

# **FINAL** REGISTRATION REPORT

## **Part B**

### **Section 8**

#### **Environmental Fate**

Detailed summary of the risk assessment

Product code: CHR/F/PROTAZO

Product name(s): CLARO 375 SC, KAJMAN 375 SC

Chemical active substance(s):

Prothioconazole, 175 g/L

Azoxystrobin, 200 g/L

Central Zone

Zonal Rapporteur Member State: Poland

#### **CORE ASSESSMENT**

(authorization)

Applicant: Innvigo Sp. z o.o.

Submission date: May 2020

**MS Finalisation date: 28/04/2022**

## Version history

When	What
May 2021	Dossier sent for evaluation
December 2021	Applicant updated dRR on the zRMS request
January 2022	zRMS finalised evaluation
April 2022	Final version prepared by zRMS after Commenting period

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Evaluator 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

PPP (product name/code):	CHR/F/PROTAZO	Formulation type:	EC <sup>(a, b)</sup>	GAP rev.	, date: 19-02-2020
Active substance 1:	prothioconazol	Conc. of as 1:	175g <sup>(c)</sup>		
Active substance 2:	azoxystrobin	Conc. of as 2:	200 <sup>(c)</sup>		
Safener:	n/a	Conc. of safener:	conc. <sup>(c)</sup>		
Synergist:	n/a	Conc. of synergist:	conc. <sup>(c)</sup>		
Applicant:	PUH Chemirol Sp. z o.o.	Professional use:	<input checked="" type="checkbox"/>		
Zone(s):	northern/central/southern/interzonal <sup>(d)</sup>	Non professional use:	<input type="checkbox"/>		
Verified by MS:	yes				

Field of use: fungicide

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, G, Gn, Gnp 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, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L/kg 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			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL	Winter wheat/ Pszenica ozima,, triticum aestivum (TRZAW), Spring barley/ Jęczmień jary hordeum vulgare (HORVS), Winter	F	diseases	Spray	Spring BBCH 25- 69	a) 1 b) 2	14-28	a) 1,0 b) 2,0	c) 0,200 AZX + 0,175 PROTIO d) 0,400 AZX + 0,350 PROTIO	200- 400	35		

		Triticale/ Pszenżyto ozimy triticale (TTLWI)												
2	PL	Winter oilseed rape / Rzepak ozimy (BRSNW)	F	Diseases	Spray	Spring BBCH 59- 69, the risk of infection, warning	c) 1 d) 1	N/A	e) 1,0 f) 1,0	g) 0,200 AZX + 0,175 PROTIO h) 0,200 AZX + 0,175 PROTIO	200- 400	56		
<b>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)</b>														
3														
<b>Minor uses according to Article 51 (field uses)</b>														
5	PL	Spring Rye	F	diseases	Spray	Spring BBCH 25- 69	e) 1 f) 2	14-28	i) 1,0 j) 2,0	k) 0,200 AZX + 0,175 PROTIO l) 0,400 AZX + 0,350 PROTIO	200- 400	35		
6	PL	Spring oilseed rape	F	Diseases	Spray	Spring BBCH 59- 69, the risk of infection, warning	g) 1 h) 1	N/A	m) 1,0 n) 1,0	o) 0,200 AZX + 0,175 PROTIO p) 0,200 AZX + 0,175 PROTIO	200- 400	56		
	PL	Common Sunflower	F	Diseases	Spray	Spring BBCH 18- 69, the risk of infection, warning	i) 1 j) 1	N/A	q) 1,0 r) 1,0	s) 0,200 AZX + 0,175 PROTIO t) 0,200 AZX + 0,175 PROTIO	200- 400	56		
	PL	Soya	F	Diseases	Spray	Spring BBCH 12- 69, the risk of infection, warning	k) 1 l) 1	N/A	u) 1,0 v) 1,0	w) 0,200 AZX + 0,175 PROTIO x) 0,200 AZX + 0,175 PROTIO	200- 400	56		

	PL	Breadseed poppy	F	Diseases	Spray	Spring BBCH 59-69, the risk of infection, warning	m) 1 n) 1	N/A	y) 1,0 z) 1,0	aa) 0,200 AZX + 0,175 PROTIO bb) 0,200 AZX + 0,175 PROTIO	200-400	56		
	PL	Mustard	F	Diseases	Spray	Spring BBCH 59-69, the risk of infection, warning	o) 1 p) 1	N/A	cc) 1,0 dd) 1,0	ee) 0,200 AZX + 0,175 PROTIO ff) 0,200 AZX + 0,175 PROTIO	200-400	56		
	PL	Tobacco (NIOTA)	F	diseases	Spray	Spring BBCH 10-89	q) 1 r) 2	14-28	gg) 1,0 hh) 2,0	ii) 0,200 AZX + 0,175 PROTIO jj) 0,400 AZX + 0,350 PROTIO	200-400	n/a		
	PL	Coniferous / deciduous forest nurseries, Ornamental shrubs	F	diseases	Spray	Spring BBCH 10-89, the risk of infection, warning	s) 1 t) 2	14-28	kk) 1,0 ll) 2,0	mm) 0,200 AZX + 0,175 PROTIO nn) 0,400 AZX + 0,350 PROTIO	200-400	n/a		
	PL	<i>Salix viminalis</i> (SAXVI)  Wicker (ISAXG)	F	diseases	Spray	BBCH 10-89, the risk of infection, warning	u) 1 v) 2	14-28	oo) 1,0 pp) 2,0	qq) 0,200 AZX + 0,175 PROTIO rr) 0,400 AZX + 0,350 PROTIO	200-400	n/a		
	PL	Ornamental	F	diseases	Spray	BBCH 10-89, the risk of infection, warning	w) 1 x) 2	14-28	ss) 1,0 tt) 2,0	uu) 0,200 AZX + 0,175 PROTIO vv) 0,400 AZX + 0,350 PROTIO	200-400	n/a		



Minor uses according to Article 51 (interzonal uses)													
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 Prothioconazole concerning the Section Environmental Fate**

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
					Type	Conc. of as	method kind	growth stage & season	number min max	interval between applications (min)	kg as/hl	water l/ha	kg as/ha		
					(d-f)	(i)	(f-h)	(j)	(k)		min max	min max	min max		
wheat, rye, triticale	EU North South	Proline	F	Rusts, Eyespot, Fusarium spp., Powd. Mildew, Rhynchospora, Septoria,	EC	250 g/L	overall spray	start 26-29 up to BBCH69 (interval 14 - 21 d)#	1 – 3 #	ref. to growth stage		200 - 400	0.2	35	# timing , no. of applic. depends on national conditions

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
					Type (d-f)	Conc. of as (i)	method kind (f-h)	growth stage & season (j)	number min max (k)	interval between applications (min)	kg as/ha min max	water l/ha min max	kg as/ha min max		
barley, oat	EU North South	Proline	F	Rusts, Eyespot, Pyren. teres, Powd. Mildew, Fusarium spp., Rhynchospor.	EC	250 g/L	overall spray	start 30 up to BBCH 61 (interval 14 - 21 d)#	1 – 2 #	ref. to growth stage		200 - 400	0.2	35	# timing , no. of applic. depends on national conditions
rape	EU North	Proline	F	Sclerotinia, Botrytis, Alternaria, Leptosphaeria	EC	250 g/L	overall spray	start BBCH 53 (interval 14 - 28 d)#	1 – 2 #	ref. to growth stage		200 - 400	0.175	56	# timing , no. of applic. depends on national conditions

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

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

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

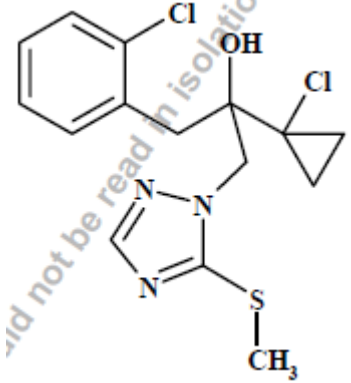
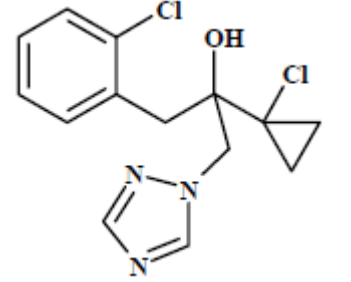
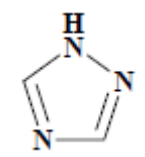
Crop and/ or situation  (a)	Member State or Country	Product name	F G or I  (b)	Pests or Group of pests controlled  (c)	Formulation		Application				Application rate per treatment			PHI (days)  (l)	Remarks:  (m)
					Type  (d-f)	Conc. of as g/L (i)	method kind (f-h)	growth stage & season (j)	number min max (k)	interval between applications (min)	kg as/hL  min max	water L/ha  min max	kg as/ha  min max		

Broccoli	EU	„Amistar“ / „Ortiva“	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	SC	250	Foliar spray	BBCH35 - BBCH39	1-2	12	0.042 – 0.125	200- 600	0.250	14	[1]
Cauliflower	EU	„Amistar“ / „Ortiva“	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	SC	250	Foliar spray	BBCH35 - BBCH39	1-2	12	0.042 – 0.125	200- 600	0.250	14	[1]
Brussels sprouts	N EU	„Amistar“ / „Ortiva“	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	SC	250	Foliar spray	BBCH35 - BBCH39	1-2	12	0.042 – 0.125	200- 600	0.250	14	[1]
Kale	EU	„Amistar“ / „Ortiva“	F	<i>Albugo candida</i> , <i>Alternaria brassicae</i> , <i>Mycosphaerella brassicicola</i> , <i>Peronospora parasitica</i>	SC	250	Foliar spray	BBCH35 - BBCH39	1-2	12	0.042 – 0.125	200- 600	0.250	14	[1]

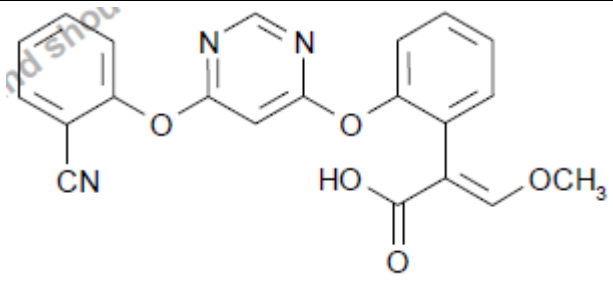
Barley	EU	„Amistar“ / „Ortiva“	F	<i>Pyrenophora teres</i> <i>Puccinia hordei</i> <i>Rhynchosporium secalis</i> <i>Gaeumannomyces graminis</i> var. <i>Tritici</i> Barley spotting	SC	250	Foliar spray	BBCH31 - BBCH59	1-2	14	0.083 – 0.250	100- 300	0.250	35*	*Timing of applications determined primarily by growth stage; 1 <sup>st</sup> no later than BBCH39, 2 <sup>nd</sup> no later than BBCH59. [1]
Wheat	EU	„Amistar“ / „Ortiva“	F	<i>Septoria tritici</i> <i>Septoria nodorum</i> <i>Puccinia striiformis</i> <i>Puccinia recondita</i> <i>Gaeumannomyces graminis</i> var. <i>tritici</i>	SC	250	Foliar spray	BBCH31 - BBCH69	1-2	14	0.083 – 0.250	100- 300	0.250	35**	**Timing of applications determined primarily by growth stage; 1 <sup>st</sup> application no later than BBCH39, 2 <sup>nd</sup> application no later than BBCH69 [1]

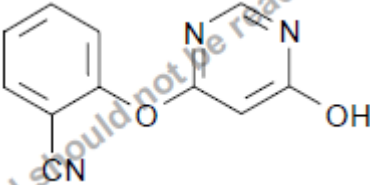
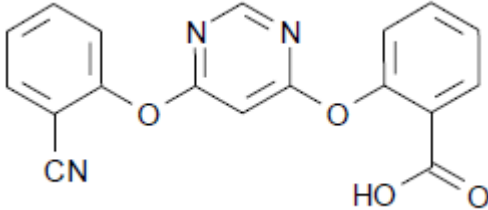
## 8.2 Metabolites considered in the assessment

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

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
Prothioconazole-S-methyl (M01)	358.8		Soil: 14.6%	PEC <sub>gw</sub> PEC <sub>soil</sub>
Prothioconazole-desthio (M04)	312.2		Soil: 57.1% Water: 32.2% Sediment: 26.9%	PEC <sub>gw</sub> PEC <sub>soil</sub> PEC <sub>sw</sub>
1, 2, 4-triazole (M13)	69.065		Water/Sediment: 32.7%	PEC <sub>sw</sub>

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

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
R234886	389.4		Soil: 28.8% Water/Sediment: 17.7%	PEC <sub>gw</sub> PEC <sub>soil</sub>

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
R401553	213.2		Soil: 17% Water/Sediment: 8/9%	PEC <sub>gw</sub> PEC <sub>soil</sub> PEC <sub>sw</sub>
R402173	333.3		Soil: 17% Water/Sediment: 2.4%	PEC <sub>sw</sub>

### 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)

Studies on aerobic degradation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion and renewal. All relevant data are presented in :

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

##### 8.3.1.1 Prothioconazole and its metabolites

Mineralization after 100 days ‡

Values are given for day 120:  
range: 3.0 to 10.7% AR median: 4.8% AR (n=4)  
(phenyl-label)  
range: 0.3 to 2.0% AR; median: 1.2% AR (n=2)  
(triazole-label)

Non-extractable residues after 100 days ‡

Values are given for day 120:  
range: 35.6 to 46.2% AR; median: 41.0% AR (n = 4)  
(phenyl-label)  
range: 42.6 to 48.3% AR; median: 45.5% AR (n = 2)  
(triazole-label)

Relevant metabolites - name and/or code,  
% of applied ‡ (range and maximum)  
at 20°C after 100 days

Prothioconazole-S-methyl (M01):  
range at day 120: 1.5 to 10.8% AR (n = 6) (both labels)  
max.: 13.7% AR (phenyl-label, day 7)  
14.6% AR (triazole-label, day 7)

Prothioconazole-desthio (M04):  
range at day 120: 15.1 to 42.3% (n = 6) (both labels)  
max.: 46.5% AR (phenyl-label, day 7)  
49.4% AR (triazole-label, day 7)

### 8.3.1.2 Azoxystrobin and its metabolites

Mineralization after 100 days ‡	21.4-27.0 % after 120 d, ( <sup>14</sup> C-Cyanophenyl-label) 1.8-19.0 % after 120 d, ( <sup>14</sup> C-Pyrimidinyl-label) 1.9-26.0 % after 120 d, ( <sup>14</sup> C-Phenylacrylate-label)
Non-extractable residues after 100 days ‡	23.5-24.5 % after 120 d, ( <sup>14</sup> C-Cyanophenyl-label) 16.5-22.0 % after 120 d, ( <sup>14</sup> C-Pyrimidinyl-label) 6.2-19.3 % after 120 d, ( <sup>14</sup> C-Phenylacrylate-label)
Metabolites requiring further consideration ‡ - name and/or code, % of applied (range and maximum)	(E)-2-(2-[6-cyanophenoxy]-pyrimidin-4-yloxy]-phenyl)-3-methoxyacrylic acid (metabolite I, R234886), 28.8% after 360 days

### 8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

Studies on anerobic degradation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

#### 8.3.2.1 Prothioconazole and its metabolites



#### Anaerobic degradation ‡

Not applicable  
(A case was presented that due to the proposed use patterns as a foliar fungicide prothioconazole will not, in general, be exposed to anaerobic conditions. However, due to the fact that a seed treatment formulation is also being considered, an anaerobic aquatic metabolism study was submitted. The anaerobic study indicated relatively rapid breakdown of parent to prothioconazole-S-methyl (M01), which seems to accumulate. This might indicate that if prothioconazole was applied to an anaerobic soil there would be significant formation of M01. However, the only major period of anaerobic conditions is likely to be in the winter, i.e. following autumn seed treatment. Drilling will only take place in relatively good aerobic conditions under which there will be relatively rapid degradation of the parent compound. Therefore, it is unlikely that there would be significant formation of M01 under field conditions.)

### 8.3.2.2 Azoxystrobin and its metabolites

#### Anaerobic degradation ‡

Mineralization after 100 days

0.3-4.7 % after 120 d, (<sup>14</sup>C-Cyanophenyl-label)  
2.3-2.7 % after 120 d, (<sup>14</sup>C-Pyrimidinyl-label)  
0.0-3.8 % after 120 d, (<sup>14</sup>C-Phenylacrylate-label)

Non-extractable residues after 100 days

3.4-15.3 % after 120 d, (<sup>14</sup>C-Cyanophenyl-label)  
5.2-9.6 % after 120 d, (<sup>14</sup>C-Pyrimidinyl-label)  
6.2-9.0 % after 120 d, (<sup>14</sup>C-Phenylacrylate-label)

Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)

(E)-2-(2-[6-cyanophenoxy]-pyrimidin-4-yl-oxy)-phenyl)-3-methoxyacrylic acid  
(metabolite I, R234886), 67.7% after 181 days.

#### Soil photolysis ‡

Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)

Greater than 5% at 2 consecutive time points;  
R401553 (Compound 28) - 5.0 % (day 9.8) – 5.7 % (day 31.3) - <sup>14</sup>C-pyrimidinyl-label.  
R402173 (Compound 30) – 5.4% (day 9.8) – 7.6% (day 31.3) - C-pyrimidinyl label.

#### 8.4.1.1 Prothioconazole and its metabolites

[illegible]

Sandy clay loam	Spalding, Lincolnshire	-	7.5 (0-15 cm)	30	261.9	869.9	106.7	10.6	-	-	SFO
Silty clay loam	Nagele, Netherlands	-	7.9 (0-15 cm)	30	186.4	619.3	86.3	10.2	-	-	SFO
Sandy clay loam (0-20cm depth)	Shirebrook, Derbyshire	-	6.7 (0-20 cm)	30	120.9	401.7	56.1	17.2	-	-	SFO
Azoxystrobin applied to soil surface and not incorporated											
Clay loam	Volpedo, Italy		8.2(0-20cm)	30					2.62	80.6	DFOP
Sandy loam	Bienenbittel-Varendorf, Germany		6.4(0-30cm)	30					2.95	61.3	DFOP
Sandy clay loam	Saxa-Anhalt, Germany		6.6(0-30cm)	30					1.64	93.7	DFOP
Clay loam	Isle/ Sorgue, France		8.5(0-20cm)	30					4.65	121.6	DFOP
Sandy loam	Monteux Vaucluse, France		8.5 (0-20cm)	30					4.03	68	DFOP
Silt loam	St Vigor, France		6.1(0-20cm)	30					3.02	34.5	DFOP
Silty clay loam	Massalombarda, France		8.3(0-20cm)	30					1.39	105	DFOP
Clay loam	Grisolles, France		7.7(0-20cm)	30					13.3	66	DFOP
Clay	Cambridgeshire, UK		8.0 (0-20cm)	30					2.09	93.7	DFOP
Clay	Somerset, UK		8.1(0-20cm)	30					0.42	73.7	DFOP
Geometric mean <sup>a</sup>					180.7	600.4	80.2		2.55	75.9	

a = the DT<sub>50</sub> used by the RMS in the slow phase (microbial degradation) groundwater modelling and surface water modelling was the geometric mean of the soil incorporated field studies (80.2 days) and the slow phase of the soil non-incorporated studies (75.9 days) = 78 days.  
b = Q10 of 2.58 for the correction of the temperature effect was used in the normalization procedure for the whole, biphasic decline

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

Studies on dissipation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- **Prothioconazole** - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

##### 8.4.2.1 Prothioconazole and its metabolites

The data presented below concern the laboratory data field data, not field data (removed).

Method of calculation

Laboratory studies ‡ (range or median, with n value, with r<sup>2</sup> value)

@ModelMaker, Version 1.1, 1st order kinetics

DT<sub>50</sub>lab (20°C, aerobic, soil):

prothioconazole (1st order and FOMC):

range: 0.07 to 1.27 days, median: 0.5 days,  
r<sup>2</sup>: range: 0.981 to 1.000 (n = 4)

prothioconazole-S-methyl (M01) (1st order)

range: 5.9 to 46.0 days; median: 17.7 days,  
r<sup>2</sup>: range: 0.955 to 0.970 (n=4). Mean value of 15.7 days used for PELMOgw modelling.

prothioconazole-desthio (M04) (1st order)

range: 7.0 to 34.0 days; median: 24.1 days  
r<sup>2</sup>: range: 0.820 to 0.987 (n=4)

minor metabolite 1,2,4-triazole (M13) (1st order)<sup>17</sup>

range: 5.0 to 9.9 days (at 20°C and pF2/10kPa);  
geometric mean: 7.4 days  
r<sup>2</sup>: range: 0.75 to 0.95 (n=3)

DT<sub>90</sub>lab (20°C, aerobic, soil):

prothioconazole (1st order and FOMC):

range: 0.99 to 78.2 days, median: 4.76 days,  
r<sup>2</sup>: range: 0.981 to 1.000 (n = 4)''

prothioconazole-S-methyl (M01) (1st order)

range: 19.6 to 153.0; median: 58.7 days,  
r<sup>2</sup>: range: 0.955 to 0.970 (n=4)

prothioconazole-desthio (M04) (1st order)

range: 23.2 to 113.0; median: 80.1 days  
r<sup>2</sup>: range: 0.820 to 0.987 (n=4)DT<sub>50</sub>lab (10°C, aerobic):

DT<sub>50</sub>lab (20°C, anaerobic):

(soil, aerobic, 10°C, calculated from 20°C using Arrhenius equation):

prothioconazole (1st order):

range: 0.20 to 2.8 days; median: 1.1 days

prothioconazole-S-methyl (M01) (1st order)

range: 12.9 to 100.9; median: 38.8 days

prothioconazole-desthio (M04) (1st order)

range: 15.3 to 74.5; median: 52.9 days

DT<sub>50</sub>/DT<sub>90</sub> (soil anaerobic):

Not applicable

(See case under 'Route of degradation in soil - Supplemental studies')

Degradation in the saturated zone ‡:

No information submitted, none required

zRMS Comments:	The mentioned data/tables in point 8.4.1.1 should concern the field data, not laboratory data. Field data are presented in point 8.4. Above presented tables were removed by evaluator.
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#### 8.4.2.2 Azoxystrobin and its metabolites

Parent	Aerobic conditions						
	X <sup>9</sup>	pH (H <sub>2</sub> O)	t. °C / % MWHC	DT <sub>50</sub> /DT <sub>90</sub> (d)	DT <sub>50</sub> (d) 20°C pF2/10kPa	St. (chi <sup>2</sup> )	Method of calculation
18 Acres (sandy clay loam) (Tummon, 1995)		6.4	20 °C / 40 % MWHC	56.4/187	35.2	3.70	SFO
East Anglia (sand)		7.9	20 °C / 40 % MWHC	66.9/222	57.2	5.34	SFO
Wisborough Green (silty clay loam)		5.9	20 °C / 40 % MWHC	94.1/313	54.1	5.60	SFO
18 Acres (sandy clay loam) (Warinton, 1996)		7	75% 1/3 bar moisture 20 °C	87.0/289	65.2	2.06	SFO
Hyde Farm (sandy clay loam)		7	75% 1/3 bar moisture 20 °C	72.8/242	48.5	7.10	SFO
Visalia (sandy loam)		8.4	75% 1/3 bar moisture 20 °C	141.6/470	79.9	2.97	SFO
Derbyshire (clay loam)		7.5	Field capacity 20 °C	118.4/393	118.4	4.84	SFO
Holland (sandy loam)		8.2	Field capacity 20 °C	153.4/510	153.4	1.92	SFO
Lincolnshire (sandy loam)		7.4	Field capacity 20°C	248/824	248	7.5	SFO
Geometric mean				109.4/363.3 <sup>a</sup>	84.5 <sup>a</sup>		

<sup>a</sup> = True geometric mean (geometric mean of 18 Acres soils taken first).

