0.1823
75%		**0.3726**	**0.3726**	**0.3726**	0.2319	0.1574	0.09274
90%		**0.3726**	**0.3726**	**0.3726**	0.2319	0.1574	0.039
None	R2 stream	**1.04**	**0.4883**	0.1674	**0.4883**	0.1674	**0.6819**
50%		**0.5216**	0.2457	0.0849	0.2457	0.0849	0.2457
75%		0.2627	0.1244	0.04367	0.1244	0.04367	0.1244
90%		0.1072	0.0517	0.03157	0.0517	0.0189	0.0517
None	R3 stream	**1.091**	**0.7076**	**0.7076**	**0.5117**	0.3189	**0.713**
50%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.2557
75%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.1297
90%		**0.7076**	**0.7076**	**0.7076**	**0.459**	0.3189	0.05481
None	R4 stream	**0.776**	**0.3647**	**0.3647**	**0.364**	0.1621	**0.5086**
50%		**0.3889**	**0.3647**	**0.3647**	0.2327	0.1621	0.1833
75%		**0.3647**	**0.3647**	**0.3647**	0.2327	0.1621	0.09332
90%		**0.3647**	**0.3647**	**0.3647**	0.2327	0.1621	0.03967

Table 8.9-27: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH13) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	Scenario	STEP 4

Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**0.9376**	**0.4494**	0.1582	-	-	-
50%		**0.4689**	0.2247	0.07909	-	-	-
75%		0.2344	0.1123	0.03955	-	-	-
90%		0.09375	0.04494	0.01735	-	-	-
None	R1 pond	0.04959	0.03404	0.01932	0.03404	0.01932	0.02982
50%		0.02739	0.01934	0.01139	0.01934	0.01139	0.01934
75%		0.01631	0.01198	0.007433	0.01198	0.007433	0.01198
90%		0.009647	0.007572	0.005058	0.007572	0.005058	0.007572
None	R1 stream	**0.8393**	**0.4034**	0.1431	**0.4034**	0.1431	**0.5576**
50%		**0.4208**	0.203	0.1252	0.203	0.07273	0.203
75%		0.2121	0.1252	0.1252	0.1031	0.05293	0.1031
90%		0.1252	0.1252	0.1252	0.07792	0.05293	0.04314
None	R2 stream	**1.115**	**0.536**	0.1898	**0.536**	0.1898	**0.741**
50%		**0.5592**	0.2694	0.09594	0.2694	0.09594	0.2694
75%		0.2812	0.1361	0.04904	0.1361	0.04904	0.1361
90%		0.1144	0.05614	0.02088	0.05614	0.02088	0.05614
None	R3 stream	**1.185**	**0.7218**	**0.7218**	**0.5686**	0.3253	**0.7868**
50%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.2848
75%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.1442
90%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.0605
None	R4 stream	**0.8391**	**0.4033**	0.143	**0.4033**	0.143	**0.5575**
50%		**0.4207**	0.203	0.07271	0.203	0.07271	0.203
75%		0.212	0.1031	0.04145	0.1031	0.03755	0.1031
90%		0.08692	0.04314	0.04145	0.04314	0.01813	0.04314

Table 8.9-28: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH13) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**0.8747**	**0.4094**	0.1393	-	-	-
50%		**0.4372**	0.2047	0.07721	-	-	-
75%		0.2187	0.1106	0.04888	-	-	-
90%		0.102	0.06075	0.03206	-	-	-

None	R1 pond	0.07988	0.05412	0.03025	0.05412	0.03025	0.04725
50%		0.0446	0.0312	0.01823	0.0312	0.01823	0.0312
75%		0.02695	0.01974	0.01301	0.01974	0.01222	0.01974
90%		0.01638	0.01348	0.01037	0.01287	0.008622	0.01287
None	R1 stream	**0.7709**	**0.3797**	**0.3797**	**0.3618**	0.1605	**0.5054**
50%		**0.3864**	**0.3797**	**0.3797**	0.2362	0.1605	0.1823
75%		**0.3797**	**0.3797**	**0.3797**	0.2362	0.1605	0.09274
90%		**0.3797**	**0.3797**	**0.3797**	0.2362	0.1605	0.039
None	R2 stream	**1.04**	**0.4883**	0.1674	**0.4883**	0.1674	**0.6819**
50%		**0.5216**	0.2457	0.08491	0.2457	0.08491	0.2457
75%		0.2627	0.1244	0.04367	0.1244	0.04367	0.1244
90%		0.1072	0.0517	0.03218	0.0517	0.0189	0.0517
None	R3 stream	**1.091**	**0.7218**	**0.7218**	**0.5118**	0.3253	**0.713**
50%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.2557
75%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.1297
90%		**0.7218**	**0.7218**	**0.7218**	**0.4682**	0.3253	0.05481
None	R4 stream	**0.776**	**0.3698**	**0.3698**	**0.364**	0.1633	**0.5086**
50%		**0.3889**	**0.3698**	**0.3698**	0.235	0.1633	0.1833
75%		**0.3698**	**0.3698**	**0.3698**	0.235	0.1633	0.09333
90%		**0.3698**	**0.3698**	**0.3698**	0.235	0.1633	0.03967

Table 8.9-29: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH13) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**0.4546**	0.1601	-	-	-
50%		**0.3756**	0.2273	0.08004	-	-	-
75%		0.1878	0.1137	0.043	-	-	-
90%		0.07665	0.05127	0.02676	-	-	-
None	D4 pond	-	0.03407	0.0193	-	-	-
50%		0.02741	0.01935	0.01139	-	-	-
75%		0.01631	0.01199	0.007433	-	-	-
90%		0.009653	0.007578	0.005059	-	-	-
None	D4 stream	-	**0.487**	0.1722	-	-	-
50%		**0.5081**	0.2444	0.08683	-	-	-
75%		0.2551	0.1232	0.04413	-	-	-
90%		0.1033	0.05042	0.01852	-	-	-

None	R1 pond	-	0.03407	0.0193	0.03407	0.0193	0.03407
50%		0.0274	0.01935	0.01139	0.01935	0.01139	0.01935
75%		0.01631	0.01199	0.00743	0.01199	0.00743	0.01199
90%		0.009648	0.007574	0.005056	0.007574	0.005056	0.007574
None	R1 stream	-	**0.4038**	0.1434	**0.4038**	0.1434	**0.4038**
50%		**0.4214**	0.2034	0.0845	0.2034	0.07284	0.2034
75%		0.2124	0.1032	0.0845	0.1032	0.03759	0.1032
90%		0.08704	0.0845	0.0845	0.05192	0.03502	0.04316

Table 8.9-30: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH13) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**0.4082**	0.1389	-	-	-
50%		**0.436**	0.2041	0.06946	-	-	-
75%		0.218	0.1021	0.04011	-	-	-
90%		0.08791	0.04957	0.02685	-	-	-
None	D4 pond	-	0.04978	0.02773	-	-	-
50%		0.04098	0.02868	0.01671	-	-	-
75%		0.02476	0.01814	0.01121	-	-	-
90%		0.01504	0.01182	0.007907	-	-	-
None	D4 stream	-	**0.4564**	0.1561	-	-	-
50%		**0.4876**	0.2292	0.07881	-	-	-
75%		0.2449	0.1156	0.04046	-	-	-
90%		0.09931	0.04792	0.01756	-	-	-
None	R1 pond	-	0.05423	0.03022	0.05423	0.03022	0.05423
50%		0.04465	0.03126	0.01822	0.03126	0.01822	0.03126
75%		0.02699	0.01978	0.01222	0.01978	0.01222	0.01978
90%		0.0164	0.01289	0.009236	0.01289	0.008624	0.01289
None	R1 stream	-	**0.3623**	0.2522	**0.3623**	0.1245	**0.3623**
50%		**0.3871**	0.2522	0.2522	0.1827	0.1045	0.1827
75%		0.2522	0.2522	0.2522	0.1549	0.1045	0.09288
90%		0.2522	0.2522	0.2522	0.1549	0.1045	0.03902

