DRAFT REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: A12916B

Product name: Amistar Max

Chemical active substances:

Azoxystrobin, 93.5 g/L
Folpet, 500 g/L

Central Zone

Zonal Rapporteur Member State: Germany

NATIONAL ADDENDUM - POLAND

(authorization)

Applicant: Syngenta

Submission date: June 2024

MS Assessment: 12/08/2024

Version history

When	What
August 2024	MS assessment

Table of Contents

8 Fate and behaviour in the environment (KCP 9)

This is the National Addendum for Poland and should be reviewed in conjunction with the Core Assessment prepared by zRMS Germany.

This National Addendum has been prepared to address specific Polish national requirements and arrangements concerning mitigation measures PECsw as well as Polish comments to the registration report Core Assessment prepared by zRMS.

This document summarises the following sections prepared to meet the national requirements for authorisation in Poland, specifically:
- the PECsw and PECsed modelling for scenarios D3, D4 and R1 characteristic for Poland.

Folpet has been included on 1 October 2007 to the Annex I of Directive 91/414/EEC under COMMISSION DIRECTIVE 2007/5/EC of 7 February 2007 amending Council Directive 91/414/EEC. The active substance expiration date is the 31st of July 2020. Currently Folpet is under EU review as part of the AIR3 program.

The selection of endpoints used in the modelling reported in the Core Dossier documents is in line with the Folpet endpoints currently approved in EU (EFSA Conclusions, EFSA Journal 2009;7(8) and Commission Review Report - SANCO/10032/2006 –rev 5, 11 July 2008) as finalised in the Standing Committee on the Food Chain and Animal Health on 29 September 2006.

General comment
The following data and information were provided by the applicant after Polish comments to the registration report Core Assessment for the Amistar Max (A12916B) prepared by zRMS Germany. This document has been submitted as a National Addendum for Poland where the PECsw and PECsed modelling for scenarios D3, D4 and R1 characteristic for Poland were presented by Applicant. All comments and conclusions of the evaluator there are in the grey boxes. Additionally, minor changes are introduced directly in the text and highlighted in grey.

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
Use-No. [I]	**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 [(f)]
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L A12916B / ha a) max. Rate per appl. b) max. total rate per crop/season	g a.s./ha AZT + FPT a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max		
Zonal uses (field or outdoor uses, certain types of protected crops)/													
25	Poland	Barley [HORVX]	F	*Pyrenophora teres* [PYRNTE]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
26	Poland	Barley [HORVX]	F	*Puccinia hordei* [PUCCHD]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
27	Poland	Barley [HORVX]	F	*Rhynchosporium secalis* [RHYNSE]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
28	Poland	Barley [HORVX]	F	*Ramularia collo-cygni* [RAMUCC]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
29	Poland	Barley [HORVX]	F	*Erysiphe graminis* [ERYSGR]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
55	Poland	Oat [AVESA]	F	*Puccinia coronata* [PUCCCO]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
79	Poland	Wheat [TRZSS]	F	*Septoria tritici* [SEPTTR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
80	Poland	Wheat [TRZSS]	F	*Puccinia striiformis* [PUCCST]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
81	Poland	Wheat [TRZSS]	F	*Puccinia recondita* [PUCCRE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. [I]	**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 [f]
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L A12916B / ha a) max. Rate per appl. b) max. total rate per crop/season	g a.s./ha AZT + FPT a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max		
106	Poland	Rye [SECCE]	F	*Puccinia recondita* [PUCCRE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
107	Poland	Rye [SECCE]	F	*Rhynchosporium secalis* [RHYNSE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
108	Poland	Rye [SECCE]	F	*Erysiphe graminis* [ERYSGR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
135	Poland	Triticale [TTLRI]	F	*Septoria tritici* [SEPTTR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
136	Poland	Triticale [TTLRI]	F	*Puccinia striiformis* [PUCCST]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
137	Poland	Triticale [TTLRI]	F	*Puccinia recondita* [PUCCRE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
138	Poland	Triticale [TTLRI]	F	*Erysiphe graminis* [ERYSGR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)													
	None												
172	Poland	Rye, spring [SECCS]	F	*Puccinia recondita* [PUCCRE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
173	Poland	Rye, spring [SECCS]	F	*Rhynchosporium secalis [RHYNSE]*	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
174	Poland	Rye, spring [SECCS]	F	*Erysiphe graminis* [ERYSGR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
~~175~~	~~Poland~~	~~Triticale, spring [TTLRI]~~	~~F~~	~~*Puccinia striiformis* [PUCCST]~~	~~Foliar spray~~	~~BBCH 30-69~~	~~a) 1 b) 1~~	~~NA~~	~~a) 1.5 b) 1.5~~	~~a) 140 + 750 b) 140 + 750~~	~~100 - 400~~	~~N/A~~	

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. [I]	**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 [(f)]
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L A12916B / ha a) max. Rate per appl. b) max. total rate per crop/season	g a.s./ha AZT + FPT a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max		
176	Poland	Durum wheat [TRZDX]	F	*Septoria tritici* [SEPTTR]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
177	Poland	Durum wheat [TRZDX]	F	*Puccinia striiformis* [PUCCST]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
178	Poland	Durum wheat [TRZDX]	F	*Puccinia recondita* [PUCCRE]	Foliar spray	BBCH 30-69	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
179	Poland	Grasses (ornamental & for seed production)	F	*Septoria spp* [SEPTSP]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
180	Poland	Grasses (ornamental & for seed production)	F	*Puccinia spp* [PUCCSP]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
181	Poland	Energy crop - Miskanthus	F	*Septoria spp* [SEPTSP]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
182	Poland	Energy crop - Miskanthus	F	*Puccinia spp* [PUCCSP]	Foliar spray	BBCH 30-59	a) 1 b) 1	NA	a) 1.5 b) 1.5	a) 140 + 750 b) 140 + 750	100 - 400	N/A	
Minor uses according to Article 51 (interzonal uses)													
	None												

* 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

Remarks table:

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

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
n/a	EU	Broccoli	F	*Albugo candida, Alternaria brassicae, Mycosphaerella brassicicola, Peronospora parasitica*	Foliar spray	BBCH35 – BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Cauliflower	F	*Albugo candida, Alternaria brassicae, Mycosphaerella brassicicola, Peronospora parasitica*	Foliar spray	BBCH35 – BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Brussels sprouts	F	*Albugo candida, Alternaria brassicae, Mycosphaerella brassicicola, Peronospora parasitica*	Foliar spray	BBCH35 – BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Kale	F	*Albugo candida, Alternaria brassicae, Mycosphaerella brassicicola, Peronospora parasitica*	Foliar spray	BBCH35 – BBCH39	a) 1 b) 2	12	a) 1 b) 2	a) 0.250 b) 0.500	200-600	14	
n/a	EU	Barley	F	*Pyrenophora teres, Puccinia hordei, Rhynchosporium secalis, Gaeumannomyces graminis, var. Tritici Barley spotting*	Foliar spray	BBCH31 – BBCH59	a) 1 b) 2	14	a) 1 b) 2	a) 0.250 b) 0.500	100-300	35*	*Timing of applications determined primarily by growth stage;1st no later than BBCH39, 2nd no later than BBCH59.
n/a	EU	Wheat	F	*Septoria tritici, Septoria nodorum, Puccinia striiformis, Puccinia recondita, Gaeumannomyces*	Foliar spray	BBCH31 – BBCH69	a) 1 b) 2	14	a) 1 b) 2	a) 0.250 b) 0.500	100-300	35**	**Timing of applications determined primarily by growth stage; 1st application no later than BBCH39, 2nd application

				graminis var. Tritici									no later than BBCH69

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener / synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
n/a	EU (S)	Winter wheat	F	*Septoria, Brown rust*	Foliar spray; downward	Up to Z65	2	7-28	a) 0.6 b) 1.2	a) 0.75 b) 1.5	200	42	
n/a	EU (S)	Tomatoes	F	Various[a]	Foliar spray; downward	From beginning of fruit set	4	7-28	a) 1 b) 4	a) 1.25 b) 5	1000	7	
n/a	EU (S)	Tomatoes	G	Various[a]	Foliar spray; downward	From beginning of fruit set	3	7-28	a) 1.28 b) 3.84	a) 1.6 b) 4.8	1000-1300	7	
n/a	EU (N/S)	Wine grapes	F	Various[b]	Airblast foliar spary, upwards/sideways	Shoot emergence to veraison	10	7-28	a) 1.2 b) 12	a) 1.5 b) 15	200-400	28	
n/a	EU (N/S)	Table grapes	F	Various[b]	Airblast foliar spary, upwards/sideways	Shoot emergence to veraison	10	7-28	a) 1.2 b) 12	a) 1.5 b) 15	200-400	28	

[a] *Alternaria solanum, cladospora, Colletotrichum, Septoria, Botrytis*
[b] *Black rot, Botrytis cinerea, Phomosis, Plasmopara viticola*
* 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

Not relevant. Please refer to core assessment.

8.3 Rate of degradation in soil (KCP 9.1.1)

Not relevant. Please refer to core assessment.

8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

8.3.1.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.3.1.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

8.3.2.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.3.2.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.4 Field studies (KCP 9.1.1.2)

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

Not relevant. Please refer to core assessment.

8.4.1.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.4.1.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

Not relevant. Please refer to core assessment.

8.5 Mobility in soil (KCP 9.1.2)

Not relevant. Please refer to core assessment.

8.5.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.5.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.5.3 Column leaching (KCP 9.1.2.1)

Not relevant. Please refer to core assessment.

8.5.4 Lysimeter studies (KCP 9.1.2.2)

Not relevant. Please refer to core assessment.

8.5.5 Field leaching studies (KCP 9.1.2.3)

Not relevant. Please refer to core assessment.

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

Not relevant. Please refer to core assessment.

8.6.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.6.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

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

8.7.1 Justification for new endpoints

Not relevant. Please refer to core assessment.

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

Not relevant. Please refer to core assessment.

8.7.2.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.7.2.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.7.2.3 PEC_S of A12916B

Not relevant. Please refer to core assessment.

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

Not relevant. Please refer to core assessment.

8.8.1 Justification for new endpoints

Not relevant. Please refer to core assessment.

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

Not relevant. Please refer to core assessment.

8.8.2.1 Azoxystrobin and its metabolites

Not relevant. Please refer to core assessment.

8.8.2.2 Folpet and its metabolites

Not relevant. Please refer to core assessment.

8.9 Predicted Environmental Concentrations in surface water (PEC_{SW}) and

sediment (PEC_{SED}) (KCP 9.2.5)

Unless otherwise stated, EU agreed endpoints refer to those stated in the EU review of azoxystrobin (**EFSA Journal 2010; 8(4): 1542** and DAR, 2014) and folpet (**EFSA Journal 2009; 297, 1-80 and addendum to DAR, 2005**) as well as the Core Assessment.

8.9.1 Justification for new endpoints

Azoxystrobin

The K_{FOC} used in modelling for azoxystrobin were re-calculated based on the recommendation of the latest guideline (EFSA, 2014). The individual values from which the geometric mean is calculated, are those established for azoxystrobin (**EFSA Journal 2010; 8(4): 1542** or **DAR, 2014)**. Details are included in the Core Assessment.

Folpet

The DT_{50} and K_{FOC} used in modelling were re-calculated based on the recommendation of the latest guideline (EFSA, 2014). The individual values from which the geometric mean is calculated, are those established in Folpet, (**EFSA Journal 2009; 297, 1-80** and **addendum to DAR (2005)).** Details are included in the Core Assessment.

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

The following PEC_{SW} calculations for azoxystrobin and folpet have not previously been reviewed and are provided in support of this national assessment.