R234886	Aerobic conditions							
Soil type	X <sup>2</sup>	pH	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	f. f. k <sub>dp</sub> /k <sub>r</sub>	DT <sub>50</sub> (d) 20°C pF2/10kPa	St. (chi <sup>2</sup> )	Method of calculation
Frensham (sandy loam)		6.6	20°C/40% MWHC	45.2/2136 <sup>(d)</sup>	- <sup>(C)</sup>	30.4	3.9	DFOP
Wisborough Green (silty clay loam)		6.4	20°C/40% MWHC	36.7/2124 <sup>(e)</sup>	- <sup>(C)</sup>	21.2	4.3	DFOP
East Anglia (loamy sand)		7.9	20°C/40% MWHC	56.5/ 188	- <sup>(C)</sup>	43.4	3.3	SFO
Hyde Farm (sandy clay loam)		7.0	20°C/ 75% 1/3 bar	31.8/ 105.6	0.9716	21.2	12.3	SFO
18 Acres (sandy clay loam)		7.0	20°C/ 75% 1/3 bar	23.7/ 78.8	0.7764	17.8	5.9	SFO



Geometric mean		37.1/371.7	0.874	25.4 <sup>(b)</sup>		
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<sup>(b)</sup> = A default slow phase DFOP  $DT_{50}$  of 1000 days for the Frensham and Wisborough Green soils was used to calculate a geometric mean normalised  $DT_{50}$  of 110.4 days for use in the groundwater modelling.

<sup>(c)</sup> = R234886 applied as parent therefore no formation fractions

<sup>(d)</sup> = Additional DFOP parameters for the Frensham soil are as follows:  $k_1 = 0.0464462 \text{ d}^{-1}$ ,  $k_2 = 0.0007 \text{ d}^{-1}$ ,  $g = 0.554106$

<sup>(e)</sup> = Additional DFOP parameters for the Wisborough Green soil are as follows:  $k_1 = 0.0570421 \text{ d}^{-1}$ ,  $k_2 = 0.0007 \text{ d}^{-1}$ ,  $g = 0.557696$

R401553	Aerobic conditions							
Soil type	X <sup>2</sup>	pH	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	f. f. k <sub>dp</sub> /k <sub>f</sub>	DT <sub>50</sub> (d) 20°C pF2/10kPa	St. (chi <sup>2</sup> )	Method of calculation
Frensham (sandy loam)		6.6	20°C/40% MWHC	1.36 /4.52	<sup>(d)</sup>	0.9	9.1	SFO
Wisborough Green (silty clay loam)		6.4	20°C/40% MWHC	1.59/ 5.29	<sup>(d)</sup>	0.9	10.9	SFO
East Anglia (loamy sand)		7.9	20°C/40% MWHC	2.01/ 6.68	<sup>(d)</sup>	1.5	12.3	SFO
Geometric mean				1.63/ 5.43		1.07		

<sup>(d)</sup> = R401553 applied as parent therefore no formation fractions

R402173	Aerobic conditions							
Soil type	X <sup>2</sup>	pH	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	f. f. k <sub>dp</sub> /k <sub>f</sub>	DT <sub>50</sub> (d) 20°C pF2/10kPa	St. (chi <sup>2</sup> )	Method of calculation
Frensham (sandy loam)		6.6	20°C/40% MWHC	8.44/28.0	<sup>(e)</sup>	5.7	8.6	SFO
Wisborough Green (silty clay loam)		6.4	20°C/40% MWHC	4.24/ 14.1	<sup>(e)</sup>	2.4	12.3	SFO
East Anglia (loamy sand)		7.9	20°C/40% MWHC	9.80/ 32.6	<sup>(e)</sup>	7.5	12.7	SFO
Geometric mean/median				7.05/ 23.43		4.68		

<sup>(e)</sup> = R402173 applied as parent therefore no formation fractions

### 8.4.3 Soil accumulation testing (KCP 9.1.1.2.2)

#### 8.4.3.1 Prothioconazole and its metabolites

Soil accumulation and plateau concentration ‡	Not applicable (Soil accumulation testing is not necessary since DT <sub>90f</sub> values of prothioconazole and prothioconazole-desmethio (M04) are less than one year.)
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#### 8.4.3.2 Azoxystrobin and its metabolites

pH dependence ‡ (yes / no) (if yes type of dependence)	No
Soil accumulation and plateau concentration ‡	A plateau concentration of 0.646 mg/kg occurred after the seventh year of application. The steady-state concentration (immediately before application) plateaued at 0.246 mg/kg.

### 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.

Studies on mobility in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- **Prothioconazole** - EFSA Scientific Report (2007) 106, 1-98
- - Azoxystrobin - EFSA Journal 2010; 8(4):1542

#### 8.5.1 Prothioconazole and its metabolites

Active substance:

K <sub>f</sub> /K <sub>oc</sub> ‡	K <sub>d</sub> and K <sub>oc</sub> values of prothioconazole determined in aged column leaching studies due to the instability of the compound in standard batch equilibrium studies.
K <sub>oc</sub> ‡	K <sub>oc</sub> : 1765 mL/g (aged leaching study, only one soil tested, value used for PELMOgw modelling; 1/n set to 0.90)
K <sub>d</sub> ‡	K <sub>d</sub> : 15.2 mL/g (aged leaching study)
pH dependence ‡ (yes / no) (if yes type of dependence)	No information

**Prothioconazole-S-methyl (M01)**

$K_{oc}$

$K_d$

pH dependence (yes / no) (if yes type of dependence)

$K_{foc}$ :

Adsorption: 1974 – 2995 mL/g (n = 4), mean = 2556.3. Mean value used for PELMOgw modelling.

Desorption: 2532 – 3359 mL/g (n = 4), mean = 2985.3

$K_d$ :

Adsorption: 15.6 – 64.1 mL/g (n = 4)

Desorption: 20.0 – 71.9 mL/g (n = 4)

1/n:

Adsorption: 0.85 – 0.91 (n=4), mean = 0.88. Mean value used for PELMOgw modelling.

Desorption: 0.85 – 0.91 (n=4), mean = 0.88

No pH dependence

**Prothioconazole-desthio (M04)**

$K_{oc}$

$K_d$

pH dependence (yes / no) (if yes type of dependence)

$K_{foc}$ :

Adsorption: 523 – 625 mL/g (n = 4), mean = 575.4. Mean value used for PELMOgw modelling.

Desorption: 562 – 876 mL/g (n = 4), mean = 687.2

$K_d$ :

Adsorption: 4.1 – 13.4 mL/g (n = 4)

Desorption: 6.9 – 14.8 mL/g (n = 4)

1/n:

Adsorption: 0.79 – 0.83 (n=4), mean = 0.81. Mean value used for PELMOgw modelling.

Desorption: 0.77 – 0.84 mL/g (n=4), mean = 0.82

No pH dependence

**1,2,4-triazole (M13) (<2% AR in aerobic soil degradation studies)<sup>18</sup>**

$K_{foc}$

pH dependence (yes / no) (if yes type of dependence)

$K_{foc}$ :

Adsorption: 43 – 202 mL/g (n = 4), mean = 89 mL/g.

1/n:

Adsorption: 0.827 – 1.016 (n=4), mean = 0.9155 mL/g.

No pH dependence



## 8.5.2 Azoxystrobin and its metabolites

<b>Parent ‡</b>							
Soil Type	OC %	Soil pH	Kd (mL/g)	Koc (mL/g)	Kf (mL/g)	Kfoc (mL/g)	1/n
Sandy clay loam	1.7	7.5	12	690	7.9	465	0.84
Loamy sand A	1.7	7.8	6.0	357	4	235	0.82
Loamy sand B	3.0	7.9	9.0	304	6.2	207	0.85
Sand	0.3	5.5	2.1	724	1.5	500	0.84
Silty clay loam	1.6	4.9	12	739	9.5	594	0.90
Clay loam	2.8	5.5	20	718	15	536	0.90
Arithmetic mean/median					7.35/7.05	423/482	0.86/0.86
pH dependence (yes or no)			no				

<b>Metabolite R401553</b>							
Soil Type	OC %	Soil pH	Kd (mL/g)	Koc (mL/g)	Kf (mL/g)	Kfoc (mL/g)	1/n
Sandy clay loam	1.74	7.5	3.0	172	1.9	110	0.81
Loamy sand	0.29	6.8	1.1	376	0.76	260	0.81
Sandy loam	2.96	8.5	3.6	121	2.4	81	0.84
Silty clay loam	2.15	6.2	17.6	808	11	500	0.89
Silty clay loam	2.38	5.6	2.2	90	1.6	66	0.85
Clay loam	2.61	5.4	3.6	138	2.9	110	0.92
Arithmetic mean/median					3.43/2.15	188/110	0.85/0.85
pH dependence (yes or no)			no				

<b>Metabolite R402173</b>							
Soil Type	OC %	Soil pH	Kd (mL/g)	Koc (mL/g)	Kf (mL/g)	Kfoc (mL/g)	1/n
Sandy clay loam	1.74	7.5	0.7	40	0.65	37	0.96
Loamy sand	0.29	6.8	0.29	101	0.27	93	0.95
Sandy loam	2.96	8.5	0.80	27	0.74	25	0.96
Silty clay loam	2.15	6.2	5.5	254	4.2	200	0.92
Silty clay loam	2.38	5.6	2.4	100	2.0	86	0.93
Clay loam	2.61	5.4	3.2	124	2.9	110	0.96
Arithmetic mean/median					1.79/1.37	91.8/90	0.95/0.96
pH dependence (yes or no)			yes				

<b>Metabolite R234886</b>							
Soil Type	OC %	Soil pH	Kd (mL/g)	Koc (mL/g)	Kf (mL/g)	Kfoc (mL/g)	1/n
Loamy sand	2.96	7.5	1.0	34	0.82	28	0.90
Clay loam	2.78	4.8	14.2	514	10	360	0.89
Loamy sand	1.68	7.3	0.55	32.4	0.35	21	0.76
Sand	0.29	4.6	2.3	772	1.4	490	0.79
Silty clay loam	1.62	4.2	9.1	564	6.8	420	0.90
Sandy clay loam	1.74	6.8	1.1	65	0.85	49	0.85
Arithmetic mean/median					3.37/1.125	228/205	0.85/0.87
pH dependence (yes or no)			yes				

### 8.5.3 Column leaching (KCP 9.1.2.1)

Studies on column leaching the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

#### 8.5.3.1 Prothioconazole and its metabolites

Column leaching ‡

Guideline: SETAC (1995), BBA Part IV, 6-2 (1986)  
 Precipitation: 200mm  
 Time period: 2days  
 Leachate: <1% AR; fractions not investigated

#### 8.5.3.2 Azoxystrobin and its metabolites

Column leaching ‡

Aged residues leaching ‡

No leaching observed

Ageing for 30 d

### 8.5.4 Lysimeter studies (KCP 9.1.2.2)

Studies on lysimeter formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98

- Azoxystrobin - EFSA Journal 2010; 8(4):1542

#### 8.5.4.1 Prothioconazole and its metabolites

Aged residues leaching ‡

Guideline: US EPA 163-1 (1982)

Aged for: 30 hours

Precipitation: 1000 mL

The total radioactivity in the leachate accounted for only 1.1% of the AR, and no individual leachate fraction resulted in a radioactivity content >0.2% of the AR. Therefore the leachate fractions were not analysed for parent compound or metabolites.

#### 8.5.4.2 Azoxystrobin and its metabolites

Aged residues leaching ‡

Ageing for 30 d

### 8.5.5 Field leaching studies (KCP 9.1.2.3)

#### 8.5.5.1 Prothioconazole and its metabolites

Lysimeter/ field leaching studies ‡

No data submitted, none required.

#### 8.5.5.2 Azoxystrobin and its metabolites

Lysimeter/ field leaching studies ‡

Not submitted - not required

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

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

Studies on degradation in water/sediment systems were not performed, since it is possible to extrapolate from data obtained with the active substance. EU approved endpoints were evaluated during Annex I inclusion. All relevant data are presented in :

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

### 8.6.1 Prothioconazole and its metabolites

Hydrolysis of active substance and relevant metabolites (DT<sub>50</sub>) ‡  
(state pH and temperature)

prothioconazole:  
DT<sub>50</sub> at 50°C:  
pH 9 and 7: > 1 year  
pH 4: 120 days  
DT<sub>50</sub> at 25°C:  
pH 9, 7 and 4: > 1 year

Photolytic degradation of active substance and relevant metabolites ‡

**Aqueous photolysis study (25°C, pH7):**  
prothioconazole:  
phenyl label - DT<sub>50</sub> = 44.3 hrs (R<sup>2</sup> = 0.999)  
triazole label - DT<sub>50</sub> = 51.4 hrs (R<sup>2</sup> = 0.999)  
mean = 47.7 hours (n=2)  
predicted environmental half-life under solar summer conditions (June) of Phoenix, AZ, USA of 7.1 days and 11 days at Athens  
mineralisation at study end (18 days) = 3.0% AR (phenyl label), 0.5% AR (triazole label)  
Dark controls: prothioconazole was stable in the dark control samples, confirming that photolysis was the main process of degradation. %AR at 18 days was 108.7% for the phenyl label and 107.1% for the triazole label.  
prothioconazole-desthio (M04): max 55.7% AR 11 d  
prothioconazole-thiazocine (M12): max 14.1% AR, 5d  
1,2,4-triazole (M13): max 11.9% AR, 18d

**Quantum yield studies**  
prothioconazole:  
Quantum yields Φ of 0.0638 (pH 4) and 0.0047 (pH 9) were calculated. Environmental direct photolysis half-lives were in the range 50 to >200 days at pH 4 and 7 to 20 days at pH 9 for the periods of main use.  
prothioconazole-desthio (M04):  
A quantum yield of Φ of 0.00449 was calculated. The resulting quantum yield and the UV absorption were used to estimate the environmental half-life of prothioconazole-desthio (M04) concerning direct photodegradation in water by two different simulation models (GC-SOLAR, half-life at 50° latitude and 0-1cm depth in the summer season: 269 days and Frank & Klöpffer, half-life at 50° latitude and 0-1cm depth > 1 year).  
1,2,4-triazole (M13):  
The UV-absorption data in the environmentally relevant pH range showed that 1,2,4-triazole (M13) dissolved in aqueous solution does not absorb any light at wavelengths above 290 nm.

Degradation in water/sediment	Aerobic lab sediment/water at 20°C
- DT <sub>50</sub> water ‡	DT <sub>50</sub> water - 0.8 and 1.0 days, 1 <sup>st</sup> Order (1.0 day value used for PEC <sub>sw</sub> calculation) (1 <sup>st</sup> Order, r <sup>2</sup> = 0.947 and 0.999, respectively, n = 2)
- DT <sub>90</sub> water ‡	DT <sub>90</sub> water - 2.7 and 3.4 days (1 <sup>st</sup> Order, r <sup>2</sup> = 0.947 and 0.999, respectively, n = 2)
- DT <sub>50</sub> whole system ‡	DT <sub>50</sub> whole system - 2.8 and 1.6 days ('hockey stick', r <sup>2</sup> = 0.953 and 0.998, respectively, n = 2)
- DT <sub>90</sub> whole system ‡	DT <sub>90</sub> whole system - 76.4 and 23.6 days ('hockey stick', r <sup>2</sup> = 0.953 and 0.998, respectively, n = 2)
Mineralization	Hönniger Weiher: 14.7% AR at study end (121 days, phenyl-label). 1.9% AR at study end (121 days, triazole-label). Angler Weiher: 29.0% AR at study end (121 days, phenyl-label). 1.9% AR at study end (121 days, triazole-label).
Non-extractable residues	Hönniger Weiher: 50.8% AR at study end (121 days, phenyl-label). 52.5% AR at study end (121 days, triazole-label). Angler Weiher: 31.3% AR at study end (121 days, phenyl-label). 18.9% AR at study end (121 days, triazole-label).
Distribution in water / sediment systems (active substance) ‡	Sediment: phenyl-label: max 21.0 – 23.4 %AR, 1d (n=2) triazole-label: max 18.3 – 22.6 %AR, 1d (n=2)
Distribution in water / sediment systems (metabolites) ‡ Prothioconazole-desthio (M04)	Water layer: phenyl-label: max 13.9 – 32.3 %AR, 0- 7 d (n=2) triazole-label: max 9.2 – 31.9 %AR, 1 - d (n=2)  Sediment: phenyl-label: max 21.9 – 26.9 %AR, 14 – 59 d (n=2) triazole-label: max 17.7 – 26.9 %AR, 14 – 59 d (n=2)
1,2,4-triazole (M13)	Water layer: triazole-label: max 0.8 – 37.2 %AR, 59 – 121 d (n=2)

## 8.6.2 Azoxystrobin and its metabolites

Parent	Distribution (max in water 91.2 % AR after 0 d, (Virginia), Max. sed 90.5 % after 0 d (Old Basing))									
Water / sediment system	pH water phase	pH sed	t. °C	DT <sub>50</sub> -DT <sub>90</sub> whole sys.	St. (Chi <sup>2</sup> )	DT <sub>50</sub> -DT <sub>90</sub> water	St. (r <sup>2</sup> )	DT <sub>50</sub> -DT <sub>90</sub> sed	St. (r <sup>2</sup> )	Method of calculation
Old Basing	7.5	7.8	20° C	234/777	2.440	-	-	-	-	SFO
Virginia water	6.4	6.9	20° C	180/598	4.095	-	-	-	-	SFO
Geometric mean/median				205/682		-		-		

Metabolite R234886	Distribution (max in water 10.8 % after 152 d, Max. sed 15.6% after 152 d)									
Water / sediment system	pH water phase	pH sed	t. °C	DT <sub>50</sub> -DT <sub>90</sub> whole sys.	St. (r <sup>2</sup> )	DT <sub>50</sub> -DT <sub>90</sub> water	r <sup>2</sup>	DT <sub>50</sub> -DT <sub>90</sub> sed	St. (r <sup>2</sup> )	Method of calculation
Old Basing	7.5	7.8	20° C	- *		-*		-*		
Virginia Water	6.4	6.9	20° C	- *		-*		-*		
Geometric mean/median				-						

\* In the exposure assessment a default worst case DT<sub>50</sub> of 1000 days was used for water, sediment and whole system and therefore no DT<sub>50</sub>s were calculated from the above study.

Mineralization and non extractable residues					
Water / sediment system	pH water phase	pH sed	Mineralization x % after n d. (end of the study).	Non-extractable residues in sed. Max x % after n d	Non-extractable residues in sed. Max x % after n d (end of the study)

## 8.7 Predicted Environmental Concentrations in soil (PEC<sub>soil</sub>) (KCP 9.1.3)

zRMS Comments:	<p>Calculations of PEC<sub>s</sub> for both active substances, their metabolites and formulation used for crops included in GAP table were submitted.</p> <p>The endpoints used for PECs assessment were agreed at the EU level.</p> <p>The interception for particular crop were accepted.</p> <p><b>Prothioconazole.</b> The PECs values for active substance and its formulation for particular use presented in GAP table were accepted. The PECs values were corrected in accordance with submitted calculations (ESCAPE model) for mustard, poppy seeds.</p> <p><b>Azoxystrobin.</b> The PECs values for active substance and its formulation for particular use presented in GAP table were accepted. The PECs values were corrected in accordance with submitted calculations (ESCAPE model) for tobacco.</p> <p><b>Formulation.</b> For PECs assessment only single application was taken into consideration The relevant calculations were provided by the evaluator.</p>
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The PECs values both active substances and formulation for particular crops are presented in the table below.

Crop	Prothioconazole	Azoxystrobin	Formulation
	PECs mg/kg soil		
Cereals	0.3382 0.3397*	0.4189 0.6765*	1.1957
Oilseed rape ,	0.0467 0.0469*	0.0533 0.0861*	0.2989
Mustard, Breadseed poppy	0.1400 0.1406*	0.1600 0.2584	0.8968
Soya	0.1517 0.1523*	0.1733 0.2799*	0.9715
Sunflower	0.1867 0.1875*	0.2133 0.3445*	1.1957
Ornamentals	0.3171 0.3185*	0.3927 0.6342*	1.1210
Forestry tree, Salix, Wicker, Ornamentals	0.1691 0.1699*	0.2095 0.3382*	0.5979
Tobacco	0.2114 0.2123*	0.2618 0.4228	0.7473

\* - PECs accum is presented

**Prothioconazole metabolites.** For metabolites of prothioconazole: prothioconazole-desthio (M04) and prothioconazole-S-methyl (M01) the PECs were recalculated by evaluator.