Table 8.9-31: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH53) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.506**	**1.714**	**0.6209**	-	-	-
50%		**1.752**	**0.8569**	0.3104	-	-	-
75%		**0.8761**	**0.4285**	0.1577	-	-	-
90%		**0.3506**	0.18	0.08131	-	-	-
None	R1 pond	0.1766	0.1207	0.06789	0.1207	0.06789	0.1049
50%		0.09214	0.06375	0.03813	0.06375	0.03655	0.06375
75%		0.04988	0.03704	0.02454	0.03529	0.02088	0.03529
90%		0.0277	0.02222	0.01639	0.01964	0.01251	0.01821
None	R1 stream	**3.105**	**1.519**	**0.5511**	**1.519**	**0.5511**	**2.085**
50%		**1.553**	**0.7606**	**0.5089**	**0.7606**	0.2769	**0.7606**
75%		**0.7778**	**0.5089**	**0.5089**	**0.3822**	0.2243	**0.3822**
90%		**0.5089**	**0.5089**	**0.5089**	0.3253	0.2242	0.1554
None	R2 stream	**4.159**	**2.036**	**0.7394**	**2.036**	**0.7394**	**2.793**
50%		**2.082**	**1.02**	**0.3713**	**1.02**	**0.3713**	**1.02**
75%		**1.044**	**0.5126**	0.1875	**0.5126**	0.1875	**0.5126**
90%		**0.4206**	0.2078	0.08472	0.2078	0.07717	0.2078
None	R3 stream	**4.384**	**2.144**	**0.777**	**2.144**	**0.777**	**2.943**
50%		**2.192**	**1.072**	**0.3885**	**1.072**	**0.3885**	**1.072**
75%		**1.096**	**0.5366**	0.1954	**0.5366**	0.1954	**0.5366**
90%		**0.439**	0.2168	0.08088	0.2168	0.08088	0.2168
None	R4 stream	**3.054**	**1.495**	**0.6988**	**1.495**	**0.543**	**2.051**
50%		**1.529**	**0.7493**	**0.6988**	**0.7493**	0.3145	**0.7493**
75%		**0.7664**	**0.6988**	**0.6988**	**0.4515**	0.3145	**0.3765**
90%		**0.6988**	**0.6988**	**0.6988**	**0.4515**	0.3145	0.153

Table 8.9-32: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH53) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	Scenario	STEP 4

Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.102**	**1.508**	**0.5417**	-	-	-
50%		**1.551**	**0.754**	0.2709	-	-	-
75%		**0.7754**	**0.377**	0.1412	-	-	-
90%		0.3102	0.1632	0.0749	-	-	-
None	R1 pond	0.2818	0.1919	0.1076	0.1919	0.1076	0.1667
50%		0.1476	0.102	0.05902	0.102	0.05844	0.102
75%		0.08064	0.05787	0.03775	0.05713	0.03388	0.05713
90%		0.04346	0.03456	0.02501	0.0312	0.01995	0.03022
None	R1 stream	**2.749**	**1.337**	**0.6644**	**1.337**	**0.481**	**1.839**
50%		**1.375**	**0.6695**	**0.6644**	**0.6695**	0.2928	**0.6695**
75%		**0.6887**	**0.6644**	**0.6644**	**0.4248**	0.2928	0.3368
90%		**0.6644**	**0.6644**	**0.6644**	**0.4248**	0.2928	0.1374
None	R2 stream	**3.683**	**1.792**	**0.6455**	**1.792**	**0.6455**	**2.464**
50%		**1.844**	**0.8983**	0.3432	**0.8983**	0.3246	**0.8983**
75%		**0.9243**	**0.4517**	0.3432	**0.4517**	0.1641	**0.4517**
90%		**0.373**	0.3432	0.3432	0.2227	0.1546	0.1835
None	R3 stream	**3.882**	**1.887**	**0.6779**	**1.887**	**0.6779**	**2.597**
50%		**1.941**	**0.9437**	0.3393	**0.9437**	0.3393	**0.9437**
75%		**0.9706**	**0.4723**	0.1711	**0.4723**	0.1711	**0.4723**
90%		**0.3888**	0.1914	0.07115	0.1914	0.07115	0.1914
None	R4 stream	**2.705**	**1.316**	**0.6988**	**1.316**	**0.4741**	**1.81**
50%		**1.354**	**0.6988**	**0.6988**	**0.6598**	0.3145	**0.6597**
75%		**0.6988**	**0.6988**	**0.6988**	**0.4515**	0.3145	0.3318
90%		**0.6988**	**0.6988**	**0.6988**	**0.4515**	0.3145	0.1352

Table 8.9-33: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH53) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.506**	**1.714**	**0.6209**	-	-	-
50%		**1.752**	**0.857**	0.3104	-	-	-
75%		**0.8761**	**0.4285**	0.1578	-	-	-

90%		**0.3506**	0.18	0.08134	-	-	-
None	R1 pond	0.1767	0.1207	0.0679	0.1207	0.0679	0.1049
50%		0.09215	0.06376	0.03831	0.06376	0.03655	0.06376
75%		0.04989	0.03721	0.0247	0.0353	0.02088	0.0353
90%		0.02786	0.02238	0.01654	0.01974	0.01258	0.01822
None	R1 stream	**3.105**	**1.519**	**0.5512**	**1.519**	**0.5512**	**2.085**
50%		**1.553**	**0.7606**	**0.5197**	**0.7606**	0.2769	**0.7606**
75%		**0.7779**	**0.5197**	**0.5197**	**0.3822**	0.229	**0.3822**
90%		**0.5197**	**0.5197**	**0.5197**	0.3322	0.229	0.1554
None	R2 stream	**4.159**	**2.036**	**0.7394**	**2.036**	**0.7394**	**2.793**
50%		**2.082**	**1.02**	**0.3713**	**1.02**	**0.3713**	**1.02**
75%		**1.044**	**0.5126**	0.1875	**0.5126**	0.1875	**0.5126**
90%		**0.4206**	0.2078	0.08652	0.2078	0.07717	0.2078
None	R3 stream	**4.384**	**2.144**	**0.777**	**2.144**	**0.777**	**2.943**
50%		**2.192**	**1.072**	**0.3886**	**1.072**	**0.3886**	**1.072**
75%		**1.097**	**0.5367**	0.1954	**0.5367**	0.1954	**0.5367**
90%		**0.439**	0.2168	0.08088	0.2168	0.08088	0.2168
None	R4 stream	**3.054**	**1.495**	**0.7096**	**1.495**	**0.543**	**2.051**
50%		**1.529**	**0.7493**	**0.7096**	**0.7493**	0.3174	**0.7493**
75%		**0.7665**	**0.7096**	**0.7096**	**0.4558**	0.3174	**0.3765**
90%		**0.7096**	**0.7096**	**0.7096**	**0.4558**	0.3174	0.153

Table 8.9-34: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH53) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	**Scenario**	**STEP 4**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.103**	**1.508**	**0.5417**	-	-	-
50%		**1.551**	**0.754**	0.2709	-	-	-
75%		**0.7754**	**0.377**	0.1412	-	-	-
90%		0.3102	0.1633	0.07493	-	-	-
None	R1 pond	0.282	0.192	0.1076	0.192	0.1076	0.1668
50%		0.1477	0.1021	0.05929	0.1021	0.05849	0.1021
75%		0.0807	0.05814	0.03798	0.05717	0.03391	0.05717
90%		0.0437	0.03479	0.02522	0.03135	0.02005	0.03024
None	R1 stream	**2.749**	**1.337**	**0.6787**	**1.337**	**0.481**	**1.839**
50%		**1.375**	**0.6787**	**0.6787**	**0.6695**	0.2991	**0.6695**
75%		**0.6887**	**0.6787**	**0.6787**	**0.4338**	0.2991	0.3368