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

Crop	Winter cereals	Spring cereals
Application rate (g a.s./ha)	1 x 140 g / ha Azoxystrobin 1 x 750 g / ha Folpet	
Number of applications / interval (d)	1 / -	
BBCH growth stage	~~40~~ 30-69	
Application method	Ground spray	
CAM (Chemical application method)	2	
Soil depth (cm)	4	
Models used for calculation	FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v5.5.3, ECPA SWAN v5.0.1	

Table 8.9-2: FOCUS Step 3 Scenario related input parameters for $PEC_{SW/SED}$ calculations for the application of A12916B to winter and spring cereals

Crop	**Rationale**	**Scenario**	**Application window used in modelling**	
			Start of Window	**End of Window**
Winter cereals 1 x 140 g / ha azoxystrobin 1 x 750 g / ha folpet BBCH 30-69	First application at BBCH 30 and 69 according to AppDate (v3.06)	D3	16-Apr (106)	31-Jul (212)
		D4	18-Mar (77)	9-Jul (190)
		R1	24-Apr (114)	25-Jun (176)
Spring cereals 1 x 140 g / ha azoxystrobin 1 x 750 g / ha folpet BBCH 30-69	First application at BBCH 30 and 69 according to AppDate (v3.06)	D3	28-Apr (118)	28-Jun (179)
		D4	18-May (138)	9-Jul (190)
		R1[a]	05-Jun (156)	22-Aug (234)

[a]maize as a surrogate scenario

Since R1 scenario is not available for spring cereals, PECsw modelling for maize as a surrogate scenario has been performed. For R1 scenario, a maize specific application window was applied.

8.9.2.1 Azoxystrobin and its metabolites

Table 8.9-3: Input parameters related to active substance azoxystrobin for $PEC_{SW/SED}$ calculations STEP 3/4

Compound	Azoxystrobin	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	Yes, EFSA (2010)
Water solubility (mg/L)	6.0 (20°C)	Yes / EFSA (2010)
Saturated vapour pressure (Pa)	$1.1x10^{-10}$ (20°C) (set to 0)	Yes / EFSA (2010)
K_{FOC} (mL/g)	392* (geometric mean, n = 6)	*No[a] / EFSA (2010) **Yes / EFSA (2010)
Freundlich Exponent 1/n	0.86 (arithmetic mean, n = 6)	Yes / EFSA (2010)
Plant Uptake	0.0	FOCUS default
Wash-Off factor from Crop	0.05 mm^{-1} (MACRO) 0.50 cm^{-1} (PRZM)	FOCUS default
$DT_{50,soil}$ (d)	78[b] * (geometric mean field , n =13)	* Yes / EFSA (2010) ** Yes / DAR (2014) normalisation to pF2, 20 °C with Q_{10} of 2.58, n = 5)
$DT_{50,water}$ (d)	**Option 1:** 1000[c] (Step 3, default) **Option 2:** 205[c] (Step 3, geometric mean, total system, n = 2)	Yes / EFSA (2010)
$DT_{50,sed}$ (d)	**Option 1:** 205[c] (Step 3, geometric mean, total system, n = 2) **Option 2:** 1000[c] (Step 3, default)	Yes / EFSA (2010)

[a] differs from the EFSA conclusion as the latest guideline (EFSA Journal 2014;12(5):3662) recommends the use of the geometric mean instead of the arithmetic mean. The individual values from which the geometric mean is calculated, are those established in EFSA, 2011.

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

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

$PEC_{SW/SED}$

Table 8.9-4: FOCUS Step 3 $PEC_{SW/SED}$ for azoxystrobin following application to winter cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Winter cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	0.8863	drift	0.04378	0.4184
	D4	pond	0.2486	drainage	0.2404	1.660
	D4	stream	0.6563	drainage	0.1526	0.6244
	R1	pond	0.1001	runoff	0.08129	0.09943
	R1	stream	0.9054	runoff	0.05850	0.4283
Step 3 – Option 2						
Winter cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	0.8863	drift	0.04375	0.4185
	D4	pond	0.2461	drainage	0.2376	1.676
	D4	stream	0.6563	drainage	0.1526	0.6293
	R1	pond	0.09682	runoff	0.08583	0.6125
	R1	stream	0.9054	runoff	0.05850	0.4293

Table 8.9-5: FOCUS Step 3 $PEC_{SW/SED}$ for azoxystrobin following application to spring cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Spring cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	**0.8873**	drift	0.04923	0.4501
	D4	pond	0.2887	drainage	0.2796	1.921
	D4	stream	**0.7259**	drainage	0.1792	0.7152
	R1[a]	pond	0.2852	runnoff	0.2604	1.491
	R1[a]	stream	**1.661**	runnoff	0.1111	1.496
Step 3 – Option 2						
Spring cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	**0.8873**	drift	0.04918	0.4502
	D4	pond	0.2854	drainage	0.2761	1.937
	D4	stream	**0.7259**	drainage	0.1792	0.7249
	R1[a]	pond	0.2789	runnoff	0.2504	1.470
	R1[a]	stream	**1.661**	runnoff	0.1111	1.497

[a]maize as a surrogate scenario

Table 8.9-6: Global maximum PEC_{sw} values for azoxystrobin, following single application of A12916B to winter cereals according to the PL GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 azoxystrobin					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	0.2403	0.1274	0.06618	0.2403	0.1274	0.06618
50 %		0.1201	0.06371	0.03310	0.1201	0.06371	0.03310
75 %		0.06007	0.03185	0.01654	0.06007	0.03185	0.01654
90 %		0.02402	0.01274	0.006615	0.02402	0.01274	0.006615
None	D4 pond	0.2481	0.2473	0.2465	0.2457	0.2449	0.2443
50 %		0.2466	0.2461	0.2457	0.2443	0.2439	0.2436
75 %		0.2458	0.2455	0.2453	0.2436	0.2434	0.2433
90 %		0.2453	0.2452	0.2451	0.2432	0.2432	0.2431
None	D4 stream	0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
50 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
75 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
90 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
None	R1 pond	0.02645	0.01902	0.01270	0.02645	0.01902	0.01270
50 %		0.01364	0.009507	0.006348	0.01323	0.009507	0.006348
75 %		0.01018	0.004753	0.003173	0.009854	0.004753	0.003173
90 %		0.008123	0.001901	0.001269	0.007917	0.001901	0.001269
None	R1 stream	0.2133	0.1131	0.05878	0.2133	0.1131	0.05878
50 %		0.1066	0.05654	0.02937	0.1066	0.05654	0.02937
75 %		0.05331	0.02828	0.01469	0.05331	0.02828	0.01469
90 %		0.05126	0.01131	0.005875	0.05126	0.01131	0.005875