The risk envelope approach was used (the highest effective application rate was considered – multiple application in cereals 2 x 200 g a.s./ha and 20% of interception):

Crop	Prothioconazole- desthio (M04)	Prothioconazole- S- methyl (M01)
	PECs mg/kg soil	
Cereals	0.0873 0.0944*	0.0208 0.0214*

\* - PECs accum is presented

**Azoxystrobin metabolites.**

The risk envelope approach was used (the highest effective application rate was considered – multiple application in cereals 2 x 200 g a.s./ha and 20% of interception):

Crop	R234886	R401553	R402173
	PECs mg/kg soil		
Cereals	0.0266 0.0297*	0.0003 0.0004*	0.0016 0.0026*

\* - PECs accum is presented



	These values will be used in further risk assessment.
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### 8.7.1 Justification for new endpoints

All endpoints used for PEC soil calculations are EU approved and were evaluated on EU level and presented in:

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

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

**Table 8.7-1: Input parameters related to application for PEC<sub>soil</sub> calculations**

Use No.				
Crop	Cereals	Oilseed rape	Ornamentals	Tobacco
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	2/14	1	2/14	2/14
Crop interception (%)	20%	80%	25%	50%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (no tillage)	5 cm (no tillage)		
Use No.				
Crop	Soya	Sunflower	Mustard	Breadseed poppy
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	1/-	1/-	1/-	1/-
Crop interception (%)	35%	20%	40%	40%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (no tillage)	5 cm (no tillage)		
Use No.				
Crop	Coniferous / deciduous forest nurseries, Ornamental shrubs	Salix viminalis (SAXVI) Wicker (1SAXG)		
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200		
Number of applications/interval	2/14	2/14		
Crop interception (%)	60%	60%		
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (no tillage)	5 cm (no tillage)		



**Table 8.7-2: Input parameter for active substance(s) and relevant metabolite(s) for PEC<sub>soil</sub> calculation**

Compound	Molecular weight (g/mol)	Max. occurrence (%)	DT50 (days)	Value in accordance to EU endpoint y/n/ Reference
Prothioconazole	344.3	-	46.6	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Prothioconazole-desthio	312.2	57.1	72.3	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Prothioconazole-S-methyl	358.3	14.6	46	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Azoxystrobin	403.4	-	262	EFSA Journal 2010; 8(4):1542
R234886	389.4	28.8	110	EFSA Journal 2010; 8(4):1542
R401553	213.2	17%	1.5	EFSA Journal 2010; 8(4):1542
R402173	333.3	17	7.5	EFSA Journal 2010; 8(4):1542

### 8.7.2.1 Prothioconazole and its metabolites

**Table 8.7-3: PEC<sub>soil</sub> for prothioconazole on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter/spring cereals	
		Multiple application	
		Actual	TWA
Initial		0.3382	-
Short term	24h	0.3332	0.3357
	2d	0.3283	0.3333
	4d	0.3187	0.3284
Long term	7d	0.3048	0.3212
	14d	0.2747	0.3054
	21d	0.2475	0.2905
	28d	0.2230	0.2774
	50d	0.1608	0.2403
	100d	0.0764	0.1887
Plateau concentration (5 cm) after year 10		0.0015	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.3397	

**Table 8.7-4:  $PEC_{soil}$  for prothioconazole on winter oilseed rape**

$PEC_{soil}$ (mg/kg)		winter oilseed rape	
		Single application	
		Actual	TWA
Initial		0.0467	-
Short term	24h	0.0460	0.0463
	2d	0.0453	0.0460
	4d	0.0440	0.0453
Long term	7d	0.0421	0.0443
	14d	0.0379	0.0421
	21d	0.0341	0.0401
	28d	0.0308	0.0382
	50d	0.0222	0.0329
	100d	0.0105	0.0243
Plateau concentration (5 cm) after year 10		0.0002	-
$PEC_{accumulation}$ ( $PEC_{act} + PEC_{soil \text{ plateau}}$ )		0.0469	

**Table 8.7-5:  $PEC_{soil}$  for prothioconazole on forestry tree, Salix, Wicker**

$PEC_{soil}$ (mg/kg)		Forestry treem Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.1691	-
Short term	24h	0.1666	0.1679
	2d	0.1642	0.1666
	4d	0.1594	0.1642
Long term	7d	0.1524	0.1606
	14d	0.1373	0.1527
	21d	0.1237	0.1453
	28d	0.1115	0.1387
	50d	0.0804	0.1201
	100d	0.0382	0.0943
Plateau concentration (5 cm) after year 10		0.0007	-
$PEC_{accumulation}$ ( $PEC_{act} + PEC_{soil \text{ plateau}}$ )		0.1699	

**Table 8.7-6: PEC<sub>soil</sub> for prothioconazole on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy		Mustard, breadseed poppy	
		Single application		Single application	
		Actual	TWA	Actual	TWA
Initial		0.3866	-	0.1400	
Short term	24h	0.3809	0.3837	0.1379	0.1390
	2d	0.3752	0.3809	0.1359	0.1379
	4d	0.3642	0.3753	0.1319	0.1359
Long term	7d	0.3483	0.3671	0.1262	0.1330
	14d	0.3139	0.3490	0.1137	0.1264
	21d	0.2829	0.3320	0.1024	0.1202
	28d	0.2549	0.3170	0.0923	0.1145
	50d	0.1837	0.2746	0.0665	0.0988
	100d	0.0873	0.2156	0.0316	0.0729
Plateau concentration (5 cm) after year 10		0.0017	-	0.0006	
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.3883		0.1406	

**Table 8.7-7: PEC<sub>soil</sub> for prothioconazole on ornamentals**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.3171	-
Short term	24h	0.3124	0.3148
	2d	0.3078	0.3124
	4d	0.2988	0.3079
Long term	7d	0.2857	0.3012
	14d	0.2575	0.2863
	21d	0.2320	0.2724
	28d	0.2091	0.2601
	50d	0.1507	0.2253
	100d	0.0716	0.1769
Plateau concentration (5 cm) after year 10		0.0014	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.3185	

**Table 8.7-8: PEC<sub>soil</sub> for prothioconazole on soya**

PEC <sub>soil</sub> (mg/kg)		Soya	
		Single application	
		Actual	TWA
Initial		0.1517	-
Short term	24h	0.1494	0.1505
	2d	0.1472	0.1494
	4d	0.1429	0.1472
Long term	7d	0.1367	0.1440
	14d	0.1232	0.1369
	21d	0.1110	0.1303
	28d	0.1000	0.1240
	50d	0.0721	0.1070
	100d	0.0343	0.0789
Plateau concentration (5 cm) after year 10		0.0007	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.1523	

**Table 8.7-9: PEC<sub>soil</sub> for prothioconazole on sunflower**

PEC <sub>soil</sub> (mg/kg)		sunflower	
		Single application	
		Actual	TWA
Initial		0.1867	-
Short term	24h	0.1839	0.1853
	2d	0.1812	0.1839
	4d	0.1759	0.1812
Long term	7d	0.1682	0.1773
	14d	0.1516	0.1685
	21d	0.1366	0.1603
	28d	0.1231	0.1527
	50d	0.0887	0.1317
	100d	0.0422	0.0971
Plateau concentration (5 cm) after year 10		0.0008	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.1875	

**Table 8.7-10: PEC<sub>soil</sub> for prothioconazole on tobacco**

PEC <sub>soil</sub>	Tobacco
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(mg/kg)		Multiple application	
		Actual	TWA
Initial		0.2114	-
Short term	24h	0.2083	0.2098
	2d	0.2052	0.2083
	4d	0.1992	0.2052
Long term	7d	0.1905	0.2008
	14d	0.1717	0.1908
	21d	0.1547	0.1816
	28d	0.1394	0.1734
	50d	0.1005	0.1502
	100d	0.0478	0.1179
Plateau concentration (5 cm) after year 10		0.0009	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.2123	

**Table 8.7-11: PEC<sub>soil</sub> for azoxystrobin on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA
Initial		0.4189	-
Short term	24h	0.4178	0.4184
	2d	0.4167	0.4178
	4d	0.4145	0.4167
Long term	7d	0.4112	0.4151
	14d	0.4037	0.4112
	21d	0.3963	0.4075
	28d	0.3890	0.4038
	50d	0.3670	0.3924
	100d	0.3215	0.3681
Plateau concentration (5 cm) after year 10		0.2576	
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.6765	

**Table 8.7-12: PEC<sub>soil</sub> for azoxystrobin on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		Winter oilseed rape	
		Single application	
		Actual	TWA

Initial		0.0533	-
Short term	24h	0.0532	0.0533
	2d	0.0531	0.0532
	4d	0.0528	0.0531
Long term	7d	0.0524	0.0528
	14d	0.0514	0.0524
	21d	0.0505	0.0519
	28d	0.0495	0.0514
	50d	0.0467	0.0500
	100d	0.0409	0.0469
Plateau concentration (5 cm) after year 10		0.0328	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0861	

**Table 8.7-13: PEC<sub>soil</sub> for azoxystrobin on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.2095	-
Short term	24h	0.2089	0.2092
	2d	0.2083	0.2089
	4d	0.2072	0.2084
Long term	7d	0.2056	0.2075
	14d	0.2018	0.2056
	21d	0.1981	0.2037
	28d	0.1945	0.2019
	50d	0.1835	0.1962
	100d	0.1608	0.1840
Plateau concentration (5 cm) after year 10		0.1288	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.3382	

**Table 8.7-14: PEC<sub>soil</sub> for azoxystrobin on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.1600	-
Short term	24h	0.1596	0.1598

Long term	2d	0.1592	0.1596
	4d	0.1583	0.1592
	7d	0.1571	0.1585
	14d	0.1542	0.1571
	21d	0.1514	0.1556
	28d	0.1486	0.1542
	50d	0.1402	0.1499
	100d	0.1228	0.1406
Plateau concentration (5 cm) after year 10		0.0984	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.2584	

**Table 8.7-15: PEC<sub>soil</sub> for azoxystrobin on ornamentals**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.3927	-
Short term	24h	0.3917	0.3922
	2d	0.3907	0.3917
	4d	0.3886	0.3907
Long term	7d	0.3855	0.3891
	14d	0.3784	0.3855
	21d	0.3715	0.3820
	28d	0.3647	0.3785
	50d	0.3441	0.3679
	100d	0.3014	0.3451
Plateau concentration (5 cm) after year 10		0.2415	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.6342	

**Table 8.7-16: PEC<sub>soil</sub> for azoxystrobin on soya**

PEC <sub>soil</sub> (mg/kg)		Soya	
		Single application	
		Actual	TWA
Initial		0.1733	-
Short term	24h	0.1729	0.1731
	2d	0.1724	0.1729
	4d	0.1715	0.1724

Long term	7d	0.1702	0.1717
	14d	0.1670	0.1702
	21d	0.1640	0.1686
	28d	0.1610	0.1671
	50d	0.1519	0.1624
	100d	0.1330	0.1523
Plateau concentration (5 cm) after year 10		0.1066	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.2799	

**Table 8.7-17: PEC<sub>soil</sub> for azoxystrobin on sunflower**

PEC <sub>soil</sub> (mg/kg)		Sunflower	
		Single application	
		Actual	TWA
Initial		0.2133	-
Short term	24h	0.2128	0.2131
	2d	0.2122	0.2128
	4d	0.2111	0.2122
Long term	7d	0.2094	0.2114
	14d	0.2056	0.2094
	21d	0.2018	0.2075
	28d	0.1981	0.2056
	50d	0.1869	0.1998
	100d	0.1637	0.1874
Plateau concentration (5 cm) after year 10		0.1312	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.3445	

**Table 8.7-18: PEC<sub>soil</sub> for azoxystrobin on tobacco**

PEC <sub>soil</sub> (mg/kg)		Tobacco		Tobacco	
		Multiple application		Multiple application	
		Actual	TWA	Actual	TWA
Initial		0.3866	-	0.2618	
Short term	24h	0.3809	0.3837	0.2611	0.2615
	2d	0.3752	0.3809	0.2604	0.2611
	4d	0.3642	0.3753	0.2591	0.2604
Long term	7d	0.3483	0.3671	0.2570	0.2594
	14d	0.3139	0.3490	0.2523	0.2570



	21d	<del>0.2829</del>	<del>0.3320</del>	0.2477	0.2547
	28d	<del>0.2549</del>	<del>0.3170</del>	0.2431	0.2524
	50d	<del>0.1837</del>	<del>0.2746</del>	0.2294	0.2452
	100d	<del>0.0873</del>	<del>0.2156</del>	0.2010	0.2300
Plateau concentration (5 cm) after year 10		<del>0.0017</del>	-	01610	
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		<del>0.3883</del>		0.4228	

### PEC<sub>soil</sub> of metabolites

**Table 8.7-19: PEC<sub>soil</sub> for Prothioconazole-desthio on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA
Initial		0.0873	-
Short term	24h	0.0873	0.0873
	2d	0.0872	0.0873
	4d	0.0872	0.0873
Long term	7d	0.0870	0.0873
	14d	0.0861	0.0872
	21d	0.0849	0.0871
	28d	0.0833	0.0869
	50d	0.0767	0.0860
	100d	0.0583	0.0824
Plateau concentration (5 cm) after year 10		0.0071	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0944	

**Table 8.7-20: PEC<sub>soil</sub> for Prothioconazole-S-methyl on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA
Initial		0.0208	-
Short term	24h	0.0208	0.0208
	2d	0.0208	0.0208
	4d	0.0207	0.0208

Long term	7d	0.0207	0.0208
	14d	0.0204	0.0207
	21d	0.0199	0.0207
	28d	0.0193	0.0206
	50d	0.0171	0.0203
	100d	0.0116	0.0190
Plateau concentration (5 cm) after year 10		0.0006	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0214	

**Table 8.7-21: PEC<sub>soil</sub> for Prothioconazole-desthio on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		winter oilseed rape	
		Single application	
		Actual	TWA
Initial		0.0109	-
Short term	24h	0.0109	0.0109
	2d	0.0109	0.0109
	4d	0.0109	0.0109
Long term	7d	0.0109	0.0109
	14d	0.0108	0.0109
	21d	0.0107	0.0109
	28d	0.0105	0.0109
	50d	0.0096	0.0108
	100d	0.0073	0.0103
Plateau concentration (5 cm) after year 10		0.0009	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0118	

**Table 8.7-22: PEC<sub>soil</sub> for Prothioconazole-S-methyl on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		Winter oilseed rape	
		Single application	
		Actual	TWA
Initial		0.0026	-
Short term	24h	0.0026	0.0026
	2d	0.0026	0.0026
	4d	0.0026	0.0026
Long term	7d	0.0026	0.0026
	14d	0.0026	0.0026

	21d	0.0025	0.0026
	28d	0.0024	0.0026
	50d	0.0022	0.0026
	100d	0.0015	0.0024
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0027	

**Table 8.7-23: PEC<sub>soil</sub> for Prothioconazole-desthio on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.0436	-
Short term	24h	0.0436	0.0436
	2d	0.0436	0.0436
	4d	0.0436	0.0436
Long term	7d	0.0435	0.0436
	14d	0.0431	0.0436
	21d	0.0424	0.0435
	28d	0.0417	0.0434
	50d	0.0383	0.0430
	100d	0.0291	0.0412
Plateau concentration (5 cm) after year 10		0.0036	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0472	

**Table 8.7-24: PEC<sub>soil</sub> for Prothioconazole-S-methyl on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.0083	-
Short term	24h	0.0083	0.0083
	2d	0.0083	0.0083
	4d	0.0083	0.0083
Long term	7d	0.0083	0.0083
	14d	0.0081	0.0083
	21d	0.0080	0.0083
	28d	0.0077	0.0082

	50d	0.0069	0.0081
	100d	0.0046	0.0076
Plateau concentration (5 cm) after year 10		0.0003	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0086	

**Table 8.7-25: PEC<sub>soil</sub> for Prothioconazole-desthio on mustard, bread seed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.0328	-
Short term	24h	0.0328	0.0328
	2d	0.0328	0.0328
	4d	0.0328	0.0328
Long term	7d	0.0327	0.0328
	14d	0.0324	0.0328
	21d	0.0320	0.0328
	28d	0.0314	0.0327
	50d	0.0289	0.0329
	100d	0.0220	0.0310
Plateau concentration (5 cm) after year 10		0.0027	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0355	

**Table 8.7-26: PEC<sub>soil</sub> for Prothioconazole-S-methyl on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.0078	-
Short term	24h	0.0078	0.0078
	2d	0.0078	0.0078
	4d	0.0078	0.0078
Long term	7d	0.0078	0.0078
	14d	0.0077	0.0078
	21d	0.0075	0.0078
	28d	0.0073	0.0078
	50d	0.0065	0.0077
	100d	0.0044	0.0072

Plateau concentration (5 cm) after year 10	0.0002	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )	0.0081	

**Table 8.7-27: PEC<sub>soil</sub> for Prothioconazole-desthio on ornamental**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.0818	-
Short term	24h	0.0818	0.0818
	2d	0.0818	0.0818
	4d	0.0817	0.0818
Long term	7d	0.0815	0.0818
	14d	0.0808	0.0817
	21d	0.0796	0.0816
	28d	0.0781	0.0814
	50d	0.0719	0.0806
	100d	0.0546	0.0773
Plateau concentration (5 cm) after year 10		0.0067	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0885	

**Table 8.7-28: PEC<sub>soil</sub> for Prothioconazole-S-methyl on ornamental**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.0195	-
Short term	24h	0.0195	0.0195
	2d	0.0195	0.0195
	4d	0.0194	0.0195
Long term	7d	0.0194	0.0195
	14d	0.0191	0.0194
	21d	0.0187	0.0194
	28d	0.0181	0.0193
	50d	0.0161	0.0190
	100d	0.0108	0.0178
Plateau concentration (5 cm) after year 10		0.0005	-

PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )	0.0200	
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**Table 8.7-29: PEC<sub>soil</sub> for Prothioconazole-desthio on soya**

PEC <sub>soil</sub> (mg/kg)		Soya	
		Single application	
		Actual	TWA
Initial		0.0356	-
Short term	24h	0.0356	0.0356
	2d	0.0356	0.0356
	4d	0.0355	0.0356
Long term	7d	0.0355	0.0356
	14d	0.0351	0.0355
	21d	0.0346	0.0355
	28d	0.0340	0.0354
	50d	0.0313	0.0351
	100d	0.0238	0.0336
Plateau concentration (5 cm) after year 10		0.0029	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0029	

**Table 8.7-30: PEC<sub>soil</sub> for Prothioconazole-S-methyl on soya**

PEC <sub>soil</sub> (mg/kg)		Soya	
		Single application	
		Actual	TWA
Initial		0.0085	-
Short term	24h	0.0085	0.0085
	2d	0.0085	0.0085
	4d	0.0085	0.0085
Long term	7d	0.0085	0.0085
	14d	0.0083	0.0085
	21d	0.0081	0.0085
	28d	0.0079	0.0084
	50d	0.0070	0.0083
	100d	0.0047	0.0078
Plateau concentration (5 cm) after year 10		0.0002	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0087	

**Table 8.7-31: PEC<sub>soil</sub> for Prothioconazole-desthio on sunflower**

PEC <sub>soil</sub> (mg/kg)		Sunflower	
		Single application	
		Actual	TWA
Initial		0.0438	-
Short term	24h	0.0438	0.0438
	2d	0.0438	0.0438
	4d	0.0437	0.0438
Long term	7d	0.0437	0.0438
	14d	0.0433	0.0437
	21d	0.0426	0.0437
	28d	0.0418	0.0436
	50d	0.0386	0.0432
	100d	0.0293	0.0414
Plateau concentration (5 cm) after year 10		0.0036	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0474	

**Table 8.7-32: PEC<sub>soil</sub> for Prothioconazole-S-methyl on sunflower**

PEC <sub>soil</sub> (mg/kg)		Sunflower	
		Single application	
		Actual	TWA
Initial		0.0104	-
Short term	24h	0.0104	0.0104
	2d	0.0104	0.0104
	4d	0.0104	0.0104
Long term	7d	0.0104	0.0104
	14d	0.0102	0.0104
	21d	0.0100	0.0104
	28d	0.0097	0.0104
	50d	0.0086	0.0102
	100d	0.0058	0.0096
Plateau concentration (5 cm) after year 10		0.0003	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0107	

**Table 8.7-33: PEC<sub>soil</sub> for Prothioconazole-desthio on tobacco**

PEC <sub>soil</sub>	Tobacco
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(mg/kg)		Multiple application	
		Actual	TWA
Initial		0.0546	-
Short term	24h	0.0545	0.0546
	2d	0.0545	0.0545
	4d	0.0545	0.0545
Long term	7d	0.0544	0.0545
	14d	0.0538	0.0545
	21d	0.0531	0.0544
	28d	0.0521	0.0543
	50d	0.0479	0.0538
	100d	0.0364	0.0515
Plateau concentration (5 cm) after year 10		0.0044	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0590	

**Table 8.7-34: PEC<sub>soil</sub> for Prothioconazole-S-methyl on tobacco**

PEC <sub>soil</sub> (mg/kg)		Tobacco	
		Multiple application	
		Actual	TWA
Initial		0.0130	-
Short term	24h	0.0130	0.0130
	2d	0.0130	0.0130
	4d	0.0130	0.0130
Long term	7d	0.0129	0.0130
	14d	0.0127	0.0130
	21d	0.0124	0.0129
	28d	0.0121	0.0129
	50d	0.0107	0.0127
	100d	0.0072	0.0119
Plateau concentration (5 cm) after year 10		0.0004	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0133	

**Table 8.7-35: PEC<sub>soil</sub> for R234886 on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA



Initial		0.0266	-
Short term	24h	0.0266	0.0266
	2d	0.0266	0.0266
	4d	0.0266	0.0266
Long term	7d	0.0266	0.0266
	14d	0.0266	0.0266
	21d	0.0266	0.0266
	28d	0.0265	0.0266
	50d	0.0262	0.0266
	100d	0.0250	0.0265
Plateau concentration (5 cm) after year 10		0.0297	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0564	

**Table 8.7-36: PEC<sub>soil</sub> for R401553 on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA
Initial		0.0003	-
Short term	24h	0.0003	0.0003
	2d	0.0003	0.0003
	4d	0.0003	0.0003
Long term	7d	0.0003	0.0003
	14d	0.0003	0.0003
	21d	0.0002	0.0003
	28d	0.0002	0.0003
	50d	0.0002	0.0003
	100d	0.0002	0.0002
Plateau concentration (5 cm) after year 10		0.0002	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0004	

**Table 8.7-37: PEC<sub>soil</sub> for R402173 on winter/spring cereals**

PEC <sub>soil</sub> (mg/kg)		winter cereals	
		Multiple application	
		Actual	TWA
Initial		0.0016	-
Short term	24h	0.0016	0.0016

Long term	2d	0.0016	0.0016
	4d	0.0016	0.0016
	7d	0.0016	0.0016
	14d	0.0016	0.0016
	21d	0.0016	0.0016
	28d	0.0015	0.0016
	50d	0.0014	0.0016
	100d	0.0013	0.0015
Plateau concentration (5 cm) after year 10		0.0015	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0026	

**Table 8.7-38: PEC<sub>soil</sub> for R234886 on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		winter oilseed rape	
		Single application	
		Actual	TWA
Initial		0.0033	-
Short term	24h	0.0033	0.0033
	2d	0.0033	0.0033
	4d	0.0033	0.0033
Long term	7d	0.0033	0.0033
	14d	0.0033	0.0033
	21d	0.0033	0.0033
	28d	0.0033	0.0033
	50d	0.0033	0.0033
	100d	0.0031	0.0033
Plateau concentration (5 cm) after year 10		0.0037	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0071	

**Table 8.7-39: PEC<sub>soil</sub> for R401553 on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		winter oilseed rape	
		Single application	
		Actual	TWA
Initial		<0.0001	-
Short term	24h	<0.0001	<0.0001
	2d	<0.0001	<0.0001
	4d	<0.0001	<0.0001

Long term	7d	<0.0001	<0.0001
	14d	<0.0001	<0.0001
	21d	<0.0001	<0.0001
	28d	<0.0001	<0.0001
	50d	<0.0001	<0.0001
	100d	<0.0001	<0.0001
Plateau concentration (5 cm) after year 10		<0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		<0.0001	

**Table 8.7-40: PEC<sub>soil</sub> for R402173 on winter oilseed rape**

PEC <sub>soil</sub> (mg/kg)		winter oilseed rape	
		Single application	
		Actual	TWA
Initial		0.0002	-
Short term	24h	0.0002	0.0002
	2d	0.0002	0.0002
	4d	0.0002	0.0002
Long term	7d	0.0002	0.0002
	14d	0.0002	0.0002
	21d	0.0002	0.0002
	28d	0.0002	0.0002
	50d	0.0002	0.0002
	100d	0.0002	0.0002
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0003	

**Table 8.7-41: PEC<sub>soil</sub> for R234886 on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.0133	-
Short term	24h	0.0133	0.0133
	2d	0.0133	0.0133
	4d	0.0133	0.0133
Long term	7d	0.0133	0.0133
	14d	0.0133	0.0133

	21d	0.0133	0.0133
	28d	0.0132	0.0133
	50d	0.0131	0.0133
	100d	0.0125	0.0132
Plateau concentration (5 cm) after year 10		0.0149	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0282	

**Table 8.7-42: PEC<sub>soil</sub> for R401553 on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.0001	-
Short term	24h	0.0001	0.0001
	2d	0.0001	0.0001
	4d	0.0001	0.0001
Long term	7d	0.0001	0.0001
	14d	0.0001	0.0001
	21d	0.0001	0.0001
	28d	0.0001	0.0001
	50d	0.0001	0.0001
	100d	0.0001	0.0001
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0002	

**Table 8.7-43: PEC<sub>soil</sub> for R402173 on forestry tree, Salix, Wicker**

PEC <sub>soil</sub> (mg/kg)		Forestry tree, Salix, Wicker	
		Multiple application	
		Actual	TWA
Initial		0.0008	-
Short term	24h	0.0008	0.0008
	2d	0.0008	0.0008
	4d	0.0008	0.0008
Long term	7d	0.0008	0.0008
	14d	0.0008	0.0008
	21d	0.0008	0.0008
	28d	0.0008	0.0008