90%		**0.6787**	**0.6787**	**0.6787**	**0.4338**	0.2991	0.1374
None	R2 stream	**3.683**	**1.792**	**0.6455**	**1.792**	**0.6455**	**2.465**
50%		**1.844**	**0.8983**	**0.3506**	**0.8983**	0.3246	**0.8983**
75%		**0.9243**	**0.4517**	**0.3506**	**0.4517**	0.1641	**0.4517**
90%		**0.373**	**0.3506**	**0.3506**	0.2275	0.158	0.1835
None	R3 stream	**3.882**	**1.887**	**0.6779**	**1.887**	**0.6779**	**2.597**
50%		**1.941**	**0.9437**	0.3393	**0.9437**	0.3393	**0.9437**
75%		**0.9706**	**0.4723**	0.1711	**0.4723**	0.1711	**0.4723**
90%		**0.3888**	0.1915	0.07115	0.1915	0.07115	0.1915
None	R4 stream	**2.705**	**1.316**	**0.7096**	**1.316**	**0.4741**	**1.81**
50%		**1.354**	**0.7096**	**0.7096**	**0.6598**	0.3174	**0.6597**
75%		**0.7096**	**0.7096**	**0.7096**	**0.4558**	0.3174	0.3318
90%		**0.7096**	**0.7096**	**0.7096**	**0.4558**	0.3174	0.1352

Table 8.9-35: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH53) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	**Scenario**	**STEP 4**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**1.712**	**0.6204**	-	-	-
50%		**1.751**	**0.8562**	0.3102	-	-	-
75%		**0.8754**	**0.4281**	0.1551	-	-	-
90%		**0.3501**	0.1712	0.0751	-	-	-
None	D4 pond	-	0.1886	0.06804	-	-	-
50%		0.09227	0.0977	0.03663	-	-	-
75%		0.04996	0.05226	0.02092	-	-	-
90%		0.02457	0.02501	0.0115	-	-	-
None	D4 stream	-	**1.919**	**0.6964**	-	-	-
50%		**1.963**	**0.961**	**0.3492**	-	-	-
75%		**0.9828**	**0.4818**	0.1757	-	-	-
90%		**0.3949**	0.1947	0.07235	-	-	-
None	R1 pond	-	0.1883	0.06794	0.1883	0.06794	0.1883
50%		0.09213	0.09755	0.03657	0.09755	0.03657	0.09755
75%		0.04988	0.05219	0.02138	0.05219	0.02089	0.05219
90%		0.02454	0.02497	0.0132	0.02497	0.01148	0.02497
None	R1 stream	-	**1.52**	**0.5516**	**1.52**	**0.5516**	**1.52**
50%		**1.555**	**0.7611**	**0.4207**	**0.7611**	0.2772	**0.7611**
75%		**0.7784**	**0.4207**	**0.4207**	**0.3823**	0.1815	**0.3823**

90%		**0.4207**	**0.4207**	**0.4207**	0.2654	0.1815	0.1557

Table 8.9-36: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH53) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**1.511**	**0.5428**	-	-	-
50%		**1.554**	**0.7556**	0.2714	-	-	-
75%		**0.7771**	**0.3779**	0.1358	-	-	-
90%		0.3109	0.1532	0.07033	-	-	-
None	D4 pond	-	0.1771	0.09924	-	-	-
50%		0.1363	0.09412	0.05389	-	-	-
75%		0.0744	0.05268	0.03124	-	-	-
90%		0.03733	0.02785	0.01766	-	-	-
None	D4 stream	-	**1.747**	**0.6275**	-	-	-
50%		**1.797**	**0.8736**	0.3139	-	-	-
75%		**0.8985**	0.1628	0.1579	-	-	-
90%		**0.3597**	0.1764	0.06467	-	-	-
None	R1 pond	-	0.1823	0.1033	0.1814	0.1018	0.1799
50%		0.1409	0.09812	0.05726	0.09712	0.05576	0.09563
75%		0.07809	0.05604	0.03426	0.05504	0.03275	0.05354
90%		0.04045	0.03081	0.02047	0.02981	0.01896	0.02831
None	R1 stream	-	**1.34**	**0.482**	**1.34**	**0.482**	**1.34**
50%		**1.378**	**0.6709**	**0.4207**	**0.6709**	0.2424	**0.6709**
75%		**0.6902**	**0.4207**	**0.4207**	0.3372	0.1815	0.3372
90%		**0.4207**	**0.4207**	**0.4207**	0.2654	0.1815	0.1381

Table 8.9-37: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH83) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)

	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.52**	**1.721**	**0.6234**	-	-	-
50%		**1.759**	**0.8604**	0.3254	-	-	-
75%		**0.8796**	**0.4468**	0.1833	-	-	-
90%		**0.3814**	0.2114	0.09808	-	-	-
None	R1 pond	0.1785	0.1224	0.06916	0.1224	0.06916	0.1066
50%		0.09399	0.06548	0.03782	0.06548	0.03782	0.06548
75%		0.05173	0.03703	0.02215	0.03703	0.02215	0.03703
90%		0.02639	0.01995	0.01275	0.01995	0.01275	0.01995
None	R1 stream	**3.112**	**1.523**	**0.5527**	**1.523**	**0.5527**	**2.09**
50%		**1.557**	**0.7626**	0.278	**0.7626**	0.278	**0.7626**
75%		**0.7801**	**0.3837**	0.1416	**0.3837**	0.1416	**0.3837**
90%		0.3156	0.1576	0.05984	0.1576	0.05984	0.1576
None	R2 stream	**4.175**	**2.045**	**0.743**	**2.045**	**0.743**	**2.804**
50%		**2.091**	**1.025**	**0.3736**	**1.025**	**0.3736**	**1.025**
75%		**1.049**	**0.5158**	0.1892	**0.5158**	0.1892	**0.5158**
90%		**0.4235**	0.2099	0.07841	0.2099	0.07841	0.2099
None	R3 stream	**4.384**	**2.145**	**0.7771**	**2.145**	**0.7771**	**2.943**
50%		**2.193**	**1.072**	**0.3887**	**1.072**	**0.3887**	**1.072**
75%		**1.097**	**0.5368**	0.2619	**0.5368**	0.1965	**0.5368**
90%		**0.4393**	0.2619	0.2619	0.2182	0.1191	0.2182
None	R4 stream	**3.112**	**1.523**	**0.5526**	**1.523**	**0.5526**	**2.089**
50%		**1.557**	**0.7624**	0.278	**0.7624**	0.278	**0.7624**
75%		**0.78**	**0.3837**	0.1416	**0.3837**	0.1416	**0.3837**
90%		0.3155	0.1575	0.1382	0.1575	0.06185	0.1575

Table 8.9-38: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH83) according to surface water Step 4 - using the EU agreed endpoints

PECsw (µg/L)	**Scenario**	**STEP 4**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**4.174**	**2.038**	**0.7397**	-	-	-
50%		**2.097**	**1.029**	**0.3778**	-	-	-
75%		**1.06**	**0.5248**	0.2112	-	-	-
90%		**0.4405**	0.2464	0.1166	-	-	-

None	R1 pond	0.2587	0.1769	0.09961	0.1769	0.09961	0.154
50%		0.1369	0.09534	0.05506	0.09534	0.05506	0.09534
75%		0.07615	0.05462	0.03279	0.05462	0.03279	0.05462
90%		0.03973	0.03022	0.01945	0.03022	0.01945	0.03022
None	R1 stream	**2.756**	**1.341**	**0.4826**	**1.341**	**0.4826**	**1.844**
50%		**1.379**	**0.6716**	0.2433	**0.6716**	0.2433	**0.6716**
75%		**0.6911**	0.3383	0.1243	0.3383	0.1243	0.3383
90%		0.2803	0.1395	0.05289	0.1395	0.05289	0.1395
None	R2 stream	**3.697**	**1.8**	**0.6488**	**1.8**	**0.6488**	**2.475**
50%		**1.852**	**0.9028**	0.3267	**0.9028**	0.3267	**0.9028**
75%		**0.929**	**0.4546**	0.1657	**0.4546**	0.1657	**0.4546**
90%		**0.3757**	0.1854	0.06898	0.1854	0.06898	0.1854
None	R3 stream	**3.882**	**1.887**	**0.6919**	**1.887**	**0.678**	**2.597**
50%		**1.941**	**0.9438**	**0.6919**	**0.9438**	0.3394	**0.9438**
75%		**0.9707**	**0.6919**	**0.6919**	**0.4725**	0.3131	**0.4725**
90%		**0.6919**	**0.6919**	**0.6919**	**0.4501**	0.3131	0.1929
None	R4 stream	**2.755**	**1.34**	**0.7316**	**1.34**	**0.4825**	**1.844**
50%		**1.379**	**0.7316**	**0.7316**	**0.6715**	0.3273	**0.6715**
75%		**0.7316**	**0.7316**	**0.7316**	**0.4723**	0.3273	0.3382
90%		**0.7316**	**0.7316**	**0.7316**	**0.4723**	0.3273	0.1395