Table 8.9-7: Global maximum PEC_{sw} values for azoxystrobin, following single application of A12916B to spring cereals according to the PL GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 azoxystrobin					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	0.2405	0.1275	0.06625	0.2405	0.1275	0.06625
50 %		0.1202	0.06378	0.03314	0.1202	0.06378	0.03314
75 %		0.06013	0.03188	0.01656	0.06013	0.03188	0.01656
90 %		0.02404	0.01275	0.006622	0.02404	0.01275	0.006622
None	D4 pond	0.2880	0.2867	0.2856	0.2848	0.2838	0.2828
50 %		0.2857	0.2850	0.2845	0.2829	0.2824	0.2819
75 %		0.2845	0.2842	0.2839	0.2819	0.2817	0.2814
90 %		0.2839	0.2837	0.2836	0.2813	0.2812	0.2811
None	D4 stream	0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
50 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
75 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
90 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
None	R1 pond	0.06787	0.02961	0.01270	0.06820	0.03557	0.01270
50 %		0.05928	0.02342	0.006348	0.05807	0.02307	0.006348
75 %		0.05499	0.02035	0.003174	0.05398	0.02014	0.003174
90 %		0.05242	0.01852	0.001269	0.05154	0.01840	0.001269
None	R1 stream	0.2841	0.1136	0.05904	0.5091	0.5091	0.05904
50 %		0.2841	0.08395	0.02951	0.2841	0.08395	0.02951
75 %		0.2841	0.08395	0.01475	0.2841	0.08395	0.01475
90 %		0.2841	0.08395	0.005902	0.2841	0.08395	0.005902

[a]maize as a surrogate scenario

8.9.2.2 Folpet and its metabolites

Table 8.9-8: Input parameters related to active substance folpet for $PEC_{SW/SED}$ calculations STEPs 3/4

Compound	Folpet	Value in accordance to EU endpoint / Reference
Molar mass (g/mol)	296.6	Yes/ EFSA (2009) & Addendum to DAR (2005)
Water solubility (mg/L)	0.8 (25°C)	Yes/ EFSA (2009) & Addendum to DAR (2005)
Saturated vapour pressure (Pa)	2.1×10^{-5} (20 °C)	Yes/ EFSA (2009) & Addendum to DAR (2005)
K_{FOC} (mL/g)	304 (worst-case estimation)	Yes/ EFSA (2009) & Addendum to DAR (2005)
Freundlich Exponent 1/n	1 (worst case value)	Yes/ EFSA (2009) & Addendum to DAR (2005)
Plant Uptake	0.0	FOCUS default
Wash-Off factor from Crop	0.05 mm^{-1} (MACRO) 0.50 cm^{-1} (PRZM)	FOCUS default
$DT_{50,soil}$ (d)	1.3 (geomean, n = 4)	No[a]/ EFSA (2009) & Addendum to DAR (2005)
$DT_{50,water}$ (d)	**Steps 3/4:** **Option 1:** 1000 [b] **Option 2:** 0.016* (whole system, geomean, n=2)	* Yes/ EFSA (2009) & Addendum to DAR (2005) **FOCUS default
$DT_{50,sed}$ (d)	**Steps 3/4:** **Option 1:** 0.016* (whole system, geomean, n=2) **Option 2:** 1000 [b]	* Yes/ EFSA (2009) & Addendum to DAR (2005)

[a] values used in the modelling have been re-calculated from the list of endpoints, geometric mean are used in the modelling instead of arithmetic means (EFSA, 2009 & addendum to DAR, 2005)

[b] For compounds with K_{FOC} between 100 and 2000 mL/g, the FOCUS kinetics advice regarding running simulations with both combinations for ascribing the whole system DT_{50} and default and selecting the results that give the highest concentrations for the risk assessment, should be followed.

$PEC_{SW/SED}$

Table 8.9-9: FOCUS Steps 3 $PEC_{SW/SED}$ for folpet following application of A12916B to winter cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Winter cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.751**	drift	0.2227	0.1930
	D4	pond	0.1639	drift	0.1175	0.01103
	D4	stream	**3.509**	drift	0.006328	0.07323
	R1	pond	0.1640	drift	0.1182	0.007625
	R1	stream	**3.130**	drift	0.06220	0.1235
Step 3 – Option 2						
Winter cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.751**	drift	0.01294	0.1721
	D4	pond	0.1639	drift	0.000793	0.008973
	D4	stream	**3.509**	drift	0.005206	0.07499
	R1	pond	0.1640	drift	0.000506	0.006418
	R1	stream	**3.130**	drift	0.01333	0.1177

Table 8.9-10: FOCUS Steps 3 $PEC_{SW/SED}$ for folpet following application of A12916B to spring cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Spring cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.756**	drift	0.2479	0.1111
	D4	pond	0.1640	drift	0.1177	0.006265
	D4	stream	**3.888**	drift	0.01672	0.1015
	R1[a]	pond	0.5234	runnoff	0.3705	0.01351
	R1[a]	stream	**3.547**	runnoff	0.1690	0.1215
Step 3 – Option 2						
Spring cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.756**	drift	0.006088	0.1025
	D4	pond	0.1640	drift	0.000383	0.005384
	D4	stream	**3.888**	drift	0.007744	0.1085
	R1[a]	pond	0.1588	runnoff	0.000906	0.02754
	R1[a]	stream	2.741	runnoff	0.09625	1.431

[a]maize as a surrogate scenario

FOCUS Step 4

Table 8.9-11: Global maximum PEC_{sw} values for folpet, following single application of A12916B to winter cereals according to the GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 folpet					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	**1.288**	**0.6831**	0.3550	**1.288**	**0.6831**	0.3550
50 %		**0.6440**	0.3415	0.1775	**0.6440**	0.3415	0.1775
75 %		0.3220	0.1708	0.08872	0.3220	0.1708	0.08872
90 %		0.1288	0.06831	0.03550	0.1288	0.06831	0.03550
None	D4 pond	0.1419	0.1020	0.06809	0.1419	0.1020	0.06809
50 %		0.07091	0.05099	0.03404	0.07091	0.05099	0.03404
75 %		0.03546	0.02549	0.01702	0.03546	0.02549	0.01702
90 %		0.01419	0.01020	0.006809	0.01419	0.01020	0.006809
None	D4 stream	**1.282**	**0.6800**	0.3534	**1.282**	**0.6800**	0.3534
50 %		**0.6410**	0.3400	0.1766	**0.6410**	0.3400	0.1766
75 %		0.3204	0.1700	0.08832	0.3204	0.1700	0.08832
90 %		0.1282	0.06800	0.03534	0.1282	0.06800	0.03534
None	R1 pond	0.1419	0.1020	0.06810	0.1419	0.1020	0.06810
50 %		0.07093	0.05100	0.03405	0.07093	0.05100	0.03405
75 %		0.03546	0.02550	0.01702	0.03546	0.02550	0.01702
90 %		0.01419	0.01020	0.006810	0.01419	0.01020	0.006810
None	R1 stream	**1.144**	**0.6066**	0.3152	**1.144**	**0.6066**	0.3152
50 %		**0.5718**	0.3033	0.1576	**0.5718**	0.3033	0.1576
75 %		0.2858	0.1516	0.07878	0.2858	0.1516	0.07878
90 %		0.1144	0.06066	0.03152	0.1144	0.06066	0.03152