	50d	0.0007	0.0008
	100d	0.0006	0.0008
Plateau concentration (5 cm) after year 10		0.0005	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0013	

**Table 8.7-44: PEC<sub>soil</sub> for R234886 on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.0100	-
Short term	24h	0.0100	0.0100
	2d	0.0100	0.0100
	4d	0.0100	0.0100
Long term	7d	0.0100	0.0100
	14d	0.0100	0.0100
	21d	0.0100	0.0100
	28d	0.0099	0.0100
	50d	0.0098	0.0100
	100d	0.0094	0.0099
Plateau concentration (5 cm) after year 10		0.0112	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0212	

**Table 8.7-45: PEC<sub>soil</sub> for R401553 on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.0001	-
Short term	24h	0.0001	0.0001
	2d	0.0001	0.0001
	4d	0.0001	0.0001
Long term	7d	0.0001	0.0001
	14d	0.0001	0.0001
	21d	0.0001	0.0001
	28d	0.0001	0.0001
	50d	0.0001	0.0001

	100d	0.0001	0.0001
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0002	

**Table 8.7-46: PEC<sub>soil</sub> for R402173 on mustard, breadseed poppy**

PEC <sub>soil</sub> (mg/kg)		Mustard, breadseed poppy	
		Single application	
		Actual	TWA
Initial		0.0006	-
Short term	24h	0.0006	0.0006
	2d	0.0006	0.0006
	4d	0.0006	0.0006
Long term	7d	0.0006	0.0006
	14d	0.0006	0.0006
	21d	0.0006	0.0006
	28d	0.0006	0.0006
	50d	0.0005	0.0006
	100d	0.0005	0.0006
Plateau concentration (5 cm) after year 10		0.0004	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0010	

**Table 8.7-47: PEC<sub>soil</sub> for R234886 on ornamental**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.0250	-
Short term	24h	0.0250	0.0250
	2d	0.0250	0.0250
	4d	0.0250	0.0250
Long term	7d	0.0250	0.0250
	14d	0.0249	0.0250
	21d	0.0249	0.0250
	28d	0.0248	0.0250
	50d	0.0245	0.0249
	100d	0.0234	0.0248
Plateau concentration (5 cm) after year 10		0.0279	-

PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )	0.0529	
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**Table 8.7-48: PEC<sub>soil</sub> for R401553 on ornamentals**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.0002	-
Short term	24h	0.0002	0.0002
	2d	0.0002	0.0002
	4d	0.0002	0.0002
Long term	7d	0.0002	0.0002
	14d	0.0002	0.0002
	21d	0.0002	0.0002
	28d	0.0002	0.0002
	50d	0.0002	0.0002
	100d	0.0002	0.0002
Plateau concentration (5 cm) after year 10		0.0002	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0004	

**Table 8.7-49: PEC<sub>soil</sub> for R402173 on ornamental**

PEC <sub>soil</sub> (mg/kg)		Ornamental	
		Multiple application	
		Actual	TWA
Initial		0.0015	-
Short term	24h	0.0015	0.0015
	2d	0.0015	0.0015
	4d	0.0015	0.0015
Long term	7d	0.0015	0.0015
	14d	0.0015	0.0015
	21d	0.0015	0.0015
	28d	0.0014	0.0015
	50d	0.0014	0.0015
	100d	0.0012	0.0014
Plateau concentration (5 cm) after year 10		0.0010	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0025	

**Table 8.7-50: PEC<sub>soil</sub> for R234886 on soya**

PEC <sub>soil</sub> (mg/kg)		soya	
		Single application	
		Actual	TWA
Initial		0.0108	-
Short term	24h	0.0108	0.0108
	2d	0.0108	0.0108
	4d	0.0108	0.0108
Long term	7d	0.0108	0.0108
	14d	0.0108	0.0108
	21d	0.0108	0.0108
	28d	0.0108	0.0108
	50d	0.0106	0.0108
	100d	0.0102	0.0108
Plateau concentration (5 cm) after year 10		0.0121	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0229	

**Table 8.7-51: PEC<sub>soil</sub> for R401553 on soya**

PEC <sub>soil</sub> (mg/kg)		soya	
		Single application	
		Actual	TWA
Initial		0.0001	-
Short term	24h	0.0001	0.0001
	2d	0.0001	0.0001
	4d	0.0001	0.0001
Long term	7d	0.0001	0.0001
	14d	0.0001	0.0001
	21d	0.0001	0.0001
	28d	0.0001	0.0001
	50d	0.0001	0.0001
	100d	0.0001	0.0001
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0002	

**Table 8.7-52: PEC<sub>soil</sub> for R402173 on soya**

PEC <sub>soil</sub>	soya
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(mg/kg)		Single application	
		Actual	TWA
Initial		0.0007	-
Short term	24h	0.0007	0.0007
	2d	0.0007	0.0007
	4d	0.0007	0.0007
Long term	7d	0.0007	0.0007
	14d	0.0006	0.0007
	21d	0.0006	0.0007
	28d	0.0006	0.0007
	50d	0.0006	0.0006
	100d	0.0005	0.0006
Plateau concentration (5 cm) after year 10		0.0004	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0011	

**Table 8.7-53: PEC<sub>soil</sub> for R234886 on sunflower**

PEC <sub>soil</sub> (mg/kg)		sunflower	
		Single application	
		Actual	TWA
Initial		0.0133	-
Short term	24h	0.0133	0.0133
	2d	0.0133	0.0133
	4d	0.0133	0.0133
Long term	7d	0.0133	0.0133
	14d	0.0133	0.0133
	21d	0.0133	0.0133
	28d	0.0133	0.0133
	50d	0.0131	0.0133
	100d	0.0125	0.0132
Plateau concentration (5 cm) after year 10		0.0149	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0282	

**Table 8.7-54: PEC<sub>soil</sub> for R401553 on sunflower**

PEC <sub>soil</sub> (mg/kg)		sunflower	
		Single application	
		Actual	TWA

Initial		0.0001	-
Short term	24h	0.0001	0.0001
	2d	0.0001	0.0001
	4d	0.0001	0.0001
Long term	7d	0.0001	0.0001
	14d	0.0001	0.0001
	21d	0.0001	0.0001
	28d	0.0001	0.0001
	50d	0.0001	0.0001
	100d	0.0001	0.0001
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0002	

**Table 8.7-55: PEC<sub>soil</sub> for R402173 on sunflower**

PEC <sub>soil</sub> (mg/kg)		sunflower	
		Single application	
		Actual	TWA
Initial		0.0008	-
Short term	24h	0.0008	0.0008
	2d	0.0008	0.0008
	4d	0.0008	0.0008
Long term	7d	0.0008	0.0008
	14d	0.0008	0.0008
	21d	0.0008	0.0008
	28d	0.0008	0.0008
	50d	0.0007	0.0008
	100d	0.0006	0.0008
Plateau concentration (5 cm) after year 10		0.0005	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0013	

**Table 8.7-56: PEC<sub>soil</sub> for R234886 on tobacco**

PEC <sub>soil</sub> (mg/kg)		Tobacco	
		Multiple application	
		Actual	TWA
Initial		0.0167	-
Short term	24h	0.0167	0.0167

Long term	2d	0.0167	0.0167
	4d	0.0167	0.0167
	7d	0.0166	0.0167
	14d	0.0166	0.0167
	21d	0.0166	0.0166
	28d	0.0166	0.0166
	50d	0.0164	0.0166
	100d	0.0156	0.0165
Plateau concentration (5 cm) after year 10		0.0186	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0352	

**Table 8.7-57: PEC<sub>soil</sub> for R401553 on tobacco**

PEC <sub>soil</sub> (mg/kg)		Tobacco	
		Multiple application	
		Actual	TWA
Initial		0.0002	-
Short term	24h	0.0002	0.0002
	2d	0.0002	0.0002
	4d	0.0002	0.0002
Long term	7d	0.0002	0.0002
	14d	0.0002	0.0002
	21d	0.0002	0.0002
	28d	0.0002	0.0002
	50d	0.0001	0.0002
	100d	0.0001	0.0001
Plateau concentration (5 cm) after year 10		0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0003	

**Table 8.7-58: PEC<sub>soil</sub> for R402173 on tobacco**

PEC <sub>soil</sub> (mg/kg)		Tobacco	
		Multiple application	
		Actual	TWA
Initial		0.0010	-
Short term	24h	0.0010	0.0010
	2d	0.0010	0.0010
	4d	0.0010	0.0010

Long term	7d	0.0010	0.0010
	14d	0.0010	0.0010
	21d	0.0010	0.0010
	28d	0.0010	0.0010
	50d	0.0009	0.0010
	100d	0.0008	0.0009
Plateau concentration (5 cm) after year 10		0.0006	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0016	

### 8.7.2.2 PEC<sub>soil</sub> of CHR/F/PROTAZO

**Table 8.7-59: PEC<sub>soil</sub> for CHR/F/PROTAZO on cereals**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	<del>2 x 1121</del>	<del>2.3915</del>	-	5 cm	-	-

**Table 8.7-60: PEC<sub>soil</sub> for CHR/F/PROTAZO on oilseed rape**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	1 x 1121	0.2989	-	5 cm	-	-

**Table 8.7-61: PEC<sub>soil</sub> for CHR/F/PROTAZO on forestry tree, salix, wicker**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	<del>2 x 1121</del>	<del>1.1957</del>	-	5 cm	-	-

**Table 8.7-62: PEC<sub>soil</sub> for CHR/F/PROTAZO on mustard, breadseed poppy**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	1 x 1121	0.8968	-	5 cm	-	-

**Table 8.7-63: PEC<sub>soil</sub> for CHR/F/PROTAZO on ornamental**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	<del>2 x 1121</del>	2.242	-	5 cm	-	-

**Table 8.7-64: PEC<sub>soil</sub> for CHR/F/PROTAZO on soya**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	1 x 1121	0.9715	-	5 cm	-	-

**Table 8.7-65: PEC<sub>soil</sub> for CHR/F/PROTAZO on sunflower**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	1 x 1121	1.1957	-	5 cm	-	-

**Table 8.7-66: PEC<sub>soil</sub> for CHR/F/PROTAZO on tobacco**

Active substance/ reparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/F/PROTAZO	<del>1 x 1121</del>	1.4947	-	5 cm	-	-

## 8.8 Predicted Environmental Concentrations in groundwater (PEC<sub>gw</sub>) (KCP 9.2.4)

zRMS Comments:	<p>Calculations of PEC<sub>gw</sub> for both active substances and their metabolites used for crops included in were submitted in accordance with GAP table.  The endpoints used for PEC<sub>gw</sub> assessment were agreed at the EU level.</p> <p>Calculations of PEC<sub>gw</sub> for both active substances and their relevant metabolites were provided with PUF = 0.</p> <p>The recommended FOCUS models were used: FOCUS PELMO and FOCUS PEARL.</p> <p><b>Prothioconazole.</b> The PEC<sub>gw</sub> values for active substance and its metabolites for particular use presented in GAP table were accepted. The PEC<sub>gw</sub> for active substance for proposed pattern use were below the trigger value of 0.1 µg/L.</p> <p><b>Prothioconazole metabolites:</b> for the prothioconazole-desthio and prothioconazole-S-methyl the max PEC<sub>gw</sub> for proposed uses were below the trigger value of 0.1 µg/L.</p> <p><b>Azoxystrobin.</b> The PEC<sub>gw</sub> values for active substance and its metabolites for particular use presented in GAP table were accepted. The PEC<sub>gw</sub> for active substance for proposed uses were below the trigger value of 0.1 µg/L.  The typo errors were corrected.</p> <p><b>Azoxystrobin metabolites:</b> for the R402173 and R401553 the max PEC<sub>gw</sub> were below trigger value of 0.1 µg/L.</p> <p>For metabolite R234886 the acidic and alkaline soils were taken into consideration (geometric mean DT<sub>50lab</sub>: 98.6 d and 36.7 d and K<sub>foc</sub> of 227.4 mL/g and 36.7 mL/g for acidic and alkaline soils, respectively). For acidic soils the max PEC<sub>gw</sub> was also below the trigger value. In alkaline soils max PEC<sub>gw</sub> = 4.4677 µg/L was obtained for spring cereals in Hamburg scenario in PEARL model.</p> <p>Its relevance is presented in Section 10.</p>
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### 8.8.1 Justification for new endpoints

All endpoints used for PEC<sub>gw</sub> calculations are EU approved and were evaluated on EU level and presented in:

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

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

Risk envelope use in calculation to optimize calculation Pecgw:

#### a) Winter Cereals and surrogate scenarios for spring cereals – GAP – defined use:

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing

Winter Cereals	Prothioconazole	200	Boom sprayer	2	21	BBCH 25-61
Winter Cereals	Prothioconazole	200	Boom sprayer	2	21	BBCH 61-69
Spring Cereals	Prothioconazole	200	Boom sprayer	2	21	BBCH 25-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 25-69

**b) Winter Cereals and surrogate scenario for spring cereals – GAP – defined use:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 25-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 25-69

**c) Winter oilseed rape and surrogate scenario for spring oilseed rape– GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 59-65
Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 65-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing

Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 59-69
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**d) Sunflower – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69
Maize as surrogate crop for sunflower according to national Polish requirements	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69

**e) Soyabeam – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabeam	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabeam	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69
Beans as surrogate crop for soya according to national Polish requirements	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69
Peas as	Prothioconazole	175	Boom	1	-	BBCH 12-69



surrogate crop for soya according to national Polish requirements	Azoxystrobin	200	sprayer			
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**f) Spring oilseed rape, Breadseed poppy, mustard and surrogate scenarios for sunflower and soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Mustard	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Breadseed poppy	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Sunflower	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69
Soyabean	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 10-69

**g) Tobacco – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**h) Ornamentals – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Cabbage	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**a) Forestry tree, Ornamental h > 50 cm, Salix, Wicker – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1-2	14	BBCH 10-89
Coniferous / deciduous forest nurseries, Ornamental shrubs	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89
Salix viminalis (SAXVI)  Wicker (ISAXG)	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Apple	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	21	BBCH 10-89

**Table 8.8-1: Input parameters related to application for PEC<sub>gw</sub> calculations**

Use No.				
BBCH	25-69	59-69	25-69	59-69 from gap 10-69 used for

				calculation (please refer to risk envelope point f)
<b>Crop</b>	<b>Winter cereals</b>	<b>Winter oilseed rape</b>	<b>Spring cereals</b>	<b>Spring oilseed rape</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	2/14	1	2/14	1/-
Relative application date	Only for winter cereals used different absolute date depends on scenario: Chateaudun: 10.04 Hamburg: 29.04 Jokioinen: 09.05 Kremsmunster: 19.04 Okehampton: 16.04 Piacenza: 14.03 Porto: 15.01 Sevilla: 1.01 Thivia: 06.01	83 day before harvest	20 days after emergence	1 day after emergence
Crop interception (%)	20%	80%	20%	40%
Frequency of application	annual	annual	annual	annual
Use No.				
<b>BBCH</b>	<b>10-89</b>	<b>10-89</b>	<b>12-69</b>	<b>18-69</b>
<b>Crop</b>	<b>Ornamentals</b>	<b>Tobacco</b>	<b>Soya</b>	<b>Sunflower</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	2/14	2/14	1/-	1/-
Relative application date	1 day after emergence	5 days after emergence	5 days after emergence	17 day after emergence
Crop interception (%)	25%	50%	35%	20%
Frequency of application	annual	annual	annual	annual
Use No.				
<b>BBCH</b>	59-69 from gap 10-69 used for calculation (please refer to risk envelope point f)	59-69 from gap 10-69 used for calculation (please refer to risk envelope point f)	10-89	10-89
<b>Crop</b>	<b>Breadseed poppy</b>	<b>Mustard</b>	<b>Coniferous / deciduous forest nurseries, Ornamental shrubs</b>	<b>Salix viminalis (SAXVI) Wicker (1SAXG)</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200

Number of applications/interval	1/-	1/-	2/14	2/14
Relative application date	1 day after emergence	1 day after emergence	1 day after emergence	1 day after emergence
Crop interception (%)	40%	40%	60%	60%
Frequency of application	annual	annual	annual	annual
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.3			
Use No.				
BBCH	12-69	12-69	18-69	
Crop	Beans as surrogate crop for soya according to national Polish requirements	Peas as surrogate crop for soya according to national Polish requirements	Maize as surrogate crop for sunflower according to national Polish requirements	
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	
Number of applications/interval	1/-	1/-	1/-	
Relative application date	7 day after emergence	5 day after emergence	14 day after emergence	
Crop interception (%)	25%	35%	25%	
Frequency of application	annual	annual	annual	
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.3			

### 8.8.2.1 Prothioconazole and its metabolites

**Table 8.8-2: Input parameters related to active substance Prothioconazole and metabolite(s) for PEC<sub>gw</sub> calculations**

Compound	Prothioconazole	Prothioconazole—S-methyl	Prothioconazole-desthio	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	344.26	358.38	312.2	EFSA Scientific Report (2007) 106, 1-98
Water solubility (g/mol):	0.3	0.3	0.3	EFSA Scientific Report (2007) 106, 1-98
Saturated vapour pressure (Pa):	4 x 10 <sup>-7</sup>	0	0	EFSA Scientific Report (2007) 106, 1-98
DT <sub>50</sub> in soil (d)	1.2	15.7	22.7	EFSA Scientific Report (2007) 106,

Compound	Prothioconazole	Prothioconazole— S-methyl	Prothioconazole- desthio	Value in accordance with EU endpoint y/n/ Reference*
				1-98
Transformation rate	0.08086722 to Prothioconazole desthio 0.32924511 to Prothioconazole S- methyl 0.16751067 to CO2	0.4415 to CO2	0.030535 to CO2	EFSA Scientific Report (2007) 106, 1-98
K <sub>foc</sub> (mL/g)/K <sub>fom</sub>	1765	2556.3	575.4	EFSA Scientific Report (2007) 106, 1-98
1/n	0.9	0.88	0.81	EFSA Scientific Report (2007) 106, 1-98
Plant uptake factor	0	0	0	EFSA Scientific Report (2007) 106, 1-98
Formation fraction	-	0.14	0.57	EFSA Scientific Report (2007) 106, 1-98

\* Delete row in case of no pH dependency

**Table 8.8-3: PEC<sub>gw</sub> for Prothioconazole and its metabolites on winter oilseed rape (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole- desthio	Prothioconazole-S- methyl
Winter oilseed rape	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen*	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla**	<0.0001	<0.0001	<0.0001
	Thiva**	<0.0001	<0.0001	<0.0001

\* surrogate scenario from spring oilseed rape

\*\* surrogate scenario from winter oilseed rape

**Table 8.8-4: PEC<sub>gw</sub> for Prothioconazole and its metabolites on winter oilseed rape (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Winter oilseed rape	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen*	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla**	<0.001	<0.001	<0.001
	Thiva**	<0.001	<0.001	<0.001

\* surrogate scenario from spring oilseed rape

\*\* surrogate scenario from winter oilseed rape

**Table 8.8-5: PEC<sub>gw</sub> for Prothioconazole and its metabolites on winter cereals (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Winter cereals	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-6: PEC<sub>gw</sub> for Prothioconazole and its metabolites on winter cereals (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Winter cereals	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla	<0.0001	<0.0001	<0.0001
	Thiva	<0.0001	<0.0001	<0.0001

**Table 8.8-7: PEC<sub>gw</sub> for Prothioconazole and its metabolites on spring oilseed rape, mustard, breadseed poppy (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Spring oilseed rape, Mustard, Breadseed poppy	Châteaudun*	<0.0001	<0.0001	<0.0001
	Hamburg*	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster*	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza*	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla*	<0.0001	<0.0001	<0.0001
	Thiva*	<0.0001	<0.0001	<0.0001

\*surrogate form winter oilseed rape

**Table 8.8-8: PEC<sub>gw</sub> for Prothioconazole and its metabolites on spring oilseed rape, mustard, breadseed poppy (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Spring	Châteaudun*	<0.001	<0.001	<0.001

oilseed rape, Mustard, Breadseed poppy	Hamburg*	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster*	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza*	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla*	<0.001	<0.001	<0.001
	Thiva*	<0.001	<0.001	<0.001

\*surrogate form winter oilseed rape

**Table 8.8-9: PEC<sub>gw</sub> for Prothioconazole and its metabolites on spring cereals (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Spring cereals	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza*	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla*	<0.001	<0.001	<0.001
	Thiva*	<0.001	<0.001	<0.001

\*surrogate form winter cereals

**Table 8.8-10: PEC<sub>gw</sub> for Prothioconazole and its metabolites on spring cereals (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Spring cereals	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza*	<0.0001	<0.0001	<0.0001



	Porto	<0.0001	<0.0001	<0.0001
	Sevilla*	<0.0001	<0.0001	<0.0001
	Thiva*	<0.0001	<0.0001	<0.0001

\*surrogate form winter cereals

**Table 8.8-11: PEC<sub>gw</sub> for Prothioconazole and its metabolites on soya (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Soya	Châteaudun*	<0.001	<0.001	<0.001
	Hamburg*	<0.001	<0.001	<0.001
	Jokioinen*	<0.001	<0.001	<0.001
	Kremsmünster*	<0.001	<0.001	<0.001
	Okehampton*	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto*	<0.001	<0.001	<0.001
	Sevilla*	<0.001	<0.001	<0.001
	Thiva*	<0.001	<0.001	<0.001

\* surrogate scenario from spring oilseed rape

**Table 8.8-12: PEC<sub>gw</sub> for Prothioconazole and its metabolites on soya (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Soya	Chateaudun	<0.0001	<0.0001	<0.0001
	Hamburg*	<0.0001	<0.0001	<0.0001
	Jokioinen*	<0.0001	<0.0001	<0.0001
	Kremsmünster*	<0.0001	<0.0001	<0.0001
	Okehampton*	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto*	<0.0001	<0.0001	<0.0001
	Sevilla*	<0.0001	<0.0001	<0.0001
	Thiva*	<0.0001	<0.0001	<0.0001

\* surrogate scenario from spring oilseed rape

**Table 8.8-13: PEC<sub>gw</sub> for Prothioconazole and its metabolites on beans as surrogate crop for soya according to national Polish requirements (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
beans as surrogate crop for soya according to national Polish requirements	Hamburg	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-14: PEC<sub>gw</sub> for Prothioconazole and its metabolites on beans as surrogate crop for soya according to national Polish requirements (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
beans as surrogate crop for soya according to national Polish requirements	Hamburg	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Thiva	<0.0001	<0.0001	<0.0001

**Table 8.8-15: PEC<sub>gw</sub> for Prothioconazole and its metabolites on peas as surrogate crop for soya according to national Polish requirements (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Peas as surrogate crop according to national Polish requirements	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001

**Table 8.8-16: PEC<sub>gw</sub> for Prothioconazole and its metabolites on peas as surrogate crop for soya according to national Polish requirements (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
peas as surrogate crop for soya according to national Polish requirements	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001

**Table 8.8-17: PEC<sub>gw</sub> for Prothioconazole and its metabolites on sunflower (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Sunflower	Châteaudun*	<0.001	<0.001	<0.001
	Hamburg*	<0.001	<0.001	<0.001
	Jokioinen*	<0.001	<0.001	<0.001
	Kremsmünster*	<0.001	<0.001	<0.001
	Okehampton*	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto*	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva*	<0.001	<0.001	<0.001