Table 8.9-39: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH83) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**3.52**	**1.721**	**0.6234**	-	-	-
50%		**1.759**	**0.8604**	0.3255	-	-	-
75%		**0.8796**	**0.447**	0.1834	-	-	-
90%		**0.3815**	0.2115	0.09811	-	-	-
None	R1 pond	0.1785	0.1224	0.06917	0.1224	0.06917	0.1066
50%		0.094	0.06549	0.03782	0.06549	0.03782	0.06549
75%		0.05174	0.03703	0.02215	0.03703	0.02215	0.03703
90%		0.02639	0.01995	0.01275	0.01995	0.01275	0.01995
None	R1 stream	**3.112**	**1.523**	**0.5527**	**1.523**	**0.5527**	**2.09**
50%		**1.557**	**0.7626**	0.278	**0.7626**	0.278	**0.7626**
75%		**0.7801**	**0.3838**	0.1416	**0.3838**	0.1416	**0.3838**
90%		0.3156	0.1576	0.05984	0.1576	0.05984	0.1576

None	R2 stream	**4.175**	**2.045**	**0.743**	**2.045**	**0.743**	**2.804**
50%		**2.091**	**1.025**	**0.3736**	**1.025**	**0.3736**	**1.025**
75%		**1.049**	**0.5158**	0.1892	**0.5158**	0.1892	**0.5158**
90%		**0.4235**	0.2099	0.07841	0.2099	0.07841	0.2099
None	R3 stream	**4.384**	**2.145**	**0.7771**	**2.145**	**0.7771**	**2.943**
50%		**2.193**	**1.073**	**0.3887**	**1.073**	**0.3887**	**1.073**
75%		**1.097**	**0.5368**	0.2664	**0.5368**	0.1965	**0.5368**
90%		**0.4393**	0.2664	0.2664	0.2183	0.1211	0.2183
None	R4 stream	**3.112**	**1.523**	**0.5526**	**1.523**	**0.5526**	**2.089**
50%		**1.557**	**0.7625**	0.278	**0.7625**	0.278	**0.7625**
75%		**0.78**	**0.3837**	0.1416	**0.3837**	0.1416	**0.3837**
90%		0.3155	0.1575	0.1406	0.1575	0.06294	0.1575

Table 8.9-40: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH83) according to the central EU zone GAP according to surface water Step 4 - using the geomean Koc

PECsw (µg/L)	**Scenario**	**STEP 4**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D6 ditch	**4.177**	**2.039**	**0.5659**	-	-	-
50%		**2.099**	**1.03**	**0.3781**	-	-	-
75%		**1.061**	**0.5253**	0.2114	-	-	-
90%		**0.441**	0.2467	0.1167	-	-	-
None	R1 pond	0.259	0.1771	0.08557	0.1771	0.09973	0.1542
50%		0.1371	0.09545	0.05512	0.09545	0.05512	0.09545
75%		0.07623	0.05469	0.03283	0.05469	0.03283	0.05469
90%		0.03978	0.03025	0.01947	0.03025	0.01947	0.03025
None	R1 stream	**2.756**	**1.341**	**0.3673**	**1.341**	**0.4826**	**1.844**
50%		**1.379**	**0.6716**	0.2433	**0.6716**	0.2433	**0.6716**
75%		**0.6911**	0.3383	0.1243	0.3383	0.1243	0.3383
90%		0.2804	0.1395	0.05289	0.1395	0.05289	0.1395
None	R2 stream	**3.698**	**1.8**	**0.4937**	**1.8**	**0.6488**	**2.475**
50%		**1.852**	**0.9029**	0.3267	**0.9029**	0.3267	**0.9029**
75%		**0.929**	**0.4546**	0.1657	**0.4546**	0.1657	**0.4546**
90%		**0.3757**	0.1854	0.06899	0.1854	0.06899	0.1854
None	R3 stream	**3.882**	**1.887**	**0.7064**	**1.887**	**0.678**	**2.597**
50%		**1.941**	**0.9438**	**0.7064**	**0.9438**	0.3394	**0.9438**

75%		**0.9708**	**0.7064**	**0.7064**	**0.4725**	0.3197	**0.4725**
90%		**0.7064**	**0.7064**	**0.7064**	**0.4595**	0.3197	0.1929
None	R4 stream	**2.756**	**1.34**	**0.7454**	**1.34**	**0.4825**	**1.844**
50%		**1.379**	**0.7454**	**0.7454**	**0.6715**	0.3335	**0.6715**
75%		**0.7454**	**0.7454**	**0.7454**	**0.4815**	0.3335	0.3382
90%		**0.7454**	**0.7454**	**0.7454**	**0.4815**	0.3335	0.1395

Table 8.9-41: Global maximum PEC_{sw} values for zoxamide, following a single application of GLOB2013F to grape (BBCH83) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	**Scenario**	**STEP 4**					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**1.72**	**0.623**	-	-	-
50%		**1.758**	**0.8598**	0.3115	-	-	-
75%		**0.879**	**0.4299**	0.172	-	-	-
90%		**0.3573**	0.1985	0.09268	-	-	-
None	D4 pond	-	0.1903	0.06932	-	-	-
50%		0.09414	0.09944	0.0379	-	-	-
75%		0.05182	0.05401	0.0222	-	-	-
90%		0.02643	0.02675	0.01277	-	-	-
None	D4 stream	-	**1.943**	**0.7049**	-	-	-
50%		**1.987**	**0.9728**	**0.3536**	-	-	-
75%		**0.9948**	**0.4877**	0.1787	-	-	-
90%		**0.8181**	0.1982	0.07385	-	-	-
None	R1 pond	-	0.19	0.06921	0.19	0.06921	0.19
50%		0.09398	0.09928	0.03784	0.09928	0.03784	0.09928
75%		0.05174	0.05392	0.02216	0.05392	0.02216	0.05392
90%		0.02639	0.02671	0.01275	0.02671	0.01275	0.02671
None	R1 stream	-	**1.523**	**0.5527**	**1.523**	**0.5527**	**1.523**
50%		**1.557**	**0.7627**	0.2781	**0.7627**	0.2781	**0.7627**
75%		**0.7802**	**0.3837**	0.1417	**0.3837**	0.1417	**0.3837**
90%		0.3156	0.1576	0.05985	0.1576	0.05985	0.1576

Table 8.9-42: Global maximum PEC_{sw} values for zoxamide, following multiple applications of GLOB2013F to grape (BBCH83) using the PL specific scenarios according to surface water Step 4