Table 8.9-12: Global maximum PEC_{sw} values for folpet, following single application of A12916B to spring cereals according to the GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 folpet					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	**1.289**	**0.6838**	0.3554	**1.289**	**0.6838**	0.3554
50 %		**0.6447**	0.3419	0.1777	**0.6447**	0.3419	0.1777
75 %		0.3224	0.1710	0.08882	0.3224	0.1710	0.08882
90 %		0.1289	0.06838	0.03554	0.1289	0.06838	0.03554
None	D4 pond	0.1420	0.1020	0.06813	0.1420	0.1020	0.06813
50 %		0.07096	0.05102	0.03406	0.07096	0.05102	0.03406
75 %		0.03548	0.02551	0.01703	0.03548	0.02551	0.01703
90 %		0.01420	0.01020	0.006813	0.01420	0.01020	0.006813
None	D4 stream	**1.421**	**0.7535**	**0.3916**	**1.421**	**0.7535**	**0.3916**
50 %		**0.7103**	**0.3768**	0.1957	**0.7103**	**0.3768**	0.1957
75 %		0.3550	0.1883	0.09786	0.3550	0.1883	0.09786
90 %		0.1421	0.07535	0.03916	0.1421	0.07535	0.03916
None	R1 pond	0.1704	0.1020	0.06811	0.1419	0.1020	0.06811
50 %		0.1185	0.05101	0.03405	0.07094	0.05101	0.03405
75 %		0.09255	0.02571	0.01703	0.03547	0.02550	0.01703
90 %		0.07699	0.01444	0.006811	0.01419	0.01020	0.006811
None	R1 stream	**1.149**	**0.6093**	0.3166	**1.149**	**0.6093**	0.3166
50 %		**0.6306**	0.3047	0.1583	**0.5744**	0.3047	0.1583
75 %		**0.6306**	0.1523	0.07914	0.4795	0.1523	0.07914
90 %		**0.6306**	0.07011	0.03166	0.4795	0.06093	0.03166

[a]maize as a surrogate scenario

8.9.2.3 PEC_{sw} of A12916B

Not relevant. Please refer to core assessment.

Evaluation by zRMS	**PECsw (KCP 9.2.5)**
Inputs for Modelling	Predicted environmental concentrations in surface water (PEC_{sw}) and sediment (PEC_{sed}) were calculated for both active substances: azoxystrobin and folpet after the application of the product Amistar Max (A12916B) to winter and spring cereals: - 1x 1.5l product Amistar Max (A12916B)/ha; considering the pathways spray drift, drainage and runoff. Input parameters used in FOCUS surface water/sediment modelling for active substances are correct. The application windows presented in Table 8.9-2 for each scenario was checked by the zRMS using AppDate ver. 3.06 tool and is considered acceptable. For the both active substances: azoxystrobin and folpet the calculations presented here are accepted. However, zRMS would like to indicate that in Polish guidelines does not have a surrogate crop for spring cereals, so zRMS believes that for the R1 scenario, PECsw/sed values should be extapolated from winter cereals. However, since the calculated PECsw/sed values for the R1 senario for maize are higher than for winter cerals, it can be accepted as the worst case. The PEC_{SW} and PEC_{sed} were appropriate calculated in compliance with relevant FOCUS scenarios in stepwise procedure (Steps: 3 and 4). The modelling for both active substances was made for scenarios D3, D4 and R1 that are relevant for Poland. Presented calculations of $PEC_{sw/sed}$ may be used for risk assessment.
Agreed endpoints	Please refer to Tables from 8.9-4 to 8.9-7 and from 8.9-9 to 8.9-12.
Implication for risk assessment	Please refer to Part B, Section 9 of this dRR.

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

8.10.1 Azoxystrobin

Not relevant. Please refer to core assessment.

8.10.2 Folpet

Not relevant. Please refer to core assessment.

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
KCP 9.2.5	Tabor E	2024	A12916B Calculation of Predicted Environmental Concentrations of azoxystrobin and folpet in surface water using the FOCUS scenarios (Step 3 and 4) National Addendum – Poland Report No. EST/19/2024 ESTICON Sp. z o.o., Poland GLP: no Unpublished	N	SYN

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

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

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

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

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

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

Appendix 2 Detailed evaluation of the new Annex II studies

No studies provided.

Appendix 3 Additional information provided by the applicant

A 3.1 KCP 9.2.5/01: Tabor E, 2024, *A12916B Calculation of Predicted Environmental Concentrations of azoxystrobin and folpet in surface water using the FOCUS scenarios (Step 3 and 4) National addendum – Poland*

Comments of zRMS:	The calculations of $PEC_{SW/SED}$ of azoxystrobin and folpet using the FOCUS scenarios (Step 3 and 4) National addendum – Poland are accepted. Predicted environmental concentrations in surface water (PECSW) and sediment (PECSED) were calculated for the use of azoxystrobin and folpet on winter and spring cereals for scenarios D3, D4 and R1 that are relevant for Poland.