\* surrogate scenario from spring oilseed rape

**Table 8.8-18: PEC<sub>gw</sub> for Prothioconazole and its metabolites on sunflower (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Sunflower	Châteaudun*	<0.0001	<0.0001	<0.0001
	Hamburg*	<0.0001	<0.0001	<0.0001
	Jokioinen*	<0.0001	<0.0001	<0.0001
	Kremsmünster*	<0.0001	<0.0001	<0.0001
	Okehampton*	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto*	<0.0001	<0.0001	<0.0001

	Sevilla	<0.0001	<0.0001	<0.0001
	Thiva*	<0.0001	<0.0001	<0.0001

\* surrogate scenario from spring oilseed rape

**Table 8.8-19: PEC<sub>gw</sub> for Prothioconazole and its metabolites on Maize as surrogate crop according to national Polish requirements (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Maize as surrogate crop according for sunflower to national Polish requirements	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-20: PEC<sub>gw</sub> for Prothioconazole and its metabolites on maize as surrogate crop for sunflower according to national Polish requirements (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Maize as surrogate crop for sunflower according to national Polish requirements	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla	<0.0001	<0.0001	<0.0001
	Thiva	<0.0001	<0.0001	<0.0001

**Table 8.8-21: PEC<sub>gw</sub> for Prothioconazole and its metabolites on tobacco (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
tobacco	Châteaudun*	<0.001	<0.001	<0.001
	Hamburg*	<0.001	<0.001	<0.001
	Jokioinen*	<0.001	<0.001	<0.001
	Kremsmünster*	<0.001	<0.001	<0.001
	Okehampton*	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto*	<0.001	<0.001	<0.001
	Sevilla*	<0.001	<0.001	<0.001
	Thiva*	<0.001	<0.001	<0.001

\*surrogate scenario from winter cereals

**Table 8.8-22: PEC<sub>gw</sub> for Prothioconazole and its metabolites on tobacco (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Tobacco	Châteaudun*	<0.0001	<0.0001	<0.0001
	Hamburg*	<0.0001	<0.0001	<0.0001
	Jokioinen*	<0.0001	<0.0001	<0.0001
	Kremsmünster*	<0.0001	<0.0001	<0.0001
	Okehampton*	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto*	<0.0001	<0.0001	<0.0001
	Sevilla*	<0.0001	<0.0001	<0.0001
	Thiva*	<0.0001	<0.0001	<0.0001

\*surrogate scenario from winter cereals

**Table 8.8-23: PEC<sub>gw</sub> for Prothioconazole and its metabolites on ornamental (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Ornamental	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton*	<0.001	<0.001	<0.001
	Piacenza*	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

\*surrogate scenario from winter cereals

**Table 8.8-24: PEC<sub>gw</sub> for Prothioconazole and its metabolites on ornamental (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
Ornamental	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton*	<0.0001	<0.0001	<0.0001
	Piacenza*	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla	<0.0001	<0.0001	<0.0001
	Thiva	<0.0001	<0.0001	<0.0001

\*surrogate scenario from winter cereals

**Table 8.8-25: PEC<sub>gw</sub> for Prothioconazole and its metabolites on forestry tree, Salix, Wicker (with FOCUS PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
forestry tree, Salix, Wicker	Châteaudun	<0.001	<0.001	<0.001
	Hamburg	<0.001	<0.001	<0.001
	Jokioinen	<0.001	<0.001	<0.001
	Kremsmünster	<0.001	<0.001	<0.001
	Okehampton	<0.001	<0.001	<0.001
	Piacenza	<0.001	<0.001	<0.001
	Porto	<0.001	<0.001	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-26: PEC<sub>gw</sub> for Prothioconazole and its metabolites on forestry tree, Salix, Wicker (with FOCUS PEARL 4.4.4)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Prothioconazole	Prothioconazole-desthio	Prothioconazole-S-methyl
forestry tree, Salix, Wicker	Châteaudun	<0.0001	<0.0001	<0.0001
	Hamburg	<0.0001	<0.0001	<0.0001
	Jokioinen	<0.0001	<0.0001	<0.0001
	Kremsmünster	<0.0001	<0.0001	<0.0001
	Okehampton	<0.0001	<0.0001	<0.0001
	Piacenza	<0.0001	<0.0001	<0.0001
	Porto	<0.0001	<0.0001	<0.0001
	Sevilla	<0.0001	<0.0001	<0.0001
	Thiva	<0.0001	<0.0001	<0.0001

**Table 8.8-27: Input parameters related to active substance Azoxystrobin and metabolite(s) for PEC<sub>gw</sub> calculations**

Compound	Azoxystrobin	R401553	R402173	R234886	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	403.4	213.2	333.3	389.4	EFSA Journal 2010; 8(4):1542

Compound	Azoxystrobin	R401553	R402173	R234886	Value in accordance with EU endpoint y/n/ Reference*
Water solubility (g/mol):	6	560	61	57	EFSA Journal 2010; 8(4):1542
Saturated vapour pressure (Pa):	1.1E-10	1.1E-10	1.1E-10	1.1E-10	EFSA Journal 2010; 8(4):1542
DT <sub>50</sub> in soil (d)	78	1.1	4.7	98.6 for acidic soils 36.7 for alcaic soil	EFSA Journal 2010; 8(4):1542
Transformation rate	0.003328 per day to R402173 0.003388 per day to 401553 0.007554 per day to R234886	0.630134 per day to CO2	0.078478 per day to CO2 0.069 per day to R401553	0.018887 per day to CO2 in fast phase 0.00703 per day in slow phase	
K <sub>foc</sub> (mL/g)/K <sub>fom</sub>	423	188	25	228.4 for acidic soils 36.7 for alcaic soils	EFSA Journal 2010; 8(4):1542
1/n	0.86	0.85	0.96	0.78 for acidic soils 0.83 for alcaic soils	EFSA Journal 2010; 8(4):1542
Plant uptake factor	0	0	0		EFSA Journal 2010; 8(4):1542
Formation fraction	-	0.392 from parent 0.468 from R402173	0.385 from parent	0.874 from parent	EFSA Journal 2010; 8(4):1542

**Table 8.8-28: PEC<sub>gw</sub> for Azoxystrobin and its metabolites on crops (with FOCUS PEARL 4.4.4 and PELMO 5.5.3)**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>GW</sub> at 1 m Soil Depth (µg L <sup>-1</sup> )	80 <sup>th</sup> Percentile PEC <sub>GW</sub> at 1 m Soil Depth (µg L <sup>-1</sup> )	80 <sup>th</sup> Percentile PEC <sub>GW</sub> at 1 m Soil Depth (µg L <sup>-1</sup> )	80 <sup>th</sup> Percentile PECGW at 1 m Soil Depth (µg L <sup>-1</sup> )	
		Azoxystrobin	R401553	R402173	R234886 acidic	R234886 alkaline
Winter cereals PELMO	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.140
	Hamburg	<0.001	<0.001	0.015	0.001	1.931
	Jokioinen	<0.001	<0.001	0.008	<0.001	1.043
	Kremsmünster	<0.001	<0.001	0.003	<0.001	1.248
	Okehampton	<0.001	<0.001	0.012	0.001	1.789



	Piacenza	<0.001	<0.001	0.008	<0.001	0.918
	Porto	<0.001	<0.001	0.020	<0.001	1.079
	Sevilla	<0.001	<0.001	0.001	<0.001	0.004
	Thiva	<0.001	<0.001	0.001	<0.001	0.040
Winter cereals PEARL	Châteaudun	<0.0001	<0.0001	0.0006	<0.0001	0.5606
	Hamburg	<0.0001	0.0010	0.0211	0.0131	3.9397
	Jokioinen	<0.0001	<0.0001	0.0073	<0.0001	1.8924
	Kremsmünster	<0.0001	<0.0001	0.0047	0.0009	2.3626
	Okehampton	<0.0001	0.0001	0.0177	0.0129	3.2547
	Piacenza	<0.0001	0.0003	0.0072	0.0019	1.2746
	Porto	<0.0001	<0.0001	0.0152	0.0002	1.3413
	Sevilla	<0.0001	<0.0001	0.0004	<0.0001	0.0011
	Thiva	<0.0001	<0.0001	0.0013	<0.0001	0.2593
Winter oilseed rape PELMO	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.016
	Hamburg	<0.001	<0.001	0.003	<0.001	0.224
	Kremsmünster	<0.001	<0.001	0.001	<0.001	0.175
	Okehampton	<0.001	<0.001	0.003	<0.001	0.325
	Piacenza	<0.001	<0.001	0.002	<0.001	0.119
	Porto	<0.001	<0.001	0.005	<0.001	0.208
Winter oilseed rape PEARL	Châteaudun	<0.0001	<0.0001	<0.0001	<0.0001	0.0147
	Hamburg	<0.0001	<0.0001	0.0014	<0.0001	0.1819
	Jokioinen***	<0.0001	<0.0001	0.0085	<0.001	1.9101
	Kremsmünster	<0.0001	<0.0001	0.0003	<0.0001	0.1057
	Okehampton	<0.0001	<0.0001	0.0014	<0.0001	0.1375
	Piacenza	<0.0001	<0.0001	0.0006	<0.0001	0.0396
	Porto	<0.0001	<0.0001	0.0017	<0.0001	0.0701
Spring cereals PELMO	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.105
	Hamburg	<0.001	<0.001	0.014	<0.001	1.748
	Jokioinen	<0.001	<0.001	0.010	<0.001	0.798
	Kremsmünster	<0.001	<0.001	0.003	<0.001	1.212
	Okehampton	<0.001	<0.001	0.012	<0.001	1.628
	Piacenza*	<0.001	<0.001	0.008	0.001	0.918
	Porto	<0.001	<0.001	0.019	<0.001	0.955
	Sevilla*	<0.001	<0.001	0.001	<0.001	0.004
	Thiva*	<0.001	<0.001	0.001	<0.001	0.040
Spring cereals PEARL	Châteaudun	<0.0001	<0.0001	0.0007	<0.0001	0.4821
	Hamburg	<0.0001	0.0010	0.0229	0.0176	4.4677
	Jokioinen	<0.0001	<0.0001	0.0083	<0.0001	1.9326
	Kremsmünster	<0.0001	<0.0001	0.0051	0.0008	2.4993
	Okehampton	<0.0001	0.0001	0.0190	0.0099	3.1771
	Piacenza*	<0.0001	0.0003	0.0072	0.0019	1.2746
	Porto	<0.0001	<0.0001	0.0245	<0.0001	1.7075
	Sevilla*	<0.0001	<0.0001	0.0004	<0.0001	0.0011
	Thiva*	<0.0001	<0.0001	0.0013	<0.0001	0.2593

Spring oilseed rape  PELMO	Châteaudun**	<0.001	<0.001	<0.001	<0.001	0.016
	Hamburg***	<0.001	<0.001	0.003	<0.001	0.224
	Jokioinen	<0.001	<0.001	0.003	<0.001	0.152
	Kremsmünster	<0.001	<0.001	0.001	<0.001	0.175
	Okehampton	<0.001	<0.001	0.004	<0.001	0.433
	Piacenza**	<0.001	<0.001	0.002	<0.001	0.119
	Porto	<0.001	<0.001	0.005	<0.001	0.267
Spring oilseed rape  PEARL	Châteaudun**	<0.0001	<0.0001	<0.0001	<0.0001	0.0147
	Hamburg**	<0.0001	<0.0001	0.0014	<0.0001	0.1819
	Jokioinen	<0.0001	<0.0001	0.0085	<0.001	1.9101
	Kremsmünster**	<0.0001	<0.0001	0.0003	<0.0001	0.1057
	Okehampton	<0.0001	0.0001	0.0194	0.0101	3.1298
	Piacenza**	<0.0001	<0.0001	0.0006	<0.0001	0.0396
	Porto	<0.0001	<0.0001	0.0243	<0.0001	1.6620
soya  PELMO	Châteaudun***	<del>Châteaudun**</del> < 0.001	<0.001	<0.001	<0.001	<0.001
	Hamburg***	<del>Hamburg***</del> < 0.001	<0.001	<0.001	0.003	<0.001
	Jokioinen***	<del>Jokioinen</del> < 0.001	<0.001	<0.001	0.003	<0.001
	Kremsmünster***	<del>Kremsmünster</del> < 0.001	<0.001	<0.001	0.001	<0.001
	Okehampton***	<del>Okehampton</del> < 0.001	<0.001	<0.001	0.004	<0.001
	Piacenza	<0.001	<0.001	0.003	<0.001	0.8341
	Porto***	<0.001	<0.001	0.005	<0.001	0.267
soya  PEARL	Châteaudun***	<0.0001	<0.0001	<0.0001	<0.0001	0.0147
	Hamburg***	<0.0001	<0.0001	0.0014	<0.0001	0.1819
	Jokioinen***	<0.0001	<0.0001	0.0085	<0.001	1.9101
	Kremsmünster***	<0.0001	<0.0001	0.0003	<0.0001	0.1057
	Okehampton***	<0.0001	0.0001	0.0194	0.0101	3.1298
	Piacenza	<0.0001	0.0002	0.0050	<0.0001	0.6112
	Porto***	<0.0001	<0.0001	0.0243	<0.0001	1.6620
Beans as surrogate crop for soya according to national Polish requirement  PELMO	Hamburg	<0.001	<0.001	0.005	<0.001	0.520
	Kremsmünste	<0.001	<0.001	0.001	<0.001	0.373
	Okehampton	<0.001	<0.001	0.005	<0.001	0.540
	Porto	<0.001	<0.001	0.006	<0.001	0.250
	Thivia	<0.001	<0.001	<0.001	<0.001	0.033
Beans as	Hamburg	<0.0001	0.0004	0.0083	0.0003	1.2469
	Kremsmünste	<0.0001	<0.0001	0.0019	<0.0001	0.7641
	Okehampton	<0.0001	<0.0001	0.0083	<0.0001	1.0194

surrogate crop for soya according to national Polish requirement  PEARL	Porto	<0.0001	<0.0001	0.0060	<0.0001	0.4144
	Thivia	<0.0001	<0.0001	0.0006	<0.0001	0.1302
Peas as surrogate crop for soya according to national Polish requirement  PELMO	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.021
	Hamburg	<0.001	<0.001	0.005	<0.001	0.467
	Jokioinen	<0.001	<0.001	0.003	<0.001	0.183
	Okehampton	<0.001	<0.001	0.005	<0.001	0.459
Peas as surrogate crop for soya according to national Polish requirement  PEARL	Châteaudun	<0.0001	<0.0001	0.0002	0.0001	0.1004
	Hamburg	<0.0001	0.0003	0.0074	<0.0001	1.0549
	Jokioinen	<0.0001	<0.0001	0.0025	<0.0001	0.3879
	Okehampton	<0.0001	<0.0001	0.0063	<0.0001	0.7567
sunflower  PELMO	Châteaudun***	Châteaudun*** < 0.001	<0.001	<0.001	<0.001	<0.001
	Hamburg***	Hamburg*** < 0.001	<0.001	<0.001	0.003	<0.001
	Jokioinen***	Jokioinen*** < 0.001	<0.001	<0.001	0.003	<0.001
	Kremsmünster***	Kremsmünster*** < 0.001	<0.001	<0.001	0.001	<0.001
	Okehampton***	Okehampton*** < 0.001	<0.001	<0.001	0.004	<0.001
	Piacenza	<0.001	<0.001	0.004	<0.001	0.549
	Porto***	<0.001	<0.001	0.005	<0.001	0.267
	Sevilla	<0.001	<0.001	0.001	<0.001	0.007
sunflower  PEARL	Châteaudun***	<0.0001	<0.0001	<0.0001	<0.0001	0.0147
	Hamburg***	<0.0001	<0.0001	0.0014	<0.0001	0.1819
	Jokioinen***	<0.0001	<0.0001	0.0085	<0.001	1.9101
	Kremsmünster***	<0.0001	<0.0001	0.0003	<0.0001	0.1057
	Okehampton***	<0.0001	0.0001	0.0194	0.0101	3.1298

	Piacenza	<0.0001	0.0002	0.0047	0.0002	0.7987
	Porto***	<0.0001	<0.0001	0.0243	<0.0001	1.6620
	Sevilla	<0.0001	<0.0001	0.0007	<0.0001	0.0412
Maize as surrogate crop for sunflower according to national Polish requirement  PELMO	Châteaudun	<0.001	<0.001	<0.001	<0.001	0.151
	Hamburg	<0.001	<0.001	0.007	<0.001	0.575
	Kremsmünster	<0.001	<0.001	0.002	<0.001	0.449
	Okehampton	<0.001	<0.001	0.007	<0.001	0.652
	Piacenza	<0.001	<0.001	0.005	<0.001	0.596
	Porto	<0.001	<0.001	0.007	<0.001	0.335
	Sevilla	<0.001	<0.001	<0.001	<0.001	0.005
	Thiva	<0.001	<0.001	0.001	<0.001	0.067
Maize as surrogate crop for sunflower according to national Polish requirement  PEARL	Châteaudun	<0.0001	<0.0001	0.0008	<0.0001	0.5454
	Hamburg	<0.0001	0.0005	0.0095	0.0003	1.3622
	Kremsmünster	<0.0001	<0.0001	0.0023	<0.0001	0.8375
	Okehampton	<0.0001	<0.0001	0.0099	0.0003	1.2723
	Piacenza	<0.0001	0.0003	0.0067	0.0003	0.9212
	Porto	<0.0001	<0.0001	0.0066	<0.0001	0.5242
	Sevilla	<0.0001	<0.0001	0.0008	<0.0001	0.0353
	Thivia	<0.0001	<0.0001	0.0005	<0.0001	0.1725
tobacco  PELMO	Châteaudun*	<0.001	<0.001	<0.001	<0.001	0.140
	Hamburg*	<0.001	0.001	0.015	0.001	1.998
	Jokioinen*	<0.001	<0.001	0.008	<0.001	1.040
	Kremsmünster*	<0.001	<0.001	0.003	<0.001	1.324
	Okehampton*	<0.001	<0.001	0.013	0.001	1.836
	Piacenza	<0.001	<0.001	0.011	0.001	1.316
	Porto*	<0.001	<0.001	0.018	<0.001	1.080
	Sevilla*	<0.001	<0.001	0.001	<0.001	0.005
	Thiva	<0.001	<0.001	0.001	<0.001	0.084
tobacco  PEARL	Châteaudun*	<0.0001	<0.0001	0.0006	<0.0001	0.5552
	Hamburg*	<0.0001	0.0011	0.0218	0.0158	3.9365
	Jokioinen*	<0.0001	<0.0001	0.0074	<0.0001	1.8890
	Kremsmünster*	<0.0001	<0.0001	0.0049	0.0013	2.3961
	Okehampton*	<0.0001	0.0001	0.0182	0.0151	3.2680
	Piacenza	<0.0001	0.0003	0.0083	0.0006	1.2584
	Porto*	<0.0001	<0.0001	0.0152	0.0001	1.3846
	Sevilla*	<0.0001	<0.0001	0.0003	<0.0001	0.0016
	Thiva	<0.0001	<0.0001	0.0010	<0.0001	0.2394
Ornamental	Châteaudun	<0.001	<0.001	0.001	<0.001	0.402
	Hamburg	<0.001	<0.001	0.013	<0.001	1.555
	Jokioinen	<0.001	<0.001	0.010	<0.001	0.611

PELMO	Kremsmünster	<0.001	<0.001	0.003	<0.001	1.007
	Okehampton*	<0.001	<0.001	0.013	0.001	1.836
	Piacenza*	<0.001	<0.001	0.008	<0.001	0.916
	Porto	<0.001	<0.001	0.012	<0.001	0.817
	Sevilla	<0.001	<0.001	0.001	<0.001	0.029
	Thiva	<0.001	<0.001	0.010	<0.001	0.372
Ornamental  PEARL	Châteaudun	<0.0001	<0.0001	0.001738	<0.0001	1.0619
	Hamburg	0.0001	0.0010	0.02026	0.0056	3.0072
	Jokioinen	<0.0001	<0.0001	0.007922	<0.0001	1.4237
	Kremsmünster	<0.0001	<0.0001	0.0050	0.0002	1.8593
	Okehampton*	<0.0001	0.0001	0.0182	0.0151	3.2680
	Piacenza*	<0.0001	0.0003	0.0073	0.0022	1.2587
	Porto	<0.0001	<0.0001	0.01298	<0.0001	1.1484
	Sevilla	<0.0001	<0.0001	0.001445	<0.0001	0.1390
	Thiva	<0.0001	<0.0001	0.006562	<0.0001	0.6081
Forestry tree  PELMO	Châteaudun	<0.001	<0.001	0.001	<0.001	0.998
	Hamburg	<0.001	<0.001	0.010	<0.001	1.217
	Jokioinen	<0.001	<0.001	0.006	<0.001	0.611
	Kremsmünster	<0.001	<0.001	0.003	<0.001	1.026
	Okehampton	<0.001	<0.001	0.010	0.001	1.501
	Piacenza	<0.001	<0.001	0.006	0.002	1.072
	Porto	<0.001	<0.001	0.009	<0.001	0.775
	Sevilla	<0.001	<0.001	0.002	<0.001	0.591
	Thiva	<0.001	<0.001	0.001	<0.001	0.554
Forestry tree  PEARL	Châteaudun	<0.0001	<0.0001	0.0015	<0.0001	1.2285
	Hamburg	0.0001	0.0007	0.0155	0.0024	2.5357
	Jokioinen	<0.0001	<0.0001	0.0047	<0.0001	0.9154
	Kremsmünster	<0.0001	<0.0001	0.0031	<0.0001	1.1579
	Okehampton	<0.0001	<0.0001	0.0081	0.0005	1.3088
	Piacenza	<0.0001	0.0002	0.0054	0.0003	0.9796
	Porto	<0.0001	<0.0001	0.0061	<0.0001	0.5763
	Sevilla	<0.0001	<0.0001	0.0016	<0.0001	0.8995
	Thiva	<0.0001	<0.0001	0.0013	<0.0001	0.7859

\* Surrogate from winter cereals

\*\* Surrogate from winter oilseed rape

\*\*\* Surrogate from spring oilseed rape

## 8.9 Predicted Environmental Concentrations in surface water (PEC<sub>sw</sub>) (KCP 9.2.5)

Evaluator's Comments:	<p>Calculations of PEC<sub>sw</sub> and PEC<sub>sed</sub> for both active substances, their metabolites and formulation were submitted.</p> <p>The endpoints used for PEC<sub>sw</sub> assessment were agreed at the EU level.</p> <p>Calculations of PEC<sub>sw</sub> for both active substances and their relevant metabolites were</p>
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provided with PUF = 0.

The recommended FOCUS models were used: FOCUS Step 1 & 2, Step 3 and Step 4. D1 and D2 scenarios are not relevant for Central Zone and were not taken into consideration.

The application dates were accepted.

The proposed by the Applicant surrogate crops will be accepted at the Member State level. In accordance with PL national list of surrogate crops, the following surrogate crop were used in PECsw/sed assessment, if relevant.