PECsw (µg/L)	Scenario	STEP 4					
Nozzle reduction	Vegetative strip (m)	None	None	None	5	10	5 (VFSMOD)
	No spray buffer (m)	3	5	10	5	10	5
None	D3 ditch	-	**1.757**	**0.6351**	-	-	-
50%		**1.808**	**0.8837**	0.3216	-	-	-
75%		**0.9097**	**0.4472**	0.1788	-	-	-
90%		**0.3723**	0.2088	0.09924	-	-	-
None	D4 pond	-	0.1958	0.1103	-	-	-
50%		0.1516	0.1056	0.06099	-	-	-
75%		0.08435	0.06051	0.03633	-	-	-
90%		0.04401	0.03347	0.02155	-	-	-
None	D4 stream	-	**1.71**	**0.6152**	-	-	-
50%		**1.759**	**0.8563**	0.309	-	-	-
75%		**0.8808**	**0.4298**	0.1564	-	-	-
90%		**0.3551**	0.175	0.06493	-	-	-
None	R1 pond	-	0.1771	0.09974	0.1771	0.09974	0.1771
50%		0.1371	0.09547	0.05512	0.09547	0.05512	0.09547
75%		0.07626	0.05469	0.03283	0.05469	0.03283	0.05469
90%		0.03978	0.03025	0.01947	0.03025	0.01947	0.03025
None	R1 stream	-	**1.341**	**0.4827**	**1.341**	**0.4827**	**1.341**
50%		**1.379**	**0.6717**	0.2432	**0.6717**	0.2432	**0.6717**
75%		**0.6912**	0.3382	0.1243	0.3382	0.1243	0.3382
90%		0.2803	0.1395	0.05289	0.1395	0.05289	0.1395

Metabolites of zoxamide

Table 8.9-43: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	12.0507	runoff/drainage	11.7385	11.4927	77.6892
Step 2						
Northern Europe	March-May	0.9674	drift	0.9183	0.8978	6.1678
	June-Sept	0.9674	drift	0.9183	0.8978	6.1678
	Oct-Feb	2.0112	runoff	1.9515	1.9103	13.1306
Southern Europe	March-May	1.6633	runoff	1.6071	1.5728	10.8097
	June-Sept	1.3153	runoff	1.2627	1.2353	8.4888
	Oct-Feb	1.6633	runoff	1.6071	1.5728	10.8097

Table 8.9-44: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	36.1520	runoff/drainage	35.2156	34.4781	233.0675
Step 2						
Northern Europe	March-May	1.6815	runoff/drainage	1.5798	1.5438	10.6021
	June-Sept	1.6815	runoff/drainage	1.5798	1.5438	10.6021
	Oct-Feb	3.3256	runoff/drainage	3.2072	3.1384	21.569
Southern Europe	March-May	2.7775	runoff/drainage	2.6648	2.6069	17.9134
	June-Sept	2.2295	runoff/drainage	2.1223	2.0753	14.2577
	Oct-Feb	2.7775	runoff/drainage	2.6648	2.6069	17.9134

Table 8.9-45: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	9.5245	runoff/drainage	9.4977	9.4516	8.5902
Step 2						
Northern	March-May	0.6033	runoff	0.6007	0.5977	0.5448

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Europe	June-Sept	0.6033	runoff	0.6007	0.5977	0.5448
	Oct-Feb	1.4559	runoff	1.4512	1.4441	1.3163
Southern Europe	March-May	1.1717	runoff	1.1677	1.162	1.0591
	June-Sept	0.8875	runoff	0.8842	0.8799	0.8019
	Oct-Feb	1.1717	runoff	1.1677	1.162	1.0591

Table 8.9-46: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	28.5736	runoff/drainage	28.4931	28.3548	25.7707
Step 2						
Northern Europe	March-May	0.9714	runoff/drainage	0.9665	0.9617	0.8765
	June-Sept	0.9714	runoff/drainage	0.9665	0.9617	0.8765
	Oct-Feb	2.3139	runoff/drainage	2.3057	2.2944	2.0913
Southern Europe	March-May	1.8664	runoff/drainage	1.8593	1.8502	1.6863
	June-Sept	1.4189	runoff/drainage	1.4129	1.4059	1.2814
	Oct-Feb	1.8664	runoff/drainage	1.8593	1.8502	1.6863

Table 8.9-47: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	14.7443	runoff/drainage	14.6891	14.6172	9.8545
Step 2						
Northern Europe	March-May	1.2162	runoff	1.2072	1.201	0.822
	June-Sept	1.2162	runoff	1.2072	1.201	0.822
	Oct-Feb	2.6845	runoff	2.672	2.6587	1.8198
Southern Europe	March-May	2.1951	runoff	2.1837	2.1728	1.4872
	June-Sept	1.7056	runoff	1.6954	1.6869	1.1546
	Oct-Feb	2.1951	runoff	2.1837	2.1728	1.4872

Table 8.9-48: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	44.2328	runoff/drainage	44.0674	43.8515	29.5635
Step 2						
Northern Europe	March-May	2.2888	runoff/drainage	2.2699	2.2582	1.5455
	June-Sept	2.2888	runoff/drainage	2.2699	2.2582	1.5455
	Oct-Feb	4.9424	runoff/drainage	4.9171	4.8926	3.3487
Southern Europe	March-May	4.0578	runoff/drainage	4.0347	4.0145	2.7476
	June-Sept	3.1733	runoff/drainage	3.1523	3.1364	2.1466
	Oct-Feb	4.0578	runoff/drainage	4.0347	4.0145	2.7476

Table 8.9-49: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	3.3045	runoff/drainage	3.2965	3.2805	0.0920
Step 2						
Northern Europe	March-May	0.286	runoff	0.2853	0.2839	0.008
	June-Sept	0.286	runoff	0.2853	0.2839	0.008
	Oct-Feb	0.6879	runoff	0.6862	0.6829	0.0192
Southern Europe	March-May	0.554	runoff	0.5526	0.5499	0.0155
	June-Sept	0.42	runoff	0.419	0.4169	0.0118
	Oct-Feb	0.554	runoff	0.5526	0.5499	0.0155

Table 8.9-50: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	9.9136	runoff/drainage	9.8894	9.8416	0.2761
Step 2						
Northern Europe	March-May	0.6481	runoff/drainage	0.6465	0.6434	0.0181
	June-Sept	0.6481	runoff/drainage	0.6465	0.6434	0.0181
	Oct-Feb	1.5608	runoff/drainage	1.5569	1.5494	0.0437

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Southern Europe	March-May	1.2565	runoff/drainage	1.2535	1.2474	0.0352
	June-Sept	0.9523	runoff/drainage	0.95	0.9454	0.0266
	Oct-Feb	1.2565	runoff/drainage	1.2535	1.2474	0.0352

Table 8.9-51: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-139432 following a single application of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	13.0512	runoff/drainage	13.0157	12.9526	1.2732
Step 2						
Northern Europe	March-May	1.1363	drift	1.1323	1.1268	0.1134
	June-Sept	1.1363	drift	1.1323	1.1268	0.1134
	Oct-Feb	2.3677	runoff	2.3607	2.3493	0.2365
Southern Europe	March-May	1.9573	drift	1.9513	1.9418	0.1955
	June-Sept	1.5468	drift	1.5418	1.5343	0.1544
	Oct-Feb	1.9573	drift	1.9513	1.9418	0.1955

Table 8.9-52: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-139432 following multiple applications of GLOB2013F to potato - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	39.1536	runoff/drainage	39.0471	38.8578	3.8196
Step 2						
Northern Europe	March-May	2.1763	runoff/drainage	2.1682	2.1576	0.2172
	June-Sept	2.1763	runoff/drainage	2.1682	2.1576	0.2172
	Oct-Feb	4.4046	runoff/drainage	4.3911	4.3697	0.4398
Southern Europe	March-May	3.6618	runoff/drainage	3.6501	3.6323	0.3656
	June-Sept	2.919	runoff/drainage	2.9092	2.895	0.2914
	Oct-Feb	3.6618	runoff/drainage	3.6501	3.6323	0.3656

Table 8.9-53: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	12.7078	runoff/drainage	12.4010	12.1425	72.7604
Step 2						
Northern Europe	March-May	1.0188	drift	0.9700	0.9486	5.7765
	June-Sept	1.0188	drift	0.9700	0.9486	5.7765
	Oct-Feb	2.1217	runoff	2.0617	2.0183	12.2976
Southern Europe	March-May	1.7540	runoff	1.6978	1.6617	10.1239
	June-Sept	1.3864	runoff	1.3339	1.3051	7.9502
	Oct-Feb	1.7540	runoff	1.6978	1.6617	10.1239