Reference:	KCP 9.2.5/01
Report	A12916B Calculation of Predicted Environmental Concentrations of azoxystrobin and folpet in surface water using the FOCUS scenarios (Step 3 and 4) National addendum – Poland; ESTICON Sp. z o.o., Poland, Report No. EST/19/2024
Guideline(s):	FOCUS (2015). Generic guidance for FOCUS surface water scenarios, version 1.4.
Deviations:	No
GLP:	Not applicable
Acceptability:	Yes

Materials and methods

This report describes a FOCUS modelling study that examined the potential for azoxystrobin and folpet to reach surface water following foliar application to winter cereals and spring cereals. The FOCUS tool SWASH (v 5.3), including the operational models FOCUS-MACRO (v 5.5.4), FOCUS-PRZM (v 4.3.1) and FOCUS-TOXSWA (v 5.5.3), were used in the modelling study for Step 3 simulations. The ECPA tool SWAN (v 5.0.0) was used to implement mitigation options at Step 4.

A single application rate of 140 g azoxystrobin and 750 g folpet per ha at application stages ranging from BBCH 30 to BBCH 69, was considered. The input parameters relating to applications are shown below.

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

Crop	Winter cereals	Spring cereals
Application rate (g a.s./ha)	140	140
Number of applications / interval (d)	1 / -	1 / -
BBCH growth stage	30-69	30-69
Application method	Ground spray	Ground spray
CAM (Chemical application method)	2	2

Soil depth (cm)	4	4
Models used for calculation	FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v5.5.3, ECPA SWAN v5.0.0	

Ground spray application (foliar spray) was considered as the application method in all simulations. Crop interception at Step 3 is calculated internally by the model on the basis of the maximum interception capacity and the actual leaf area index.

Application window dates are presented in table below. The dates were selected with the tool AppDate (v3.06) using 'winter cereals', 'spring cereals' and 'maize' based on BBCH growth stages given in the recommended GAP. Simulations were carried out using the FOCUS standard crops winter cereals, spring cereals and maize (R1 scenario) as a surrogate scenario.

Table A 2: FOCUS Step 3 Scenario related input parameters for $PEC_{SW/SED}$ calculations for the application of A12916B to winter and spring cereals

Crop	Rationale	Scenario	Application window used in modelling	
			Start of Window	End of Window
Winter cereals 1 x 140 g / ha azoxystrobin 1 x 750 g / ha folpet BBCH 30-69	First application at BBCH 30 and 69 according to AppDate (v3.06)	D3	16-Apr (106)	31-Jul (212)
		D4	18-Mar (77)	9-Jul (190)
		R1	24-Apr (114)	25-Jun (176)
Spring cereals 1 x 140 g / ha azoxystrobin 1 x 750 g / ha folpet BBCH 30-69	First application at BBCH 30 and 69 according to AppDate (v3.06)	D3	28-Apr (118)	28-Jun (179)
		D4	18-May (138)	9-Jul (190)
		R1[a]	05-Jun (156)	22-Aug (234)

[a]maize as a surrogate scenario

The input parameters for azoxystrobin and folpet used in the modelling are shown in tables below. In accordance with FOCUS guidance (FOCUS 2015) where the K_{FOC} is between 100 – 2000 mL/g calculations were run twice with two different parameter sets for degradation in water and sediment. In Option 1 the measured whole system DT_{50} was used to describe the degradation in sediment together with the default value of 1000 days for water. In Option 2 these DT_{50} values were reversed.

Table A 3: Input parameters related to active substance azoxystrobin for $PEC_{SW/SED}$ calculations

Compound	Azoxystrobin	Value in accordance with EU endpoint / Reference
Molar mass (g/mol)	403.4	Yes, EFSA (2010)
Water solubility (mg/L)	6.0 (20°C)	Yes / EFSA (2010)
Saturated vapour pressure (Pa)	$1.1x10^{-10}$ (20°C) (set to 0)	Yes / EFSA (2010)
K_{FOC} (mL/g)	392* (geometric mean, n = 6)	*No[a] / EFSA (2010)

Compound	Azoxystrobin	Value in accordance with EU endpoint / Reference
		**Yes / EFSA (2010)
Freundlich Exponent 1/n	0.86 (arithmetic mean, n = 6)	Yes / EFSA (2010)
Plant Uptake	0.0	FOCUS default
Wash-Off factor from Crop	0.05 mm^{-1} (MACRO) 0.50 cm^{-1} (PRZM)	FOCUS default
$DT_{50,soil}$ (d)	78[b] * (geometric mean field , n =13)	* Yes / EFSA (2010) ** Yes / DAR (2014) normalisation to pF2, 20 °C with Q_{10} of 2.58, n = 5)
$DT_{50,water}$ (d)	**Option 1:** 1000[c] (Step 3, default) **Option 2:** 205[c] (Step 3, geometric mean, total system, n = 2)	Yes / EFSA (2010)
$DT_{50,sed}$ (d)	**Option 1:** 205[c] (Step 3, geometric mean, total system, n = 2) **Option 2:** 1000[c] (Step 3, default)	Yes / EFSA (2010)

[a] differs from the EFSA conclusion as the latest guideline (EFSA Journal 2014;12(5):3662) recommends the use of the geometric mean instead of the arithmetic mean. The individual values from which the geometric mean is calculated, are those established in EFSA, 2011.

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

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

Table A 4: Input parameters related to active substance folpet for $PEC_{SW/SED}$ calculations

Compound	Folpet	Value in accordance to EU endpoint / Reference
Molar mass (g/mol)	296.6	Yes/ EFSA (2009) & Addendum to DAR (2005)
Water solubility (mg/L)	0.8 (25°C)	Yes/ EFSA (2009) & Addendum to DAR (2005)
Saturated vapour pressure (Pa)	2.1 x 10^{-5} (20 °C)	Yes/ EFSA (2009) & Addendum to DAR (2005)
K_{FOC} (mL/g)	304 (worst-case estimation)	Yes/ EFSA (2009) & Addendum to DAR (2005)
Freundlich Exponent 1/n	1 (worst case value)	Yes/ EFSA (2009) & Addendum to

Compound	Folpet	Value in accordance to EU endpoint / Reference
		DAR (2005)
Plant Uptake	0.0	FOCUS default
Wash-Off factor from Crop	0.05 mm^{-1} (MACRO) 0.50 cm^{-1} (PRZM)	FOCUS default
$DT_{50,soil}$ (d)	1.3 (geomean, n = 4)	No[a]/ EFSA (2009) & Addendum to DAR (2005)
$DT_{50,water}$ (d)	**Steps 3/4:** **Option 1:** 1000 [b] **Option 2:** 0.016* (whole system, geomean, n=2)	* Yes/ EFSA (2009) & Addendum to DAR (2005) **FOCUS default
$DT_{50,sed}$ (d)	**Steps 3/4:** **Option 1:** 0.016* (whole system, geomean, n=2) **Option 2:** 1000 [b]	* Yes/ EFSA (2009) & Addendum to DAR (2005)

[a] values used in the modelling have been re-calculated from the list of endpoints, geometric mean are used in the modelling instead of arithmetic means (EFSA, 2009 & addendum to DAR, 2005)

[b] For compounds with K_{FOC} between 100 and 2000 mL/g, the FOCUS kinetics advice regarding running simulations with both combinations for ascribing the whole system DT_{50} and default and selecting the results that give the highest concentrations for the risk assessment, should be followed.