Crop	Surrogate crop
Spring cereals	Winter cereals (PL)
Sunflower	Maize (PL)
Soybean	Legumes
Breadseed poppy, mustard	Spring oilseed rape
Tobacco, Ornamentals	Leafy vegetables (h < 50 cm) Pome fruits (h > 50 cm)
Coniferous / deciduous forest nurseries, Ornamental shrubs Salix, Wicker	Pome fruits

**Prothioconazole.** The PECsw and PECsed were submitted. For most crops only assessment in Step 1 & 2 were submitted.

Crop	Prothioconazole Step 2	
	PECsw µg/L	PECsed µg/kg
Winter cereals	1.42	20.35
Spring cereals	1.42	20.35
Winter oilseed rape	1.61	8.57
Spring oilseed rape, mustard, bread seed poppy	1.61	15.41
Soya	1.61	19.97
Sunflower	1.61	19.97
Ornamentals at h < 50 cm	1.61	19.17
Tobacco	1.42	20.35

Crop	Prothioconazole
	10 m vbs +10 m nss
	Step 4 SWAN
	Max PECsw (µg/L)
Ornamentals h > 50 cm Coniferous / deciduous forest nurseries, Salix, Wicker	6.643

2 x 175 g a.s./ha  
early application

**Metabolites of Prothioconazole.** The relevant metabolites were considered. The max PEC<sub>sw</sub> and PEC<sub>sd</sub> values are presented in the table below:

**Prothioconazole-desthio.** The PEC<sub>sw</sub> and PEC<sub>sd</sub> assessment was provided in Step 1 & 2 and Step 3 and Step 4 (SWAN model). The following mitigation measures for Central Zone were proposed.

Crop	Prothioconazole- desthio			
	0 vbs +5 m nss	20 m vbs + 5 m nss	20 m vbs + 10 m nss	20 m vbs + 20 m nss
	Step 4 SWAN			
	Max PEC <sub>sw</sub> (µg/L)			
Winter cereals 2 x 175 g a.s./ha		0.3821 R4 scenario		
Winter OSR 1 x 175 g a.s./ha		no mitigation 0.3084 R3 stream, Step 3		
Spring cereals 2 x 175 g a.s./ha		0.1803 R4 stream		
Spring oilseed rape, mustard, breadseed poppy 1 x 175 g a.s./ha	0.03392 R1 stream			
Soya 1 x 175 g a.s./ha	0.2869 R4 stream			
Sunflower 1 x 175 g a.s./ha		0.1758 R4 stream		
Ornamentals h < 50 cm 2 x 175 g a.s./ha			0.3171 R4 stream	
Ornamentals h > 50 cm Coniferous / deciduous forest nurseries, Salix, Wicker 2 x 175 g a.s./ha early application				0.1454 R4 stream
Tobacco 2 x 175 g a.s./ha		0.2963 R3 stream		

**1,2,4-triazole** metabolite.

Metabolite	Crop	Step 2	
		PEC <sub>sw</sub> µg/L	PEC <sub>sd</sub> µg/kg
1,2,4-triazole	Forestry tree, Salix, Wicker	2.28	1.97

**Azoxystrobin.** The PEC<sub>sw</sub> and PEC<sub>sd</sub> assessment was provided in Step 1 & 2 and

Step 3 and Step 4 (SWAN model). The mitigation measures were proposed.

Crop	Azoxystrobin		
	10 m vbs +5 m nss	10 m vbs + 10 m nss	20 m vbs + 20 m nss
	Step 4 SWAN		
	Max PEC <sub>sw</sub> (µg/L)		
Winter cereals 2 x 200 g a.s./ha	1.907 R4 stream		
Winter OSR 1 x 200 g a.s./ha	no mitigation 1.456 R1 stream, Step 3		
Spring cereals 2 x 200 g a.s./ha	2.858 R4 stream		
Spring oilseed rape, mustard, breadseed poppy 1 x 200 g a.s./ha	no mitigation 1.649 R1 stream, Step 3		
Soya 1 x 200 g a.s./ha	no mitigation 3.156 R3 stream, Step 3		
Sunflower 1 x 200 g a.s./ha	1.600 R4 stream		
Ornamentals h < 50 cm 2 x 200 g a.s./ha	2.292 R4 stream		
Ornamentals h > 50 cm Coniferous / deciduous forest nurseries, Salix, Wicker 2 x 200 g a.s./ha early application			1.971 R3 stream
Tobacco 2 x 200 g a.s./ha		2.440 R3 stream	

**Metabolites of azoxystrobin.** All relevant metabolites were considered. The max PEC<sub>sw</sub> and PEC<sub>sed</sub> values are presented in the table below:

Metabolite	Crop	Step 2	
		PEC <sub>sw</sub> µg/L	PEC <sub>sed</sub> µg/kg
<b>R234886</b>	Forestry tree, Salix, Wicker	14.28	2.99
<b>R402173</b>	Forestry tree, Salix, Wicker	1.93	0.48
<b>R401553</b>	Forestry tree, Salix, Wicker	2.05	

The final mitigation measures will be proposed in Section 9.

**Additional PEC<sub>sw</sub> assessment.**



The additional PEC<sub>sw</sub> assessment for surrogate crops was submitted. These modelling results cover the national Poland requirements (D3, D4 and R1 scenarios are obligatory). **Prothioconazole**. No mitigation measure is required for active substance. The following PEC<sub>sw</sub> were obtained in Step 2 and Step 3 (forestry tree, salix, wicker):

Crop	Prothioconazole Step 2	
	PEC <sub>sw</sub> µg/L	PEC <sub>sed</sub> µg/kg
Winter cereals	1.42	20.35
Spring cereals	1.42	20.35
Winter oilseed rape	1.61	8.57
Spring oilseed rape, mustard, bread seed poppy	1.61	15.41
Soya	1.61	19.97
Sunflower	1.61	19.97
Ornamentals at h < 50 cm	1.61	19.17
Ornamentals at h < 50 cm, Coniferous / deciduous forest nurseries, Salix, Wicker	11.81 D4 stream, Step 3	5.909 D3 ditch, Step 3
Tobacco	1.42	20.35

**Prothioconazole- desthio**. The following mitigation measures including surrogate crops and D3, D4 and R1 scenarios are presented in the table below.

Crop	Prothioconazole- desthio			
	10 m vbs +5 m nss	20 m vbs + 20 m nss	10 m vbs + 10 m nss	15 m vbs +15 m nss
	Step 4 SWAN			VFSmod
	Max PEC <sub>sw</sub> (µg/L)			
Winter cereals 2 x 175 g a.s./ha	0.2577 R1 stream			
Winter OSR 1 x 175 g a.s./ha	no mitigation 0.2881 R1 stream, Step 3			
Spring cereals 2 x 175 g a.s./ha	0.2577* R1 stream			
Spring oilseed rape, mustard, breadseed poppy 1 x 175 g a.s./ha	0.03392 R1 stream			
Soya 1 x 175 g a.s./ha	0.2097 R1 stream			
Sunflower 1 x 175 g a.s./ha	0.1622 R1 stream			
Ornamentals h < 50 cm 2 x 175 g a.s./ha	0.1028 R1 stream			
Ornamentals		0.1358		0.1915

h > 50 cm Coniferous / deciduous forest nurseries, Salix, Wicker 2 x 175 g a.s./ha early application		R1 stream		D3 ditch
Tobacco 2 x 175 g a.s./ha		0.1358 R1 stream		0.1915 D3 ditch

\* R1 scenario for winter cereals was used

The tobacco was covered by ornamentals and the same mitigation measures are proposed.

The submitted PEC<sub>sw</sub> modeling results using VFSmod for forestry tree, salix and wicker (Table 8.9-11) are not sufficient (lack of R1 scenarios).

**Azoxystrobin.** The VFSmod assessment results for for forestry tree, salix and wicker were submitted. The proposed mitigation measures of 15 meters vegetated and non-spray buffer zones were not used as the max PEC<sub>sw</sub> = 3.341 µg/L is higher than RAC value of 3.33 µg/L.

The following mitigation measures including surrogate crops and D3, D4 and R1 scenarios are presented in the table below.

Crop	Azoxystrobin		
	10 m vbs +5 m nss	10 m vbs + 10 m nss	20 m vbs + 20 m nss
	Step 4 SWAN		
	Max PEC <sub>sw</sub> (µg/L)		
Winter cereals 2 x 200 g a.s./ha	1.690 R1 stream		
Winter OSR 1 x 200 g a.s./ha	no mitigation 1.456 R1 stream, Step 3		
Spring cereals 2 x 200 g a.s./ha	1.690* R1 stream		
Spring oilseed rape, mustard, breadseed poppy 1 x 200 g a.s./ha	no mitigation 1.649 R1 stream, Step 3		
Soya 1 x 200 g a.s./ha	no mitigation 1.609 R1 stream, Step 3		
Sunflower 1 x 200 g a.s./ha	2.297 R1 stream, Step 3		
Ornamentals h < 50 cm 2 x 200 g a.s./ha	0.2674 R1 stream		
Ornamentals h > 50 cm Coniferous / deciduous forest nurseries, Salix, Wicker 2 x 200 g a.s./ha early application			1.576 D3 ditch

	Tobacco 2 x 200 g a.s./ha			1.576 D3 ditch																				
* R1 scenario for winter cereals was used																								
<b>Formulation.</b> For additional non-spray buffer zones, the drift exposure was partially corrected by evaluator using the Drift Calculator in SWASH model.																								
<table><tr><td>Crop</td><td>PEC<sub>sw</sub> (µg/L)</td></tr><tr><td>Winter cereals</td><td>7.2020 at 1m</td></tr><tr><td>Winter OSR</td><td>7.2020 at 1m</td></tr><tr><td>Spring cereals</td><td>7.2020 at 1m</td></tr><tr><td>Spring oilseed rape, mustard, breadseed poppy</td><td>7.2020 at 1m</td></tr><tr><td>Soya</td><td>5.9546 at 1.5 m</td></tr><tr><td>Sunflower</td><td>5.9546 at 1.5 m</td></tr><tr><td>Ornamentals h &lt; 50 cm</td><td>7.2020 at 1m</td></tr><tr><td>Ornamentals h &gt; 50 cm Forestry tree, Salix, Wicker 2 x 200 g a.s./ha early application</td><td>69.3 at 5 m 42.55 at 10 m 9.73 at 20 m</td></tr><tr><td>Tobacco</td><td>5.3448 at 1.5 m</td></tr></table>					Crop	PEC <sub>sw</sub> (µg/L)	Winter cereals	7.2020 at 1m	Winter OSR	7.2020 at 1m	Spring cereals	7.2020 at 1m	Spring oilseed rape, mustard, breadseed poppy	7.2020 at 1m	Soya	5.9546 at 1.5 m	Sunflower	5.9546 at 1.5 m	Ornamentals h < 50 cm	7.2020 at 1m	Ornamentals h > 50 cm Forestry tree, Salix, Wicker 2 x 200 g a.s./ha early application	69.3 at 5 m 42.55 at 10 m 9.73 at 20 m	Tobacco	5.3448 at 1.5 m
Crop	PEC <sub>sw</sub> (µg/L)																							
Winter cereals	7.2020 at 1m																							
Winter OSR	7.2020 at 1m																							
Spring cereals	7.2020 at 1m																							
Spring oilseed rape, mustard, breadseed poppy	7.2020 at 1m																							
Soya	5.9546 at 1.5 m																							
Sunflower	5.9546 at 1.5 m																							
Ornamentals h < 50 cm	7.2020 at 1m																							
Ornamentals h > 50 cm Forestry tree, Salix, Wicker 2 x 200 g a.s./ha early application	69.3 at 5 m 42.55 at 10 m 9.73 at 20 m																							
Tobacco	5.3448 at 1.5 m																							
The relevant PEC <sub>sw</sub> and PEC <sub>sed</sub> values will be used in further risk assessment at national level.																								
The relevant mitigation measure will be recommended in ecotoxicological section.																								

### 8.9.1 Justification for new endpoints

All endpoints used for PEC<sub>sw</sub> calculations are EU approved and were evaluated on EU level and presented in:

- Prothioconazole - EFSA Scientific Report (2007) 106, 1-98
- Azoxystrobin - EFSA Journal 2010; 8(4):1542

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

Risk envelope use in calculation to optimize calculation for PEC<sub>sw</sub>::

#### a) Winter Cereals and surrogate scenarios for spring cereals – GAP – defined use:

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing

Winter Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 25-61
Winter Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 61-69
Spring Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 25-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 25-69

**b) Spring Cereals – GAP – defined use:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 25-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring Cereals	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 25-69

**c) Winter oilseed rape and surrogate scenario for spring oilseed rape– GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 59-65
Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 65-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
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Winter oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	N/A	BBCH 59-69
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**d) Sunflower – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower/ Maize (surrogate crope for Step 3 and 4 according to Polish national requirements)	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69

**e) Soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean	Prothioconazole	200	Boom sprayer	1	-	BBCH 12-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean / Legumes ((surrogate crope for Step 3 and 4 according to Polish national requirements))	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69

**f) Spring oilseed rape, Breadseed poppy, mustard and surrogate scenarios for sunflower and soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Mustard	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Breadseed poppy	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 59-69
Sunflower	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 18-69
Soyabean	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 12-69

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1	-	BBCH 10-69

**g) Tobacco – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89

**h) Ornamentals – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing

Ornamental	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89
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**Identifies representative use (risk envelope): for h < 50 cm**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Cabbage/Vegetable leafy	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89

**i) Forestry tree, Ornamental h > 50 cm, Salix, Wicker – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Prothioconazole Azoxystrobin	175 200	Boom sprayer	1-3	14	BBCH 10-89
Coniferous / deciduous forest nurseries, Ornamental shrubs	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89
Salix viminalis (SAXVI)  Wicker (ISAXG)	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Apple (Pome fruit)	Prothioconazole Azoxystrobin	175 200	Boom sprayer	2	14	BBCH 10-89

**Table 8.9-1: Input parameters related to application for PEC<sub>SW/SED</sub> calculations**

Use No.				
BBCH	25 - 69	59-69	25-69	59-69 from gap 10-69 used for calculation (please refer to risk envelope point f)

<b>Crop</b>	<b>Winter cereals</b>	<b>Winter oilseed rape</b>	<b>Spring cereals</b>	<b>Spring oilseed rape</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	2/14	1	2/14	1/-
Application method	Boom sprayer	boom sprayer	Boom sprayer	Boom sprayer
Use No.				
BBCH	10-89	10-89	12-69	18-69
<b>Crop</b>	<b>Ornamentals</b>	<b>Tobacco</b>	<b>Soya</b>	<b>Sunflower</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	2/14	2/14	1/-	1/-
Application method	Boom sprayer	boom sprayer	Boom sprayer	Boom sprayer
Use No.				
<b>BBCH</b>	59-69 from gap 10-69 used for calculation (please refer to risk envelope point f)	59-69 from gap 10-69 used for calculation (please refer to risk envelope point f)	<b>10-89</b>	<b>10-89</b>
<b>Crop</b>	<b>Breadseed poppy</b>	<b>Mustard</b>	<b>Coniferous / deciduous forest nurseries, Ornamental shrubs</b>	<b>Salix viminalis (SAXVI)  Wicker (1SAXG)</b>
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200
Number of applications/interval	1/-	1/-	2/14	2/14
Application method	Boom sprayer	boom sprayer	Boom sprayer	Boom sprayer
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1			
<b>Crop</b>	<b>Legumes</b>	<b>Maize</b>		
Application rate (g as/ha)	Prothioconazole: 175 Azoxystrobin: 200	Prothioconazole: 175 Azoxystrobin: 200		
Number of applications/interval	1/-	1/-		
Application method	Boom sprayer	Boom sprayer		
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1			



**Table 8.9-2: FOCUS Step 3 Scenario related input parameters for PEC<sub>sw/sed</sub> calculations for the application of CHR/F/PROTAZO 375 SC**

Crop	Scenario	Application window used in modelling
Winter cereals	D3	11 April – 25 May
	D4	13 March – 26 April
	D5	10 March – 23 April
	R1	19 April – 2 June
	R3	14 March – 27 April
	R4	6 January – 19 February
Winter Oilseed rape	D3	20 May – 19 June
	D4	31 May – 30 June
	D5	7 May – 6 June
	R1	23 May – 22 June
	R3	18 April – 18 May
Spring cereals	D3	21 April – 4 June
	D4	13 May – 26 June
	D5	3 April – 17 May
	R4	3 April – 17 May
Spring oilseed rape, mustard, breadseed poppy, soya – Please refer to point F in risk envelop provided in point 8.9.2	D3	11 April – 11 May
	D4	2 May – 1 June
	D5	16 March – 15 April
	R1	11 April – 11 May
Sunflower	D5	20 May – 19 June
	R1	19 May – 18 June
	R3	5 May – 4 June
	R4	22 April – 22 May
Ornamental	D3	26 April – 9 June
	D4	11 May – 24 June
	R1	21 April – 04 June
	R3	2 March – 15 April
	R4	2 March – 15 April
Forestry tree, Salix, Wicker	D3	16 April – 30 May
	D4	21 April – 4 June
	D5	2 April – 16 May
	R1	16 April – 30 May
	R3	2 April – 16 May
	R4	16 March – 29 April

Crop	Scenario	Application window used in modelling
Legumes like as surrogate for soya according to Polish national requirements	D3	20 April – 20 May
	D4	28 April – 28 May
	D5	21 March – 20 April
	R1	20 April – 20 May
	R3	24 April – 24 May
	R4	24 April – 24 May
Tobacco	R3	21 May – 4 July
Maize like as surrogate crop for sunflower according to Polish national requirements	D3	1 June – 1 July
	D4	6 June – 6 July
	D5	28 May – 27 June
	R1	29 May – 28 June
	R3	24 May – 23 June
	R4	28 April – 28 May
Soya	R3	15 May – 14 June
	R4	18 March – 17 April

### 8.9.2.1 Prothioconazole and its metabolites

**Table 8.9-3: Input parameters related to active substance Prothioconazole and metabolite(s) for  $PEC_{sw/sed}$  calculations STEP 1/2 and 3(/4) (if necessary)**

Compound	Prothioconazole	Prothioconazole-desthio	1,2,4-triazole	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	344.3	312.2	69.065	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Saturated vapour pressure (Pa)	$4 \times 10^{-7}$	0	0	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Water solubility (mg/L)	300	300	730000	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Diffusion coefficient in water ( $m^2/d$ )	not required for Step 1+2/ $4.3 \times 10^{-5}$	not required for Step 1+2/ $4.3 \times 10^{-5}$	not required for Step 1+2/ $4.3 \times 10^{-5}$	default
Diffusion coefficient in air ( $m^2/d$ )	not required for Step 1+2/0.43	not required for Step 1+2/0.43	not required for Step 1+2/0.43	default
$K_{foc}$ (mL/g)	1765	575.4	89	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Freundlich Exponent	0.9	0.81	0.9155	<i>EFSA Scientific</i>

Compound	Prothioconazole	Prothioconazole-desthio	1,2,4-triazole	Value in accordance to EU endpoint y/n/ Reference
1/n				<i>Report (2007) 106, 1-98</i>
Plant Uptake	0	0	0	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	<i>EFSA Scientific Report (2007) 106, 1-98</i>
DT <sub>50,soil</sub> (d)	2.8	72.3	60.5	<i>EFSA Scientific Report (2007) 106, 1-98</i>
DT <sub>50,water</sub> (d)	1	1000	1000	<i>EFSA Scientific Report (2007) 106, 1-98</i>
DT <sub>50,sed</sub> (d)	2.8	1000	1000	<i>EFSA Scientific Report (2007) 106, 1-98</i>
DT <sub>50,whole system</sub> (d)	2.8	1000	1000	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 57.1 Water: 32.3 Sediment: 26.9	Soil: 0.00001 Water: 37.2	<i>EFSA Scientific Report (2007) 106, 1-98</i>
Formation fraction in soil:	-			

#### PEC<sub>sw/sed</sub>

**Table 8.9-4: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.42	drainage/run off	0.21	20.35
Northern Europe	March-May	1.42	drainage/run off	0.21	20.35

\* single applications should be marked.

\*\* twa-time as required by ecotox

**Table 8.9-5: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.61	drainage/run off	0.13	8.57
Northern Europe	March-May	1.61	drainage/run off	0.13	8.57

**Table 8.9-6: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.42	drainage/run off	0.21	20.35
Northern Europe	March-May	1.42	drainage/run off	0.21	20.35

**Table 8.9-7: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to spring oilseed rape , mustard, breadseed poppy**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.61	drainage/run off	0.18	15.41
Northern Europe	March-May	1.61	drainage/run off	0.18	15.41

**Table 8.9-8: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to soya**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.61	drainage/run off	0.22	19.97
Northern Europe	March-May	1.61	drainage/run off	0.22	19.97

**Table 8.9-9: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.61	drainage/run off	0.22	19.97
Northern Europe	March-May	1.61	drainage/run off	0.22	19.97

**Table 8.9-10: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to ornamentals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	407.03
Step 2		1.42	drainage/run off	0.20	19.17
Northern Europe	March-May	1.42	drainage/run off	0.20	19.17

**Table 8.9-11: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicker**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	34.43	drainage/run off	4.59	309.69
Step 2		14.91	drainage/run off	0.93	41.03
Northern Europe	March-May	14.91	drainage/run off	0.93	41.03
Step 3					
D3	ditch	11.67	drainage	1.004	5.909
D4	pond	0.7203	drainage	0.1746	1.039
D4	stream	11.81	drainage	0.05922	0.9271
D5	pond	0.7437	drainage	0.2430	1.049
D5	stream	12.51	drainage	0.07448	0.8671
R1	pond	0.7321	run off	0.2169	0.8401
R1	stream	9.362	run off	0.1294	1.133
R3	Stream	13.25	run off	0.3848	2.902

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R4	stream	9.417	run off	0.08968	1.319
Step 4 only for scenario D		10 meteres vegetative buffer zone and 10 meteres no-spray buffer zone			
D3	Pond	5.316	drainage	0.4565	2.726
D4	Stream	5.920	drainage	0.02970	0.4658
D5	Stream	6.274	drainage	0.03735	0.4362
R1	stream	4.695	run off	0.06487	0.5696
R3	stream	6.643	run off	0.1927	1.457
Step 4 only for scenario D		5 meteres buffer zone by vfs mode – only for Poland assesment			
D3	pond	10.29	drainage	0.4608	5.217
D4	stream	11.45	drainage	0.05746	0.8996
D5	stream	12.21	drainage	0.05545	0.8652

**Table 8.9-12: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole following single/ multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	19.01	drainage/run off	3.45	307.03
Step 2		1.42	drainage/run off	0.21	20.35
Northern Europe	March-May	1.42	drainage/run off	0.21	20.35

#### Metabolite(s) of prothioconazole

**Table 8.9-13: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desithio following single/ multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	54.46	drainage/run off	53.67	310.79
Step 2		6.07	drainage/run off	5.95	34.46
Northern Europe	March-May	6.07	drainage/run off	5.95	34.46
Step 3					
D3	ditch	0.05873	drainage	0.004429	0.1240

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
D4	pond	0.06139	drainage	0.05377	0.5858
D4	stream	0.1880	drainage	0.02765	0.2194
D5	pond	0.02556	drainage	0.02259	0.4116
D5	stream	0.07038	drainage	0.006306	0.06660
R1	pond	0.1388	run off	0.1205	1.451
R1	stream	0.8144	run off	0.06151	1.314
R3	stream	0.7908	run off	0.06017	1.128
R4	Stream	1.604	run off	0.07876	1.071
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R1	pond	0.04226	run off	0.03940	0.6278
R1	stream	0.2577	run off	0.01488	0.3226
R3	Stream	0.3557	run off	0.02690	0.3800
R4	stream	0.7294	run off	0.03551	0.4659
Step 4 only for scenario R3 I R4		20 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R3	Stream	0.1855	run off	0.01399	0.1723
R4	stream	0.3821	run off	0.01854	0.2427