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-54: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	38.1234	runoff/drainage	37.2031	36.4275	218.2813
Step 2						
Northern Europe	March-May	1.7694	drainage/runoff	1.6687	1.6310	9.9295
	June-Sept	1.7694	drainage/runoff	1.6687	1.6310	9.9295
	Oct-Feb	3.5065	drainage/runoff	3.3882	3.3158	20.2007
Southern Europe	March-May	2.9275	drainage/runoff	2.8150	2.7542	16.7769
	June-Sept	2.3484	drainage/runoff	2.2419	2.1926	13.3532
	Oct-Feb	2.9275	drainage/runoff	2.8150	2.7542	16.7769

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-55: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	9.5245	runoff/drainage	9.4977	9.4516	8.5902
Step 2						
Northern	March-May	0.6033	runoff	0.6007	0.5977	0.5448

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Europe	June-Sept	0.6033	runoff	0.6007	0.5977	0.5448
	Oct-Feb	1.4559	runoff	1.4512	1.4441	1.3163
Southern Europe	March-May	1.1717	runoff	1.1677	1.1620	1.0591
	June-Sept	0.8875	runoff	0.8842	0.8799	0.8019
	Oct-Feb	1.1717	runoff	1.1677	1.1620	1.0591

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-56: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	28.5736	runoff/drainage	28.4931	28.3548	25.7707
Step 2						
Northern Europe	March-May	0.9714	drainage/runoff	0.9665	0.9617	0.8765
	June-Sept	0.9714	drainage/runoff	0.9665	0.9617	0.8765
	Oct-Feb	2.3139	drainage/runoff	2.3057	2.2944	2.0913
Southern Europe	March-May	1.8664	drainage/runoff	1.8593	1.8502	1.6863
	June-Sept	1.4189	drainage/runoff	1.4129	1.4059	1.2814
	Oct-Feb	1.8664	drainage/runoff	1.8593	1.8502	1.6863

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-57: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	14.7620	runoff/drainage	14.7071	14.6350	9.7215
Step 2						
Northern Europe	March-May	1.2176	runoff	1.2086	1.2025	0.8109
	June-Sept	1.2176	runoff	1.2086	1.2025	0.8109
	Oct-Feb	2.6877	runoff	2.6752	2.6620	1.7952
Southern Europe	March-May	2.1977	runoff	2.1864	2.1755	1.4671
	June-Sept	1.7076	runoff	1.6975	1.6890	1.1390
	Oct-Feb	2.1977	runoff	2.1864	2.1755	1.4671

Table 8.9-58: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	44.2860	runoff/drainage	44.1213	43.9051	29.1644
Step 2						
Northern Europe	March-May	2.2914	drainage/runoff	2.2727	2.2610	1.5246
	June-Sept	2.2914	drainage/runoff	2.2727	2.2610	1.5246
	Oct-Feb	4.9482	drainage/runoff	4.9231	4.8986	3.3035
Southern Europe	March-May	4.0626	drainage/runoff	4.0396	4.0194	2.7105
	June-Sept	3.1770	drainage/runoff	3.1561	3.1402	2.1176
	Oct-Feb	4.0626	drainage/runoff	4.0396	4.0194	2.7105

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-59: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	3.3045	runoff/drainage	3.2965	3.2805	0.0920
Step 2						
Northern Europe	March-May	0.2860	runoff	0.2853	0.2839	0.0080
	June-Sept	0.2860	runoff	0.2853	0.2839	0.0080
	Oct-Feb	0.6879	runoff	0.6862	0.6829	0.0192
Southern Europe	March-May	0.5540	runoff	0.5526	0.5499	0.0155
	June-Sept	0.4200	runoff	0.4190	0.4169	0.0118
	Oct-Feb	0.5540	runoff	0.5526	0.5499	0.0155

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-60: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	9.9136	runoff/drainage	9.8894	9.8416	0.2761
Step 2						

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Northern Europe	March-May	0.6481	drainage/runoff	0.6465	0.6434	0.0181
	June-Sept	0.6481	drainage/runoff	0.6465	0.6434	0.0181
	Oct-Feb	1.5608	drainage/runoff	1.5569	1.5494	0.0437
Southern Europe	March-May	1.2565	drainage/runoff	1.2535	1.2474	0.0352
	June-Sept	0.9523	drainage/runoff	0.9500	0.9454	0.0266
	Oct-Feb	1.2565	drainage/runoff	1.2535	1.2474	0.0352

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-61: FOCUS Step 1-2 PECsw and PECsed for RH-139432 following a single application of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	13.0512	runoff/drainage	13.0157	12.9526	1.2732
Step 2						
Northern Europe	March-May	1.1363	drift	1.1323	1.1268	0.1134
	June-Sept	1.1363	drift	1.1323	1.1268	0.1134
	Oct-Feb	2.3677	runoff	2.3607	2.3493	0.2365
Southern Europe	March-May	1.9573	drift	1.9513	1.9418	0.1955
	June-Sept	1.5468	drift	1.5418	1.5343	0.1544
	Oct-Feb	1.9573	drift	1.9513	1.9418	0.1955

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-62: FOCUS Step 1-2 PECsw and PECsed for RH-139432 following multiple applications of GLOB2013F to potato - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	39.1536	runoff/drainage	39.0471	38.8578	3.8196
Step 2						
Northern Europe	March-May	2.1763	drainage/runoff	2.1682	2.1576	0.2172
	June-Sept	2.1763	drainage/runoff	2.1682	2.1576	0.2172
	Oct-Feb	4.4046	drainage/runoff	4.3911	4.3697	0.4398
Southern Europe	March-May	3.6618	drainage/runoff	3.6501	3.6323	0.3656
	June-Sept	2.9190	drainage/runoff	2.9092	2.8950	0.2914

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
	Oct-Feb	3.6618	drainage/runoff	3.6501	3.6323	0.3656

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-63: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	9.5237	drainage/runoff	9.4970	9.4509	8.5902
Step 2						
Northern Europe	March-May	0.7162	runoff	0.7133	0.7098	0.6470
	June-Sept	0.7162	runoff	0.7133	0.7098	0.6470
	Oct-Feb	1.7393	runoff	1.7340	1.7256	1.5728
Southern Europe	March-May	1.3983	runoff	1.3938	1.3870	1.2642
	June-Sept	1.0573	runoff	1.0536	1.0484	0.9556
	Oct-Feb	1.3983	runoff	1.3938	1.3870	1.2642

Table 8.9-64: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-24549 following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	19.0474	drainage/runoff	18.9939	18.9018	17.1805
Step 2						
Northern Europe	March-May	0.9899	drainage/runoff	0.9854	0.9805	0.8937
	June-Sept	0.9899	drainage/runoff	0.9854	0.9805	0.8937
	Oct-Feb	2.3803	drainage/runoff	2.3725	2.3609	2.1518
Southern Europe	March-May	1.9169	drainage/runoff	1.9101	1.9008	1.7325
	June-Sept	1.4534	drainage/runoff	1.4478	1.4407	1.3131
	Oct-Feb	1.9169	drainage/runoff	1.9101	1.9008	1.7325

Table 8.9-65: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	12.0411	drainage/runoff	11.7332	11.4877	77.6892
Step 2						
Northern Europe	March-May	1.1007	runoff	1.0511	1.0280	7.0630
	June-Sept	1.1007	runoff	1.0511	1.0280	7.0630
	Oct-Feb	2.3533	runoff	2.2909	2.2429	15.4183
Southern Europe	March-May	1.9357	runoff	1.8776	1.8379	12.6332
	June-Sept	1.5182	runoff	1.4644	1.4330	9.8481
	Oct-Feb	1.9357	runoff	1.8776	1.8379	12.6332

Table 8.9-66: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	24.0823	drainage/runoff	23.4664	22.9755	155.3783
Step 2						
Northern Europe	March-May	1.6206	drainage/runoff	1.5340	1.4996	10.3005
	June-Sept	1.6206	drainage/runoff	1.5340	1.4996	10.3005
	Oct-Feb	3.3232	drainage/runoff	3.2192	3.1509	21.6576
Southern Europe	March-May	2.7556	drainage/runoff	2.6575	2.6005	17.8719
	June-Sept	2.1881	drainage/runoff	2.0957	2.0500	14.0862
	Oct-Feb	2.7556	drainage/runoff	2.6575	2.6005	17.8719