RESULTS

Predicted environmental concentrations in surface water (PECSW) and sediment (PECSED) were calculated for the use of azoxystrobin and folpet on winter and spring cereals for scenarios D3, D4 and R1 that are characteristic for Poland.

The results are presented in the tables below:

Table A 24: FOCUS Step 3 $PEC_{SW/SED}$ for azoxystrobin following application to winter cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Winter cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	0.8863	drift	0.04378	0.4184
	D4	pond	0.2486	drainage	0.2404	1.660
	D4	stream	0.6563	drainage	0.1526	0.6244
	R1	pond	0.1001	runoff	0.08129	0.09943
	R1	stream	0.9054	runoff	0.05850	0.4283
Step 3 – Option 2						
Winter cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	0.8863	drift	0.04375	0.4185
	D4	pond	0.2461	drainage	0.2376	1.676
	D4	stream	0.6563	drainage	0.1526	0.6293
	R1	pond	0.09682	runoff	0.08583	0.6125
	R1	stream	0.9054	runoff	0.05850	0.4293

Table A 24: FOCUS Step 3 $PEC_{SW/SED}$ for azoxystrobin following application to spring cereals

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Spring cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	**0.8873**	drift	0.04923	0.4501
	D4	pond	0.2887	drainage	0.2796	1.921
	D4	stream	**0.7259**	drainage	0.1792	0.7152
	R1[a]	pond	0.2852	runnoff	0.2604	1.491
	R1[a]	stream	**1.661**	runnoff	0.1111	1.496
Step 3 – Option 2						
Spring cereals, 1 x 140 g a.s./ha, BBCH 30 - 69	D3	ditch	**0.8873**	drift	0.04918	0.4502
	D4	pond	0.2854	drainage	0.2761	1.937
	D4	stream	**0.7259**	drainage	0.1792	0.7249
	R1[a]	pond	0.2789	runnoff	0.2504	1.470

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
	R1[a]	stream	**1.661**	runnoff	0.1111	1.497

[a]maize as a surrogate scenario

Table A 24: Global maximum PEC_{sw} values for azoxystrobin, following single application of A12916B to winter cereals according to the PL GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 azoxystrobin					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	0.2403	0.1274	0.06618	0.2403	0.1274	0.06618
50 %		0.1201	0.06371	0.03310	0.1201	0.06371	0.03310
75 %		0.06007	0.03185	0.01654	0.06007	0.03185	0.01654
90 %		0.02402	0.01274	0.006615	0.02402	0.01274	0.006615
None	D4 pond	0.2481	0.2473	0.2465	0.2457	0.2449	0.2443
50 %		0.2466	0.2461	0.2457	0.2443	0.2439	0.2436
75 %		0.2458	0.2455	0.2453	0.2436	0.2434	0.2433
90 %		0.2453	0.2452	0.2451	0.2432	0.2432	0.2431
None	D4 stream	0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
50 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
75 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
90 %		0.2770	0.2770	0.2770	0.2770	0.2770	0.2770
None	R1 pond	0.02645	0.01902	0.01270	0.02645	0.01902	0.01270
50 %		0.01364	0.009507	0.006348	0.01323	0.009507	0.006348
75 %		0.01018	0.004753	0.003173	0.009854	0.004753	0.003173
90 %		0.008123	0.001901	0.001269	0.007917	0.001901	0.001269
None	R1 stream	0.2133	0.1131	0.05878	0.2133	0.1131	0.05878
50 %		0.1066	0.05654	0.02937	0.1066	0.05654	0.02937
75 %		0.05331	0.02828	0.01469	0.05331	0.02828	0.01469
90 %		0.05126	0.01131	0.005875	0.05126	0.01131	0.005875

Table A 24: Global maximum PEC_{sw} values for azoxystrobin, following single application of A12916B to spring cereals according to the PL GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 azoxystrobin					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	0.2405	0.1275	0.06625	0.2405	0.1275	0.06625
50 %		0.1202	0.06378	0.03314	0.1202	0.06378	0.03314
75 %		0.06013	0.03188	0.01656	0.06013	0.03188	0.01656
90 %		0.02404	0.01275	0.006622	0.02404	0.01275	0.006622
None	D4 pond	0.2880	0.2867	0.2856	0.2848	0.2838	0.2828
50 %		0.2857	0.2850	0.2845	0.2829	0.2824	0.2819
75 %		0.2845	0.2842	0.2839	0.2819	0.2817	0.2814
90 %		0.2839	0.2837	0.2836	0.2813	0.2812	0.2811
None	D4 stream	0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
50 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
75 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
90 %		0.3233	0.3233	0.3233	0.3233	0.3233	0.3233
None	R1 pond	0.06787	0.02961	0.01270	0.06820	0.03557	0.01270
50 %		0.05928	0.02342	0.006348	0.05807	0.02307	0.006348
75 %		0.05499	0.02035	0.003174	0.05398	0.02014	0.003174
90 %		0.05242	0.01852	0.001269	0.05154	0.01840	0.001269
None	R1 stream	0.2841	0.1136	0.05904	0.5091	0.5091	0.05904
50 %		0.2841	0.08395	0.02951	0.2841	0.08395	0.02951
75 %		0.2841	0.08395	0.01475	0.2841	0.08395	0.01475
90 %		0.2841	0.08395	0.005902	0.2841	0.08395	0.005902

[a]maize as a surrogate scenario

Table A 24: FOCUS Steps 3 $PEC_{SW/SED}$ for <u>folpet</u> following application of A12916B to <u>winter cereals</u>