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-14: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	27.23	drainage/run off	26.83	155.40
Step 2		1.51	drainage/run off	1.46	8.44
Northern Europe	March-May	1.51	drainage/run off	1.46	8.44
Step 3					
D3	ditch	0.08018	drainage	0.007744	0.1289
D4	pond	0.01194	drainage	0.009924	0.1608
D4	stream	0.04127	drainage	0.003791	0.04295
D5	pond	0.009430	drainage	0.008949	0.1339
D5	stream	0.06362	drainage	0.001360	0.03368
R1	pond	0.08236	run off	0.07600	0.7868
R1	stream	0.2881	run off	0.02392	1.089

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R3	stream	0.3048	run off	0.01469	0.2842

**Table 8.9-15: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	54.46	drainage/run off	53.67	310.79
Step 2		6.07	drainage/run off	5.95	34.46
Northern Europe	March-May	6.07	drainage/run off	5.95	34.46
Step 3					
D3	ditch	0.05961	drainage	0.006524	0.1362
D4	pond	0.05536	drainage	0.04979	0.5747
D4	stream	0.1612	drainage	0.02625	0.1996
D5	pond	0.02012	drainage	0.01771	0.3498
D5	stream	0.05888	drainage	0.004354	0.04990
R1*	pond	0.1388	run off	0.1205	1.451
R1*	stream	0.8144	run off	0.06151	1.314
R4	Stream	1.153	run off	0.1719	2.000
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R1*	pond	0.04293	run off	0.03904	0.6200
R1*	stream	0.2510	run off	0.01431	0.3328
R4	Stream	0.5246	run off	0.07796	0.7815
Step 4 only for scenario R4		20 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R4	Stream	0.1803	run off	0.02210	0.2398

\*Scenario surrogate from winter cereals

**Table 8.9-16: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	27.23	drainage/run off	26.83	155.40
Step 2		2.72	drainage/run off	2.65	15.36



Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Northern Europe	March-May	2.72	drainage/run off	2.65	15.36
Step 3					
D3	ditch	0.03745	drainage	0.002856	0.06465
D4	pond	0.02473	drainage	0.02093	0.2572
D4	stream	0.08048	drainage	0.009631	0.09047
D5	pond	0.008842	drainage	0.008528	0.1434
D5	stream	0.04037	drainage	0.000844	0.01165
R1	pond	0.05973	run off	0.05205	0.7240
R1	stream	0.4693	run off	0.03285	0.4746
Step 4 only for scenario R		10 meter vegetative buffer zone and 5 meters buffer zone			
R1	pond	0.007904	run off	0.006951	0.1276
R1	stream	0.03392	run off	0.001207	0.03406

**Table 8.9-17: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to soya**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	27.23	drainage/run off	26.83	155.40
Step 2		3.52	drainage/run off	3.45	19.97
Northern Europe	March-May	3.52	drainage/run off	3.45	19.97
Step 3					
D3*	ditch	0.03745	drainage	0.002856	0.06465
D4*	pond	0.02473	drainage	0.02093	0.2572
D4*	stream	0.08048	drainage	0.009631	0.09047
D5*	pond	0.008842	drainage	0.008528	0.1434
D5*	stream	0.04037	drainage	0.000844	0.01165
R1*	pond	0.05973	run off	0.05205	0.7240
R1*	stream	0.4693	run off	0.03285	0.4746
R3	stream	0.5146	run off	0.03987	0.6173
R4	stream	0.7971	run off	0.08011	0.8466
Step 4 only for scenario R		10 meter vegetative buffer zone and 5 meters no-spray buffer zone			
R1*	pond	0.007904	run off	0.006951	0.1276
R1*	stream	0.03392	run off	0.001207	0.03406
R3	stream	0.2329	run off	0.01814	0.2328

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R4	stream	0.3581	run off	0.03611	0.3679
Step 4 only for scenario R3		10 meter vegetative buffer zone and 10 meter no-spray buffer zone			
R4	stream	0.3581	run off	0.03611	0.3669
Step 4 only for scenario R4		20 meter vegetative buffer zone and 5 meter no-spray buffer zone			
R4	stream	0.1867	run off	0.01885	0.1968
<b>Step 3 for surrogate crop legumes for soyabean according to Polish national requirements</b>					
D3	Ditch	0.02944	drainage	0.002128	0.05141
D4	pond	0.04164	drainage	0.03935	0.4735
D4	stream	0.1099	drainage	0.02313	0.1594
D5	pond	0.008613	drainage	0.008301	0.1405
D5	stream	0.03502	drainage	0.000832	0.01169
R1	pond	0.03307	run off	0.02900	0.4939
R1	stream	0.4662	run off	0.02852	0.3599
R3	stream	0.3648	run off	0.01488	0.2589
R4	stream	0.6436	run off	0.09361	0.8931
Step 4 only for scenario R		10 meter vegetative buffer zone and 5 meters no-spray buffer zone			
R1	Pond	0.01560	run off	0.01373	0.2474
R1	stream	0.2097	run off	0.01274	0.1450
R3	stream	0.1600	run off	0.007613	0.1172
R4	stream	0.2869	run off	0.04176	0.3869

\*Scenario surrogate from spring oilseed rape

**Table 8.9-18: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-destho following single/ multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	27.23	drainage/run off	26.83	155.40
Step 2		3.52	drainage/run off	3.45	19.97
Northern Europe	March-May	3.52	drainage/run off	3.45	19.97
Step 3					
D3*	ditch	0.03745	drainage	0.002856	0.06465
D4*	pond	0.02473	drainage	0.02093	0.2572
D4*	stream	0.08048	drainage	0.009631	0.09047
D5	pond	0.009864	drainage	0.009319	0.1824

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
D5	stream	0.03994	drainage	0.001605	0.02127
R1	pond	0.06054	run off	0.05582	0.9298
R1	stream	0.3960	run off	0.02436	0.8074
R3	Stream	0.4964	run off	0.03802	0.7142
R4	stream	0.7420	run off	0.1064	1.111
Step 4 only for scenario R		10 meters vegetative buffer zone 5 meters no-spray buffer zone			
R1	pond	0.009465	run off	0.008227	0.1861
R1	stream	0.03068	run off	0.001319	0.06222
R3	Stream	0.2211	run off	0.01592	0.2333
R4	stream	0.3361	run off	0.04812	0.4445
Step 4 only for scenario R4		20 meter vegetative buffer zone and 5 meter no-spray buffer zone			
R4	Stream	0.1758	run off	0.02514	0.2348
Step 3 for surrogate crop maize for sunflower according to Polish national requirements					
D3	Ditch	0.05457	drainage	0.003410	0.07141
D4	Pond	0.03392	drainage	0.02859	0.3151
D4	stream	0.1112	drainage	0.01324	0.1237
D5	pond	0.01019	drainage	0.009418	0.1915
D5	stream	0.04333	drainage	0.001756	0.02319
R1	pond	0.04754	run off	0.04190	0.7954
R1	Stream	0.3571	run off	0.02074	0.5753
R3	stream	0.5217	run off	0.03963	0.9296
R4	stream	0.6665	run off	0.1009	1.150
Step 4 only for scenario R		10 meter vegetative buffer zone and 5 meters no-spray buffer zone			
R1	Pond	0.02055	run off	0.01807	0.3796
R1	Stream	0.1622	run off	0.009378	0.1672
R3	Stream	0.2379	run off	0.01815	0.2774
R4	stream	0.3023	run off	0.04555	0.4526

\*Scenario surrogate from spring oilseed rape

**Table 8.9-19: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to ornamentals h< 50 cm**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	54.46	drainage/run off	53.67	310.79

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 2		5.73	drainage/run off	5.61	32.48
Northern Europe	March-May	5.73	drainage/run off	5.61	32.48
Step 3					
D3	ditch	0.06106	drainage	0.008630	0.1442
D4	pond	0.1257	drainage	0.1177	1.372
D4	stream	0.2809	drainage	0.07426	0.4546
D5*	pond	0.02556	drainage	0.02259	0.4116
D5*	stream	0.07038	drainage	0.006306	0.06660
R1	pond	0.2131	run off	0.1857	2.448
R1	stream	1.022	run off	0.07950	1.304
R3	Stream	1.136	run off	0.05660	1.130
R4	stream	1.331	run off	0.1397	1.256
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R1	pond	0.03818	run off	0.03218	0.4830
R1	stream	0.1028	run off	0.004937	0.1764
Step 4 only for scenario R		20 meters vegetative buffer zone and 10 metres buffer zone			
R3	Stream	0.2719	run off	0.01323	0.2279
R4	stream	0.3171	run off	0.03326	0.2853

\*Scenario surrogate from winter cereals

**Table 8.9-20: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicker , Ornamental h>50 cm**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	63.49	drainage/run off	58.84	340.19
Step 2		11.25	drainage/run off	10.37	59.94
Northern Europe	March-May	11.25	drainage/run off	10.37	59.94
Step 3					
D3	ditch	0.7674	drainage	0.09276	1.514
D4	pond	0.2903	drainage	0.2781	2.972
D4	stream	0.4913	drainage	0.004514	0.1071
D5	pond	0.3139	drainage	0.3031	3.327
D5	stream	0.5888	drainage	0.003710	0.08912

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R1	pond	0.3045	run off	0.2911	2.585
R1	stream	0.6112	run off	0.02490	0.4285
R3	Stream	0.7538	run off	0.05532	0.7472
R4	Stream	0.6751	run off	0.06435	0.8558
Step 4 only for scenario R		10 metres vegetative buffer zone and 10 meters no-spray buffer zone			
D3	Ditch	0.3491	Drainage	0.04207	0.7294
D4	pond	0.1835	drainage	0.1756	1.954
D4	stream	0.2463	drainage	0.004513	0.06714
D5	pond	0.1988	drainage	0.1919	2.187
D5	stream	0.2953	drainage	0.001860	0.04815
R1	pond	0.1928	run off	0.1837	1.689
R1	Stream	0.2644	run off	0.01075	0.1942
R3	Stream	0.3778	run off	0.02620	0.3669
R4	Stream	0.2853	run off	0.02814	0.3985
Step 4 only for scenario R		20 metres vegetative buffer zone and 20 meters no-spray buffer zone			
D3	Ditch	0.09025	drainage	0.01080	0.2077
D4	Pond	0.05420	drainage	0.05169	0.6673
D4	stream	0.06373	drainage	0.004513	0.05432
D5	pond	0.05934	drainage	0.05716	0.7212
D5	stream	0.07639	drainage	0.000549	0.01486
R1	pond	0.05712	run off	0.05441	0.5599
R1	Stream	0.1358	run off	0.005168	0.09019
R3	Stream	0.1439	run off	0.01025	0.1413
R4	stream	0.1454	run off	0.01452	0.1972
Step 4 only for scenario R		15 metres buffer zone (vfs mode)- only for Poland assesment			
D3	ditch	0.1915	drainage	0.02301	0.4177
D4	pond	0.09526	drainage	0.09100	1.087
D4	stream	0.1352	drainage	0.004513	0.05952
D5	pond	0.1036	drainage	0.09992	1.202
D5	stream	0.1620	drainage	0.001020	0.02838
R1	pond	0.1002	run off	0.09501	0.9155
R1	stream	0.1039	run off	0.001563	0.04636

**Table 8.9-21: FOCUS Step 1,2 and 3 and Step 4 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Prothioconazole-desthio following single/ multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	54.46	drainage/run off	53.67	310.79
Step 2		6.07	drainage/run off	5.95	34.46
Northern Europe	March-May	6.07	drainage/run off	5.95	34.46
Step 3					
D3*	ditch	0.7674	drainage	0.09276	1.514
D4*	pond	0.2903	drainage	0.2781	2.972
D4*	stream	0.4913	drainage	0.004514	0.1071
D5*	pond	0.3139	drainage	0.3031	3.327
D5*	stream	0.5888	drainage	0.003710	0.08912
R1*	pond	0.3045	run off	0.2911	2.585
R1*	stream	0.6112	run off	0.02490	0.4285
R3	stream	1.239	run off	0.1403	2.129
R4*	stream	0.7804	run off	0.07320	0.9634
Step 4 only for scenario R		10 meters vegetative buffer zone and 10 meters no-spray zone buffer zone			
R3	stream	0.5646	run off	0.06430	0.6525
Step 3 & 4 only for scenario R3		20 meters vegetative buffer zone and 5 meters no-spray buffer zone			
R3	stream	0.2963	run off	0.03379	0.3294
Step 4 only for scenario R		20 meters vegetative buffer zone and 20 meters no-spray buffer zone			
D3*	ditch	0.09025	drainage	0.01080	0.2077
D4*	pond	0.05420	drainage	0.05169	0.6673
D4*	stream	0.06373	drainage	0.004513	0.05432
D5*	pond	0.05934	drainage	0.05716	0.7212
D5*	stream	0.07639	drainage	0.000549	0.01486
R1*	pond	0.05712	run off	0.05441	0.5599
R1*	stream	0.1358	run off	0.005168	0.09019
R4*	stream	0.1454	run off	0.01452	0.1972
Step 4 only for scenario R		15 meters buffer zone (vfs mode) — only for Poland assesment			
D3*	ditch	0.2313	drainage	0.02101	0.4768
D4*	pond	0.1091	drainage	0.1043	1.238
D4*	stream	0.1545	drainage	0.006144	0.07564
D5*	pond	0.1157	drainage	0.1114	1.382
D5*	stream	0.1957	drainage	0.001090	0.03901
R1*	pond	0.1082	run off	0.1016	1.038

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R1*	stream	0.1187	run off	0.001013	0.05138

\*Scenario surrogate from forestry tree

**Table 8.9-22: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.02	drainage/run off	7.94	7.11
Step 2		0.43	drainage/run off	0.42	0.38
Northern Europe	Marc h-May	0.43	drainage/run off	0.42	0.38

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-23: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	4.01	drainage/run off	3.97	3.56
Step 2		0.20	drainage/run off	0.19	0.17
Northern Europe	March-May	0.20	drainage/run off	0.19	0.17

**Table 8.9-24: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.02	drainage/run off	7.94	7.11
Step 2		0.43	drainage/run off	0.42	0.38
Northern Europe	March-May	0.43	drainage/run off	0.42	0.38

**Table 8.9-25: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	4.01	drainage/run off	3.97	3.56
Step 2		0.28	drainage/run off	0.28	0.25
Northern Europe	March-May	0.28	drainage/run off	0.28	0.25

**Table 8.9-26: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to soya**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	4.01	drainage/run off	3.97	3.56
Step 2		0.34	drainage/run off	0.34	0.30
Northern Europe	March-May	0.34	drainage/run off	0.34	0.30

**Table 8.9-27: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	4.01	drainage/run off	3.97	3.56
Step 2		0.34	drainage/run off	0.34	0.30
Northern Europe	March-May	0.34	drainage/run off	0.34	0.30

**Table 8.9-28: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to ornamentals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.02	drainage/run off	7.94	7.11
Step 2		0.42	drainage/run off	0.41	0.37
Northern Europe	March-May	0.42	drainage/run off	0.41	0.37



**Table 8.9-29: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicker**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	10.32	drainage/run off	9.99	8.94
Step 2		2.28	drainage/run off	2.20	1.97
Northern Europe	March-May	2.28	drainage/run off	2.20	1.97

**Table 8.9-30: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for 1,2,4-triazole following single/multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.02	drainage/run off	7.94	7.11
Step 2		0.43	drainage/run off	0.42	0.38
Northern Europe	March-May	0.43	drainage/run off	0.42	0.38

### 8.9.2.2 Azoxystrobin and its metabolites

**Table 8.9-31: Input parameters related to active substance Azoxystrobin and metabolite(s) for PEC<sub>sw/sed</sub> calculations STEP 1/2 and 3(4) (if necessary)**

Compound	Azoxystrobin	R234886	R402173	R401553	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	403.4	389.4	333.3	213.2	EFSA Journal 2010; 8(4):1542
Saturated vapour pressure (Pa)	1.1E-10	1.1E-10	1.1E-10	1.1E-10	EFSA Journal 2010; 8(4):1542
Water solubility (mg/L)	6	57	61	560	EFSA Journal 2010; 8(4):1542
Diffusion coefficient in water (m <sup>2</sup> /d)	not required for Step 1+2/ 4.3 x 10 <sup>-5</sup>	not required for Step 1+2/ 4.3 x 10 <sup>-5</sup>	not required for Step 1+2/ 4.3 x 10 <sup>-5</sup>	not required for Step 1+2/ 4.3 x 10 <sup>-5</sup>	default
Diffusion coefficient in air (m <sup>2</sup> /d)	not required for Step	not required for Step 1+2/0.43	not required for Step 1+2/0.43	not required for Step 1+2/0.43	default

Compound	Azosystrobin	R234886	R402173	R401553	Value in accordance to EU endpoint y/n/ Reference
	1+2/0.43				
K <sub>foc</sub> (mL/g)	423	21	25	188	EFSA Journal 2010; 8(4):1542
Freundlich Exponent 1/n	0.86	-	-	-	EFSA Journal 2010; 8(4):1542
Plant Uptake	0	0	0		EFSA Journal 2010; 8(4):1542
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	default
DT <sub>50,soil</sub> (d)	78	112.1	4.7	1.1	EFSA Journal 2010; 8(4):1542
DT <sub>50,water</sub> (d)	1000	1000	1000	1000	EFSA Journal 2010; 8(4):1542
DT <sub>50,sed</sub> (d)	205	1000	1000	1000	EFSA Journal 2010; 8(4):1542
DT <sub>50,whole system</sub> (d)	205	1000	1000	1000	EFSA Journal 2010; 8(4):1542
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 28.8 Water/Sediment: 17.7	Soil: 17 Water/Sediment: 2.4	Soil: 17 Water/Sediment: 8.9%	EFSA Journal 2010; 8(4):1542
Formation fraction in soil:	-				

**Table 8.9-32: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	88.93	drainage/run off	84.60	369.31
Step 2		14.72	drainage/run off	14.21	60.88
Northern Europe	March-May	14.72	drainage/run off	14.21	60.88

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 3					
D3	ditch	1.108	drainage	0.06048	0.6681
D4	pond	0.8562	drainage	0.8282	5.302
D4	stream	0.9022	drainage	0.5351	2.031
D5	pond	0.2721	drainage	0.2653	2.429
D5	stream	0.9718	drainage	0.1353	0.5456
R1	pond	0.3801	run off	0.3424	2.137
R1	stream	3.720	run off	0.2361	1.744
R3	Stream	4.051	Run off	0.2050	2.909
R4	Stream	4.192	Run off	0.1966	0.1880
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 meteres no-spray buffer zone			
R1	pond	0.1724	run off	0.1554	1.043
R1	stream	1.690	run off	0.1056	0.7213
R3	Stream	1.849	Run off	0.09250	1.157
R4	Stream	1.907	Run off	0.08880	0.8683

\* single applications should be marked.

\*\* twa-time as required by ecotox

**Table 8.9-33: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	44.47	drainage/run off	42.30	184.66
Step 2		3.80	drainage/run off	3.58	15.34
Northern Europe	March-May	3.80	drainage/run off	3.58	15.34
Step 3					
D3	ditch	1.270	drainage	0.08908	0.7466
D4	pond	0.1961	drainage	0.1896	1.472
D4	stream	1.070	drainage	0.1911	0.5168
D5	pond	0.1262	drainage	0.1230	1.070
D5	stream	1.182	drainage	0.06318	0.3934
R1	pond	0.1911	run off	0.1648	1.173
R1	stream	1.456	run off	0.06518	1.931
R3	Stream	1.401	Run off	0.09605	0.5918

\* single applications should be marked.

\*\* twa-time as required by ecotox

**Table 8.9-34: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for Azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	88.93	drainage/run off	84.60	369.31
Step 2		14.72	drainage/run off	14.21	60.88
Northern Europe	March-May	14.72	drainage/run off	14.21	60.88
Step 3					
D3	ditch	1.108	drainage	0.1164	0.7147
D4	pond	0.8202	drainage	0.7948	5.199
D4	stream	0.9259	drainage	0.7030	1.956
D5	pond	0.2727	drainage	0.2659	2.389
D5	stream	0.9581	drainage	0.1342	0.5431
R1*	pond	0.3801	run off	0.3424	2.137
R1*	stream	3.720	run off	0.2361	1.744
<b>R4</b>	<b>Stream</b>	<b>6.332</b>	<b>Run off</b>	<b>0.6817</b>	<b>4.704</b>
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 meteres no-spray buffer zone			
R1*	pond	0.1724	run off	0.1554	1.043
R1*	stream	1.690	run off	0.1056	0.7213
<b>R4</b>	<b>Stream</b>	<b>2.858</b>	<b>Run off</b>	<b>0.3088</b>	<b>2.095</b>

\* single applications should be marked.