Table 8.9-67: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-139432 following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	13.0443	drainage/runoff	13.0089	12.9458	1.2732
Step 2						
Northern Europe	March-May	1.2937	drift	1.2893	1.2830	0.1291
	June-Sept	1.2937	drift	1.2893	1.2830	0.1291
	Oct-Feb	2.7714	runoff	2.7634	2.7500	0.2768
Southern	March-May	2.2788	runoff	2.2720	2.2610	0.2276

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Europe	June-Sept	1.7862	drift	1.7806	1.7720	0.1784
	Oct-Feb	2.2788	runoff	2.2720	2.2610	0.2276

Table 8.9-68: FOCUS Step 1-2 PECsw and PECsed for RH-139432 following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	26.0885	drainage/runoff	26.0177	25.8916	2.5464
Step 2						
Northern Europe	March-May	2.0130	drainage/runoff	2.0058	1.9960	0.2009
	June-Sept	2.0130	drainage/runoff	2.0058	1.9960	0.2009
	Oct-Feb	4.1789	drainage/runoff	4.1665	4.1463	0.4174
Southern Europe	March-May	3.4570	drainage/runoff	3.4463	3.4295	0.3452
	June-Sept	2.7350	drainage/runoff	2.7261	2.7128	0.2731
	Oct-Feb	3.4570	drainage/runoff	3.4463	3.4295	0.3452

Table 8.9-69: FOCUS Step 1-2 PECsw and PECsed for RH-141455 following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	3.3041	drainage/runoff	3.2961	3.2801	0.0920
Step 2						
Northern Europe	March-May	0.3392	runoff	0.3384	0.3367	0.0095
	June-Sept	0.3392	runoff	0.3384	0.3367	0.0095
	Oct-Feb	0.8215	runoff	0.8195	0.8155	0.0230
Southern Europe	March-May	0.6607	runoff	0.6591	0.6559	0.0185
	June-Sept	0.5000	runoff	0.4988	0.4963	0.0140
	Oct-Feb	0.6607	runoff	0.6591	0.6559	0.0185

Table 8.9-70: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	6.6082	drainage/runoff	6.5921	6.5603	0.1840
Step 2						
Northern Europe	March-May	0.5780	drainage/runoff	0.5765	0.5737	0.0162
	June-Sept	0.5780	drainage/runoff	0.5765	0.5737	0.0162
	Oct-Feb	1.3959	drainage/runoff	1.3925	1.3857	0.0391
Southern Europe	March-May	1.1232	drainage/runoff	1.1205	1.1151	0.0314
	June-Sept	0.8506	drainage/runoff	0.8485	0.8444	0.0238
	Oct-Feb	1.1232	drainage/runoff	1.1205	1.1151	0.0314

Table 8.9-71: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following a single application of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	14.7388	drainage/runoff	14.6841	14.6121	9.8545
Step 2						
Northern Europe	March-May	1.4068	runoff	1.3975	1.3904	0.9516
	June-Sept	1.4068	runoff	1.3975	1.3904	0.9516
	Oct-Feb	3.1688	runoff	3.1552	3.1397	2.1489
Southern Europe	March-May	2.5815	runoff	2.5693	2.5566	1.7498
	June-Sept	1.9942	runoff	1.9834	1.9735	1.3507
	Oct-Feb	2.5815	runoff	2.5693	2.5566	1.7498

Table 8.9-72: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following multiple applications of GLOB2013F to grape - using the EU agreed endpoints

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	29.4776	drainage/runoff	29.3682	29.2243	19.7090
Step 2						
Northern Europe	March-May	2.1638	drainage/runoff	2.1476	2.1367	1.4623
	June-Sept	2.1638	drainage/runoff	2.1476	2.1367	1.4623
	Oct-Feb	4.7674	drainage/runoff	4.7448	4.7213	3.2315
Southern	March-May	3.8995	drainage/runoff	3.8791	3.8598	2.6418

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Europe	June-Sept	3.0317	drainage/runoff	3.0134	2.9982	2.0521
	Oct-Feb	3.8995	drainage/runoff	3.8791	3.8598	2.6418

Table 8.9-73: FOCUS Step 1-2 PECsw and PECsed for RH-24549 following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	9.5237	drainage/runoff	9.4970	9.4509	8.5902
Step 2						
Northern Europe	March-May	0.7162	runoff	0.7133	0.7098	0.6470
	June-Sept	0.7162	runoff	0.7133	0.7098	0.6470
	Oct-Feb	1.7393	runoff	1.7340	1.7256	1.5728
Southern Europe	March-May	1.3983	runoff	1.3938	1.3870	1.2642
	June-Sept	1.0573	runoff	1.0536	1.0484	0.9556
	Oct-Feb	1.3983	runoff	1.3938	1.3870	1.2642

Table 8.9-74: FOCUS Step 1-2 PECsw and PECsed for RH-24549 following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	19.0474	drainage/runoff	18.9939	18.9018	17.1805
Step 2						
Northern Europe	March-May	0.9899	drainage/runoff	0.9854	0.9805	0.8937
	June-Sept	0.9899	drainage/runoff	0.9854	0.9805	0.8937
	Oct-Feb	2.3803	drainage/runoff	2.3725	2.3609	2.1518
Southern Europe	March-May	1.9169	drainage/runoff	1.9101	1.9008	1.7325
	June-Sept	1.4534	drainage/runoff	1.4478	1.4407	1.3131
	Oct-Feb	1.9169	drainage/runoff	1.9101	1.9008	1.7325

Table 8.9-75: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	12.6983	drainage/runoff	12.3955	12.1372	72.7604
Step 2						
Northern Europe	March-May	1.1596	runoff	1.1103	1.0861	6.6149
	June-Sept	1.1596	runoff	1.1103	1.0861	6.6149
	Oct-Feb	2.4831	runoff	2.4203	2.3697	14.4402
Southern Europe	March-May	2.0420	runoff	1.9837	1.9418	11.8318
	June-Sept	1.6008	runoff	1.5470	1.5140	9.2233
	Oct-Feb	2.0420	runoff	1.9837	1.9418	11.8318

Table 8.9-76: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-127450 following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	25.3966	drainage/runoff	24.7909	24.2745	145.5209
Step 2						
Northern Europe	March-May	1.7063	drainage/runoff	1.6203	1.5843	9.6471
	June-Sept	1.7063	drainage/runoff	1.6203	1.5843	9.6471
	Oct-Feb	3.5052	drainage/runoff	3.4010	3.3291	20.2836
Southern Europe	March-May	2.9056	drainage/runoff	2.8074	2.7475	16.7381
	June-Sept	2.3059	drainage/runoff	2.2139	2.1659	13.1926
	Oct-Feb	2.9056	drainage/runoff	2.8074	2.7475	16.7381

Table 8.9-77: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-139432 following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	13.0443	drainage/runoff	13.0089	12.9458	1.2732
Step 2						
Northern Europe	March-May	1.2937	drift	1.2893	1.2830	0.1291
	June-Sept	1.2937	drift	1.2893	1.2830	0.1291
	Oct-Feb	2.7714	runoff	2.7634	2.7500	0.2768
Southern	March-May	2.2788	runoff	2.2720	2.2610	0.2276

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Europe	June-Sept	1.7862	drift	1.7806	1.7720	0.1784
	Oct-Feb	2.2788	runoff	2.2720	2.2610	0.2276

Table 8.9-78: FOCUS Step 1-2 PECsw and PECsed for RH-139432 following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	26.0885	drainage/runoff	26.0177	25.8916	2.5464
Step 2						
Northern Europe	March-May	2.0130	drainage/runoff	2.0058	1.9960	0.2009
	June-Sept	2.0130	drainage/runoff	2.0058	1.9960	0.2009
	Oct-Feb	4.1789	drainage/runoff	4.1665	4.1463	0.4174
Southern Europe	March-May	3.4570	drainage/runoff	3.4463	3.4295	0.3452
	June-Sept	2.7350	drainage/runoff	2.7261	2.7128	0.2731
	Oct-Feb	3.4570	drainage/runoff	3.4463	3.4295	0.3452