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Winter cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.751**	drift	0.2227	0.1930
	D4	pond	0.1639	drift	0.1175	0.01103
	D4	stream	**3.509**	drift	0.006328	0.07323
	R1	pond	0.1640	drift	0.1182	0.007625
	R1	stream	**3.130**	drift	0.06220	0.1235
Step 3 – Option 2						
Winter cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.751**	drift	0.01294	0.1721
	D4	pond	0.1639	drift	0.000793	0.008973
	D4	stream	**3.509**	drift	0.005206	0.07499
	R1	pond	0.1640	drift	0.000506	0.006418
	R1	stream	**3.130**	drift	0.01333	0.1177

Table A 24: FOCUS Steps 3 $PEC_{SW/SED}$ for <u>folpet</u> following application of A12916B to <u>spring cereals</u>

Application scenario	Scenario FOCUS	Water body	Max PEC_{SW} (µg/L)	Dominant entry route	21 d-$PEC_{SW,twa}$ (µg/L)	Max PEC_{SED} (µg/kg)
Step 3 – Option 1						
Spring cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.756**	drift	0.2479	0.1111
	D4	pond	0.1640	drift	0.1177	0.006265
	D4	stream	**3.888**	drift	0.01672	0.1015
	R1[a]	pond	0.5234	runnoff	0.3705	0.01351
	R1[a]	stream	**3.547**	runnoff	0.1690	0.1215
Step 3 – Option 2						
Spring cereals, 1 x 750 g a.s./ha, BBCH 30 - 69	D3	ditch	**4.756**	drift	0.006088	0.1025
	D4	pond	0.1640	drift	0.000383	0.005384
	D4	stream	**3.888**	drift	0.007744	0.1085
	R1[a]	pond	0.1588	runnoff	0.000906	0.02754
	R1[a]	stream	2.741	runnoff	0.09625	1.431

[a]maize as a surrogate scenario

FOCUS Step 4

Table A 24: Global maximum PEC_{sw} values for <u>folpet</u>, following single application of A12916B to <u>winter cereals</u> according to the GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 folpet					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	**1.288**	**0.6831**	0.3550	**1.288**	**0.6831**	0.3550
50 %		**0.6440**	0.3415	0.1775	**0.6440**	0.3415	0.1775
75 %		0.3220	0.1708	0.08872	0.3220	0.1708	0.08872
90 %		0.1288	0.06831	0.03550	0.1288	0.06831	0.03550
None	D4 pond	0.1419	0.1020	0.06809	0.1419	0.1020	0.06809
50 %		0.07091	0.05099	0.03404	0.07091	0.05099	0.03404
75 %		0.03546	0.02549	0.01702	0.03546	0.02549	0.01702
90 %		0.01419	0.01020	0.006809	0.01419	0.01020	0.006809
None	D4 stream	**1.282**	**0.6800**	0.3534	**1.282**	**0.6800**	0.3534
50 %		**0.6410**	0.3400	0.1766	**0.6410**	0.3400	0.1766
75 %		0.3204	0.1700	0.08832	0.3204	0.1700	0.08832
90 %		0.1282	0.06800	0.03534	0.1282	0.06800	0.03534
None	R1 pond	0.1419	0.1020	0.06810	0.1419	0.1020	0.06810
50 %		0.07093	0.05100	0.03405	0.07093	0.05100	0.03405
75 %		0.03546	0.02550	0.01702	0.03546	0.02550	0.01702
90 %		0.01419	0.01020	0.006810	0.01419	0.01020	0.006810
None	R1 stream	**1.144**	**0.6066**	0.3152	**1.144**	**0.6066**	0.3152
50 %		**0.5718**	0.3033	0.1576	**0.5718**	0.3033	0.1576
75 %		0.2858	0.1516	0.07878	0.2858	0.1516	0.07878
90 %		0.1144	0.06066	0.03152	0.1144	0.06066	0.03152

Table A 24: **Global maximum PEC_{sw} values for <u>folpet</u>, following single application of A12916B to <u>spring cereals</u> according to the GAP according to surface water Step 4**

PEC_{sw} (µg/L)	Scenario	STEP 4 folpet					
		Option 1			Option 2		
Nozzle reduction	Vegetative strip (m)	5 VFSmod	10 VFSmod	20 VFSmod	5 VFSmod	10 VFSmod	20 VFSmod
	No spray buffer (m)	5	10	20	5	10	20
None	D3 ditch	**1.289**	**0.6838**	0.3554	**1.289**	**0.6838**	0.3554
50 %		**0.6447**	0.3419	0.1777	**0.6447**	0.3419	0.1777
75 %		0.3224	0.1710	0.08882	0.3224	0.1710	0.08882
90 %		0.1289	0.06838	0.03554	0.1289	0.06838	0.03554
None	D4 pond	0.1420	0.1020	0.06813	0.1420	0.1020	0.06813
50 %		0.07096	0.05102	0.03406	0.07096	0.05102	0.03406
75 %		0.03548	0.02551	0.01703	0.03548	0.02551	0.01703
90 %		0.01420	0.01020	0.006813	0.01420	0.01020	0.006813
None	D4 stream	**1.421**	**0.7535**	**0.3916**	**1.421**	**0.7535**	**0.3916**
50 %		**0.7103**	**0.3768**	0.1957	**0.7103**	**0.3768**	0.1957
75 %		0.3550	0.1883	0.09786	0.3550	0.1883	0.09786
90 %		0.1421	0.07535	0.03916	0.1421	0.07535	0.03916
None	R1 pond	0.1704	0.1020	0.06811	0.1419	0.1020	0.06811
50 %		0.1185	0.05101	0.03405	0.07094	0.05101	0.03405
75 %		0.09255	0.02571	0.01703	0.03547	0.02550	0.01703
90 %		0.07699	0.01444	0.006811	0.01419	0.01020	0.006811
None	R1 stream	**1.149**	**0.6093**	0.3166	**1.149**	**0.6093**	0.3166
50 %		**0.6306**	0.3047	0.1583	**0.5744**	0.3047	0.1583
75 %		**0.6306**	0.1523	0.07914	0.4795	0.1523	0.07914
90 %		**0.6306**	0.07011	0.03166	0.4795	0.06093	0.03166

[a]maize as a surrogate scenario