Table 8.9-79: FOCUS Step 1-2 PECsw and PECsed for RH-141455 following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PECsw (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PECsed (µg/kg)
Step 1	---	3.3041	drainage/runoff	3.2961	3.2801	0.0920
Step 2						
Northern Europe	March-May	0.3392	runoff	0.3384	0.3367	0.0095
	June-Sept	0.3392	runoff	0.3384	0.3367	0.0095
	Oct-Feb	0.8215	runoff	0.8195	0.8155	0.0230
Southern Europe	March-May	0.6607	runoff	0.6591	0.6559	0.0185
	June-Sept	0.5000	runoff	0.4988	0.4963	0.0140
	Oct-Feb	0.6607	runoff	0.6591	0.6559	0.0185

Table 8.9-80: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-141455 following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	6.6082	drainage/runoff	6.5921	6.5603	0.1840
Step 2						
Northern Europe	March-May	0.5780	drainage/runoff	0.5765	0.5737	0.0162
	June-Sept	0.5780	drainage/runoff	0.5765	0.5737	0.0162
	Oct-Feb	1.3959	drainage/runoff	1.3925	1.3857	0.0391
Southern Europe	March-May	1.1232	drainage/runoff	1.1205	1.1151	0.0314
	June-Sept	0.8506	drainage/runoff	0.8485	0.8444	0.0238
	Oct-Feb	1.1232	drainage/runoff	1.1205	1.1151	0.0314

Table 8.9-81: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following a single application of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	14.7565	drainage/runoff	14.7020	14.6300	9.7215
Step 2						
Northern Europe	March-May	1.4085	runoff	1.3992	1.3921	0.9388
	June-Sept	1.4085	runoff	1.3992	1.3921	0.9388
	Oct-Feb	3.1726	runoff	3.1591	3.1435	2.1199
Southern Europe	March-May	2.5846	runoff	2.5724	2.5597	1.7262
	June-Sept	1.9965	runoff	1.9858	1.9759	1.3325
	Oct-Feb	2.5846	runoff	2.5724	2.5597	1.7262

Table 8.9-82: FOCUS Step 1-2 PEC_{sw} and PEC_{sed} for RH-163353 following multiple applications of GLOB2013F to grape - using the geomean Koc

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	---	29.5130	drainage/runoff	29.4041	29.2600	19.4429
Step 2						
Northern Europe	March-May	2.1663	drainage/runoff	2.1502	2.1393	1.4426
	June-Sept	2.1663	drainage/runoff	2.1502	2.1393	1.4426
	Oct-Feb	4.7730	drainage/runoff	4.7506	4.7271	3.1879
Southern	March-May	3.9041	drainage/runoff	3.8838	3.8645	2.6061

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7 d-PECsw,twa (µg/L)	21 d-PECsw,twa (µg/L)	Max PEC$_{sed}$ (µg/kg)
Europe	June-Sept	3.0352	drainage/runoff	3.0170	3.0019	2.0244
	Oct-Feb	3.9041	drainage/runoff	3.8838	3.8645	2.6061

8.9.2.2 PEC_{sw} of GLOB2013F

The PEC_{sw} of the formulation GLOB2013F was also calculated taking one application of this product into account. The calculator tool from the FOCUS SWASH model was used for this purpose. The density of the product is 1.1346 kg/L so the application rate of the formulation is 340.38 g/ha for 0.3 L/ha on potato and 340.38 g/ha for 0.3 l/ha (early) and 417.533 g/ha for 0.368L/ha (late) on grape. These PEC_{sw} were calculated for the ditch, pond and stream scenarios. On top, to allow for the 20% spray drift contribution from the upstream catchment in the case of streams, the drift values of the calculator have been multiplied with a factor 1.2 for the stream scenario. The ditch scenario remains the worst-case in any case. The results of these calculations are provided in the table below.

Table 8.9-83: Maximum PECsw for GLOB2013F

Cropping scenario	FOCUS scenario	FOCUS values	
		Mass loading per event (mg/m²)	Max. PECsw (µg/L)
Potato, 1 x 340.38 g/ha	Ditch	0.5424	1.8081
	Pond	0.0722	0.0722
	Stream	0.4225	1.4083
		-	1.6900*
Potato, 3 x 340.38 g/ha	Ditch	0.3941	1.3136
	Pond	0.0507	0.0507
	Stream	0.3055	1.0185
		-	1.2222*
Vines, early, 1 x 340.38 g/ha	Ditch	0.5849	1.9497
	Pond	0.0658	0.0658
	Stream	0.4829	1.6095
		-	1.9314*
Vines, early, 2 x 340.38 g/ha	Ditch	0.5332	1.7773
	Pond	0.0565	0.0565
	Stream	0.4374	1.4581
		-	1.7498*
Vines, late, 1 x 417.533 g/ha	Ditch	2.1599	7.1997
	Pond	0.2556	0.2556
	Stream	1.7925	5.9749
		-	7.1699*
Vines, late, 2 x 417.533 g/ha	Ditch	1.9086	6.3619
	Pond	0.2225	0.2225
	Stream	1.5815	5.2716
		-	6.3259*

*taking into account the 20% contribution from the upstream catchment

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

Table 8.10-1 Summary of atmospheric degradation and behaviour

Compound	**zoxamide**
Direct photolysis in air	Not studied - no data necessary.
Quantum yield of direct phototransformation	(Φ) = 0.0225 (λ > 290 nm)
Photochemical oxidative degradation in air	DT_{50} of 7.5 hours (Atkinson method), assuming hydroxyl radical concentration of 1.5 x 10^6 OH/cm^3 and a 12 hour day. Rate constant for reaction with hydroxyl radicals: 17.1 x 10^{-12} cm^3/molecule-sec.
Volatilisation	From plant surfaces: 5.1% AR after 24 hours. From soil: 3.9% AR after 24 hours.
Metabolites	Not applicable

The vapour pressure of zoxamide is 1.33 x 10^{-5} Pa at 25°C and the water solubility at 20°C is 0.68 mg/l (pH 4-9). Using these values a Henry's Law constant of <6.59 x 10^{-3} Pa/mol.m^3 was derived. These figures suggest that zoxamide is only very slightly volatile. Volatilisation of zoxamide from soil and leaf surfaces under standardised climatic conditions was investigated. Losses were very low with losses of 5.1% AR from leaf surfaces and 3.9% AR from soil after 24 hours. Concentrations of zoxamide in air will therefore be negligible.

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and 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
No data submitted.					

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

*Studies in the table below were generated to data match the AIR protected studies from the main notifier. The data matching package has been evaluated by the RMS Latvia and a copy was already sent to all MS.

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
KCA 7.1.2.1.2	Jensch, S.	2022	RH-141455 Determination of Adsorption/Desorption in 3 Soils, Eurofins Agroscience Services Ecochem Gmbh, Report No.: S21-09180, GLP, Unpublished	N	Globachem NV
KCA 7.1.3.1.2	Jensch, S.	2022	RH-141455 Degradation in three Soils at 20 °C in the Dark, Eurofins Agroscience Services Ecochem Gmbh, Report No.: S21-09181, GLP, Unpublished	N	Globachem NV
KCA 7.2.2.2	Maric, A.	2022	[14C]Zoxamide Aerobic Mineralisation in Surface Water – OECD309, Eurofins Agroscience Services Ecochem Gmbh, Report No.: S21-09182, GLP, Unpublished	N	Globachem NV
KCA 7.2.2.2	Maric, A.	2023	Identification of Unknown Metabolites of Zoxamide after Aerobic Mineralisation in Surface Water, Eurofins Agroscience Services Ecochem Gmbh, Report No.: S23-102105, GLP, Unpublished	N	Globachem NV