\*\* twa-time as required by ecotox

**Table 8.9-35: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	44.47	drainage/run off	42.30	184.66
Step 2		6.27	drainage/run off	6.01	25.74
Northern Europe	March-May	6.27	drainage/run off	6.01	25.74
Step 3					
D3	ditch	1.266	drainage	0.06276	0.6040
D4	pond	0.4078	drainage	0.3947	2.745
D4	stream	1.038	drainage	0.2538	1.023
D5	pond	0.1502	drainage	0.1463	1.292
D5	stream	1.010	drainage	0.07385	0.3092

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R1	pond	0.1576	run off	0.1417	0.9546
R1	stream	1.649	run off	0.09400	0.6522
Step 4 only for scenario R		10 meter vegetative buffer zone and 5 meteres no-spray buffer zone			
R1	pond	0.03779	run off	0.03160	0.2203
R1	stream	0.3048	run off	0.003069	0.04453

**Table 8.9-36: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to soya**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	44.47	drainage/run off	42.30	184.66
Step 2		7.91	drainage/run off	7.63	32.68
Northern Europe	March-May	7.91	drainage/run off	7.63	32.68
Step 3					
D3*	ditch	1.266	drainage	0.06276	0.6040
D4*	pond	0.4078	drainage	0.3947	2.745
D4*	stream	1.038	drainage	0.2538	1.023
D5*	pond	0.1502	drainage	0.1463	1.292
D5*	stream	1.010	drainage	0.07385	0.3092
R1*	pond	0.1576	run off	0.1417	0.9546
R1*	stream	1.649	run off	0.09400	0.6522
R3	stream	3.156	Run off	0.1385	1.226
R4	stream	1.765	Run off	0.1304	0.9156
Step 4 only for scenario R		Step 4 only for scenario R			
R1*	pond	0.03779	run off	0.03160	0.2203
R1*	stream	0.3048	run off	0.003069	0.04453
<b>Step 3 for surrogate crop legumes for soyabean according to Polish national requirements</b>					
D3	Ditch	1.047	drainage	0.05261	0.5078
D4	pond	0.4646	drainage	0.4499	3.104
D4	stream	0.8573	drainage	0.2923	1.198
D5	pond	0.1304	drainage	0.1253	1.187
D5	stream	0.8765	drainage	0.06235	0.2693
R1	pond	0.09557	run off	0.08456	0.5944
R1	stream	1.609	run off	0.08103	0.5882
R3	stream	1.025	run off	0.04899	0.4486

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
R4	stream	3.216	run off	0.2489	1.450

\*Scenario surrogate from spring oilseed rape

**Table 8.9-37: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/ multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	44.47	drainage/run off	42.30	184.66
Step 2		7.91	drainage/run off	7.63	32.68
Northern Europe	March-May	7.91	drainage/run off	7.63	32.68
Step 3					
D3*	ditch	1.266	drainage	0.06276	0.6040
D4*	pond	0.4078	drainage	0.3947	2.745
D4*	stream	1.038	drainage	0.2538	1.023
D5	pond	0.4075	drainage	0.3957	2.443
D5	stream	0.9421	drainage	0.2078	0.7514
R1	pond	0.1927	run off	0.1815	1.486
R1	stream	1.982	run off	0.08552	1.697
R3	Stream	2.809	Run off	0.1450	1.217
R4	Stream	3.531	Run off	0.2902	1.709
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 meteres no-spray buffer zone			
R1	pond	0.04557	run off	0.04005	0.2844
R1	stream	0.3057	run off	0.01073	0.1771
R4	Stream	1.600	Run off	0.1313	0.7487
<b>Step 3 for surrogate crop maize for sunflower according to Polish national requirements</b>					
D3	Ditch	1.047	drainage	0.04824	0.4801
D4	pond	0.5689	drainage	0.5507	3.694
D4	stream	0.9283	drainage	0.3544	1.407
D5	pond	0.4302	drainage	0.4178	2.560
D5	stream	0.9438	drainage	0.2204	0.7788
R1	pond	0.1752	run off	0.1511	1.155
R1	stream	2.297	run off	0.09844	1.683
R3	stream	2.011	run off	0.1399	1.352
R4	stream	3.932	run off	0.3421	1.977

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 metres no-spray buffer zone			
R4	Stream	1.780	Run off	0.1545	0.8603

\*Scenario surrogate from spring oilseed rape

**Table 8.9-38: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to ornamentals <50 cm**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	88.93	drainage/run off	84.60	369.31
Step 2		13.95	drainage/run off	13.45	57.61
Northern Europe	March-May	13.95	drainage/run off	13.45	57.61
Step 3					
D3	ditch	1.108	drainage	0.1218	0.7199
D4	pond	1.106	drainage	1.073	6.870
D4	stream	1.072	drainage	0.7053	2.665
D5*	pond	0.2721	drainage	0.2653	2.429
D5*	stream	0.9718	drainage	0.1353	0.5456
R1	pond	0.3997	run off	0.3545	2.531
R1	stream	4.287	run off	0.2477	1.681
R3	Stream	3.356	Run off	0.1734	2.091
R4	Stream	5.039	Run off	0.3639	2.473
Step 4 only for scenario R		10 meters vegetative buffer zone and 5 metres no-spraybuffer zone			
R1	pond	0.06137	run off	0.05493	0.4858
R1	stream	0.2674	run off	0.01089	0.1260
R3	Stream	1.693	Run off	0.09550	0.9793
R4	Stream	2.292	Run off	0.1656	1.146

\*Scenario surrogate from winter cereals

**Table 8.9-39: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicekr, Ornamental h>50cm**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	124.18	drainage/run off	106.66	464.33

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 2		36.77	drainage/run off	33.34	142.59
Northern Europe	March-May	36.77	drainage/run off	33.34	142.59
Step 3					
D3	ditch	13.37	drainage	1.533	7.966
D4	pond	1.378	drainage	1.241	7.471
D4	stream	13.51	drainage	0.1517	1.083
D5	pond	1.645	drainage	1.496	8.806
D5	stream	14.32	drainage	0.1078	1.166
R1	pond	1.491	run off	1.308	6.354
R1	stream	10.72	run off	0.1519	1.245
R3	Stream	15.17	Run off	0.5766	4.151
R4	Stream	10.78	Run off	0.1598	1.615
Step 4 <del>only for scenario R</del>		20 meters vegetative buffer zone and 20 meters no-spray buffer zone			
D3	ditch	1.576	drainage	0.1803	1.057
D4	pond	0.2950	drainage	0.2861	2.720
D4	stream	1.754	drainage	0.1517	0.6621
D5	pond	0.4194	drainage	0.3845	2.761
D5	stream	1.860	drainage	0.1078	0.3971
R1	pond	0.2850	run off	0.2477	1.328
R1	stream	1.391	run off	0.01971	0.1659
R3	Stream	1.971	Run off	0.08667	0.6616
R4	Stream	1.399	Run off	0.02522	0.2242

**Table 8.9-40: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for azoxystrobin following single/multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	88.93	drainage/run off	84.60	369.31
Step 2		14.72	drainage/run off	14.21	60.88
Northern Europe	March-May	14.72	drainage/run off	14.21	60.88
Step 3					
D3*	ditch	13.37	drainage	1.533	7.966



Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
D4*	pond	1.378	drainage	1.241	7.471
D4*	stream	13.51	drainage	0.1517	1.083
D5*	pond	1.645	drainage	1.496	8.806
D5*	stream	14.32	drainage	0.1078	1.166
R1*	pond	1.491	run off	1.308	6.354
R1*	stream	10.72	run off	0.1519	1.245
R3	Stream	5.353	Run off	0.4664	3.529
Step 4 only for scenario R		10 metres vegetative buffer zone and 20 metres no-spray buffer zone			
R3	Stream	2.440	run off	0.2142	1.528
Step 4 only for scenario R		20 metres vegetative buffer zone and 20 metres no-spray buffer zone			
D3*	ditch	1.576	drainage	0.1803	1.057
D4*	pond	0.2950	drainage	0.2861	2.720
D4*	stream	1.754	drainage	0.1517	0.6621
D5*	pond	0.4194	drainage	0.3845	2.761
D5*	stream	1.860	drainage	0.1078	0.3971
R1*	pond	0.2850	run off	0.2477	1.328
R1*	stream	1.391	run off	0.01971	0.1659

\* Surrogate scenario covered by forestry tree like as surrogate crops

**Table 8.9-41: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	58.85	drainage/run off	58.40	12.35
Step 2		9.16	drainage/run off	9.09	1.92
Northern Europe	March-May	9.16	drainage/run off	9.09	1.92

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-42: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	29.42	drainage/run off	29.20	6.17
Step 2		2.00	drainage/run off	1.99	0.42

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Northern Europe	March-May	2.00	drainage/run off	1.99	0.42

**Table 8.9-43: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	58.85	drainage/run off	58.40	12.35
Step 2		9.16	drainage/run off	9.09	1.92
Northern Europe	March-May	9.16	drainage/run off	9.09	1.92

**Table 8.9-44: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	29.42	drainage/run off	29.20	6.17
Step 2		3.70	drainage/run off	3.67	0.78
Northern Europe	March-May	3.70	drainage/run off	3.67	0.78

**Table 8.9-45: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to soya**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	29.42	drainage/run off	29.20	6.17
Step 2		4.83	drainage/run off	4.80	1.01
Northern Europe	March-May	4.83	drainage/run off	4.80	1.01

\*Scenario surrogate from spring oilseed rape

**Table 8.9-46: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	29.42	drainage/run off	29.20	6.17
Step 2		4.83	drainage/run off	4.80	1.01
Northern Europe	March-May	4.83	drainage/run off	4.80	1.01

**Table 8.9-47: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to ornamentals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	58.85	drainage/run off	58.40	12.35
Step 2		8.62	drainage/run off	8.55	1.81
Northern Europe	March-May	8.62	drainage/run off	8.55	1.81

**Table 8.9-48: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicekr**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	64.87	drainage/run off	64.22	13.58
Step 2		14.28	drainage/run off	14.13	2.99
Northern Europe	March-May	14.28	drainage/run off	14.13	2.99

**Table 8.9-49: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R234886 following single/multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	58.85	drainage/run off	58.40	12.35
Step 2		9.16	drainage/run off	9.09	1.92
Northern Europe	March-May	9.16	drainage/run off	9.09	1.92

**Table 8.9-50: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	20.76	drainage/run off	20.60	5.18
Step 2		1.34	drainage/run off	1.33	0.33
Northern Europe	March-May	1.34	drainage/run off	1.33	0.33

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-51: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	10.38	drainage/run off	10.30	2.59
Step 2		0.41	drainage/run off	0.41	0.10
Northern Europe	March-May	0.41	drainage/run off	0.41	0.10

**Table 8.9-52: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	20.76	drainage/run off	20.60	5.18
Step 2		1.34	drainage/run off	1.33	0.33
Northern Europe	March-May	1.34	drainage/run off	1.33	0.33

**Table 8.9-53: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	10.38	drainage/run off	10.30	2.59
Step 2		0.79	drainage/run off	0.78	0.20

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Northern Europe	March-May	0.79	drainage/run off	0.78	0.20

**Table 8.9-54: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to soya**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	10.38	drainage/run off	10.30	2.59
Step 2		1.04	drainage/run off	1.03	0.26
Northern Europe	March-May	1.04	drainage/run off	1.03	0.26

**Table 8.9-55: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	10.38	drainage/run off	10.30	2.59
Step 2		1.04	drainage/run off	1.03	0.26
Northern Europe	March-May	1.04	drainage/run off	1.03	0.26

**Table 8.9-56: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to ornamentals**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	20.76	drainage/run off	20.60	5.18
Step 2		1.26	drainage/run off	1.25	0.31
Northern Europe	March-May	1.26	drainage/run off	1.25	0.31

**Table 8.9-57: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicekr**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	21.45	drainage/run off	21.27	5.35
Step 2		1.93	drainage/run off	1.91	0.48
Northern Europe	March-May	1.93	drainage/run off	1.91	0.48

**Table 8.9-58: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R402173 following single/multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	20.76	drainage/run off	20.60	5.18
Step 2		1.34	drainage/run off	1.33	0.33
Northern Europe	March-May	1.34	drainage/run off	1.33	0.33

**Table 8.9-59: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to winter cereals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	14.77	drainage/run off	14.63	27.68
Step 2		0.92	drainage/run off	0.91	1.71
Northern Europe	March-May	0.92	drainage/run off	0.91	1.71

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-60: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	7.38	drainage/run off	7.31	13.84
Step 2		0.24	drainage/run off	0.24	0.45
Northern	March-May	0.24	drainage/run off	0.24	0.45

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Europe					

**Table 8.9-61: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to spring cereals**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	14.77	drainage/run off	14.63	27.68
Step 2		0.92	drainage/run off	0.91	1.71
Northern Europe	March-May	0.92	drainage/run off	0.91	1.71

**Table 8.9-62: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to spring oilseed rape, mustard, breadseed poppy**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	7.38	drainage/run off	7.31	13.84
Step 2		0.41	drainage/run off	0.40	0.76
Northern Europe	March-May	0.41	drainage/run off	0.40	0.76

**Table 8.9-63: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to soya**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	7.38	drainage/run off	7.30	13.84
Step 2		0.52	drainage/run off	0.51	0.97
Northern Europe	March-May	0.52	drainage/run off	0.51	0.97

\*Scenario surrogate from spring oilseed rape

**Table 8.9-64: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	7.38	drainage/run off	7.30	13.84
Step 2		0.52	drainage/run off	0.51	0.97
Northern Europe	March-May	0.52	drainage/run off	0.51	0.97

\*Scenario surrogate from spring oilseed rape

**Table 8.9-65: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to ornamentals**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	14.77	drainage/run off	14.63	27.68
Step 2		0.87	drainage/run off	0.86	1.62
Northern Europe	March-May	0.87	drainage/run off	0.86	1.62

\*Scenario surrogate from winter cereals

**Table 8.9-66: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to forestry tree, Salix, Wicekr**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	16.42	drainage/run off	15.95	30.17
Step 2		2.15	drainage/run off	2.05	3.87
Northern Europe	March-May	2.15	drainage/run off	2.05	3.87

**Table 8.9-67: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for R401553 following single/multiple application(s) of CHR/F/PROTAZO to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	14.77	drainage/run off	14.63	27.68
Step 2		0.92	drainage/run off	0.91	1.71
Northern	March-May	0.92	drainage/run off	0.91	1.71



Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
FOCUS					
Europe					

### 8.9.2.3 PEC<sub>sw/sed</sub> of CHR/F/PROTAZO

Method of calculation

Application rate winter cereals

**Resulting PEC<sub>sw</sub> winter cereals**

Application rate winter oilseed rape

**Resulting PEC<sub>sw</sub> winter oilseed rape**

Application rate spring oilseed rape, mustard, breadseed poppy

**Resulting PEC<sub>sw</sub> spring oilseed rape, mustard, breadseed poppy**

Application rate spring cereals

**Resulting PEC<sub>sw</sub> spring cereals**

Application rate ornamentals

**Resulting PEC<sub>sw</sub> ornamentals**

Application rate forestry tree, Salix, Wicker

**Resulting PEC<sub>sw</sub> forestry tree, Salix, Wicker**

Application rate tobacco

**Resulting PEC<sub>sw</sub> tobacco**

Application rate sunflower

**Resulting PEC<sub>sw</sub> sunflower**

Application rate soya

**Resulting PEC<sub>sw</sub> soya**

Drift calculator in SWASH tool calculating instantaneous PEC<sub>sw</sub> at a single drift event 1 m from the field

2 x 1121 g [prod]/ha equivalent to 2 x 375 g a.s./ha

6.2917 µg[prod]/L

1 x 1121 g [prod]/ha equivalent to 375 g a.s./ha

7.2020 µg[prod]/L

1 x 1121 g [prod]/ha equivalent to 375 g a.s./ha

7.2020 µg[prod]/L

2 x 1121 g [prod]/ha equivalent to 2 x 375 g a.s./ha

6.2917 µg[prod]/L

2 x 1121 g [prod]/ha equivalent to 2 x 375 g a.s./ha

6.2917 µg[prod]/L

2 x 1121 g [prod]/ha equivalent to 2 x 375 g a.s./ha

9.7298 µg[prod]/L

2 x 1121 g [prod]/ha equivalent to 2 x 375 g a.s./ha

4.6222 µg[prod]/L

1 x 1121 g [prod]/ha equivalent to 375 g a.s./ha

5.9546 µg[prod]/L

1 x 1121 g [prod]/ha equivalent to 375 g a.s./ha

5.9546 µg[prod]/L

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 1121 Crop: Cereals, winter

Number of Applications: 2 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

Info: Dimensions of receiving water body and field site (m)

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-- 0.50 --> Top of bank <-- 0.50 --> Water

Info: Drift regression terms to provide overall 90th percentile drift data

Regression parameters A: 2.4376 B: -1.0100 C: 2.4376 D: -1.0100

Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

Drift percentile per event 82 based on a total of 2 applications.

Distance from crop: (m) 1.00 2.00 areic mean

% of application rate: 2.4376 1.2104 1.6838

Output: Drift loading onto water body

Mass loading per drift event: 1.8875 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 6.2917 ug/L (for comparison with modelling result)

Data sources: Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999). Calculations of percentile drift are from spreadsheet of Travis, (1998). Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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X

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 1121 Crop: Cereals, spring

Number of Applications: 2 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

Info: Dimensions of receiving water body and field site (m)

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-- 0.50 --> Top of bank <-- 0.50 --> Water

Info: Drift regression terms to provide overall 90th percentile drift data

Regression parameters A: 2.4376 B: -1.0100 C: 2.4376 D: -1.0100

Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

Drift percentile per event 82 based on a total of 2 applications.

Distance from crop: (m) 1.00 2.00 areic mean

% of application rate: 2.4376 1.2104 1.6838

Output: Drift loading onto water body

Mass loading per drift event: 1.8875 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 6.2917 ug/L (for comparison with modelling result)

Data sources: Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999). Calculations of percentile drift are from spreadsheet of Travis, (1998). Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

Save Screen Print Close

Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 1121 Crop: Tobacco

Number of Applications: 2 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <- 1.00 --> Top of bank <- 0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.4376 B: -1.0100 C: 2.4376 D: -1.0100

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 82 based on a total of 2 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.50	2.50	
% of application rate:	1.6185	0.9661	1.2370

**Output: Drift loading onto water body**

Mass loading per drift event: 1.3867 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 4.6222 ug/L (for comparison with modelling result)

**Data sources:**  
Spray drift data are from BBA, (2000) and AgDRIFT 1.1t, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 1121 Crop: Pome/stone fruit, early applns

Number of Applications: 1 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? 20

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <- 20 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183

Distance for change in regression (m) 11.4

**Output: Drift deposition in water body per drift event**

Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	20.00	21.00	
% of application rate:	2.7618	2.4544	2.6039

**Output: Drift loading onto water body**

Mass loading per drift event: 2.9189 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 9.7298 ug/L (for comparison with modelling result)

**Data sources:**  
Spray drift data are from BBA, (2000) and AgDRIFT 1.1t, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

Save Screen Print Close

Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 1121 Crop: Vegetables, leafy

Number of Applications: 2 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <- 0.50 --> Top of bank <- 0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.4376 B: -1.0100 C: 2.4376 D: -1.0100

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 82 based on a total of 2 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.00	2.00	
% of application rate:	2.4376	1.2104	1.6838

**Output: Drift loading onto water body**

Mass loading per drift event: 1.8875 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 6.2917 ug/L (for comparison with modelling result)

**Data sources:**  
Spray drift data are from BBA, (2000) and AgDRIFT 1.1t, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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Calculation of drift loading into surface water

**Input**

Application Rate (g ai/ha): 1121 Crop: Oil seed rape, winter

Number of Applications: 1 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-0.50 --> Top of bank <-0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.00	2.00	
% of application rate:	2.7593	1.4010	1.9274

**Output: Drift loading onto water body**

Mass loading per drift event: 2.1606 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 7.2020 ug/L (for comparison with modelling result)

**Data sources:**

Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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Calculation of drift loading into surface water

**Input**

Application Rate (g ai/ha): 1121 Crop: Oil seed rape, spring

Number of Applications: 1 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-0.50 --> Top of bank <-0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.00	2.00	
% of application rate:	2.7593	1.4010	1.9274

**Output: Drift loading onto water body**

Mass loading per drift event: 2.1606 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 7.2020 ug/L (for comparison with modelling result)

**Data sources:**

Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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Calculation of drift loading into surface water

**Input**

Application Rate (g ai/ha): 1121 Crop: Soybeans

Number of Applications: 1 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-0.80 --> Top of bank <-0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.30	2.30	
% of application rate:	2.1349	1.2221	1.5936

**Output: Drift loading onto water body**

Mass loading per drift event: 1.7864 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 5.9546 ug/L (for comparison with modelling result)

**Data sources:**

Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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Calculation of drift loading into surface water

**Input**

Application Rate (g ai/ha): 1121 Crop: Sunflowers

Number of Applications: 1 Waterbody: focus\_ditch

Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

**Info: Dimensions of receiving water body and field site (m)**

Width: 1 Depth: 0.30 Length: 100

Distance: Crop <-0.80 --> Top of bank <-0.50 --> Water

**Info: Drift regression terms to provide overall 90th percentile drift data**

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778

Distance for change in regression (m) 1.0

**Output: Drift deposition in water body per drift event**

Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	1.30	2.30	
% of application rate:	2.1349	1.2221	1.5936

**Output: Drift loading onto water body**

Mass loading per drift event: 1.7864 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 5.9546 ug/L (for comparison with modelling result)

**Data sources:**

Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).  
Calculations of percentile drift are from spreadsheet of Travis, (1998).  
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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

**Table 8.10-1 Summary of atmospheric degradation and behaviour for prothioconazole**

Direct photolysis in air ‡	Not studied – no data requested
Quantum yield of direct phototransformation	Not measured – no data requested
Photochemical oxidative degradation in air ‡	<u>Prothioconazole:</u> Half-life: 1.1 hours Chemical lifetime: 1.6 hours Calculated according to Atkinson (AOPWIN v. 1.87, 12 hour day, $1.5 \times 10^6$ OH radicals/cm <sup>3</sup> ) <u>prothioconazole-desthio (M04):</u> Half-life: 14.2 hours Chemical lifetime: 20.5 hours Calculated according to Atkinson (AOPWIN v. 1.87, 12 hour day, $1.5 \times 10^6$ OH radicals/cm <sup>3</sup> )
Volatilization ‡	Laboratory route and rate soil studies indicated that volatilisation of prothioconazole and prothioconazole-desthio (M04) is unlikely to take place because no volatiles were detected at levels above 0.1% AR.

The vapour pressure at 20 °C of the active substance Prothioconazole is  $< 10^{-5}$  Pa. Hence the active substance Prothioconazole is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance Prothioconazole due to volatilization with subsequent deposition should be considered.

**Table 8.10-2 Summary of atmospheric degradation and behaviour for azoxystrobin**

Direct photolysis in air ‡	Not studied - no data requested
Quantum yield of direct phototransformation	Not studied - no data requested
Photochemical oxidative degradation in air ‡	DT <sub>50</sub> of 2.7 hours derived by the Atkinson model (AOPWIN version 1.8). OH (12h) concentration assumed = $1.5 \times 10^6$ cm <sup>-3</sup>
Volatilisation ‡	No significant tendency for volatilisation was observed from soil and bean leaf surfaces up to 24 hours after the application of radiolabelled azoxystrobin (dose rates: 264 or 291 g as/ha).
Metabolites	None

The vapour pressure at 20 °C of the active substance Azoxystrobin is  $< 10^{-5}$  Pa. Hence the active substance Azoxystrobin is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance Azoxystrobin due to volatilization with subsequent deposition should be considered.

## Appendix 1 Lists of data considered in support of the evaluation

### List of data submitted by the applicant and relied on

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
KCP 9.1.3	K. Florynski	2020	CHR/F/PROTAZO 250 EC Efate Calculations PUH Chemirol Sp. z o.o. Study code: CHR/F/PROTAZO-B8 Non GLP Unpublished	N	Chemirol
KCP 9.2.4	K. Florynski	2020	CHR/F/PROTAZO 250 EC Efate Calculations PUH Chemirol Sp. z o.o. Study code: CHR/F/PROTAZO-B8 Non GLP Unpublished	N	Chemirol
KCP 9.2.5	K. Florynski	2020	CHR/F/PROTAZO 250 EC Efate Calculations PUH Chemirol Sp. z o.o. Study code: CHR/F/PROTAZO-B8 Non GLP Unpublished	N	Chemirol

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

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
KCP 9.1.1/01	Gilges, M.	2000	Aerobic degradation of JAU6476 in two soils Report No. MR-549/99 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.1/02	Hellpointner, E.	2001	Degradation and metabolism of JAU6476 in aerobic soils Report No. MR-104/01 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.1/03	Gilges, M.	2001	Degradation of JAU6476-S-methyl (WAK7861) in four soils under aerobic conditions Report No. MR-340/00 Bayer AG GLP Unpublished	N	BAY
KCP 6.1.1/04	Gilges, M.	2001	Degradation of JAU6476-desthio (SXX0665) in four soils under aerobic conditions Report No. MR-327/00 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/01	Gilges, M.	2001	Photolysis of JAU6476 on soil surface Report No. MR-242/00 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/02	Schramel, O.	2001	Dissipation of JAU6476 (250EC) in soil under field conditions (France, Germany, Great Britain, Italy) Report No. RA-2152/98 Report includes study nos.: R812587, R812595, R712609, R812617, R812625, R812633, R815667,	N	BAY

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
			R815675		
KCP 9.1.2/03	Schramel, O.	2001	Determination of the storage stability of JAU6476 and the metabolites JAU6476-desthio and JAU6476-S-methyl in soil Report No. MR-644/99 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/04	Hein, W.	1999	Adsorption/desorption of S-methyl-JAU 6476 on four different soils Report No. FM774 Generated by SLFA Neustadt Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/05	Fent, G.	1998	Adsorption/desorption of [phenyl-UL-14C]SXX 0665 on four different soils Report No. FM768 Generated by SLFA Neustadt Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/06	Riegner, K.	1999	Leaching behaviour of JAU6476 formulated as 250 EC in soil (parent leaching) Report No.: MR-098/99 Bayer AG GLP Unpublished	N	BAY
KCP 9.1.2/07	Babczinski, P.	2001	Aged soil column leaching of JAU6476 Report No.: MR-364/00 Bayer AG GLP Unpublished	N	BAY

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
KCP 9.1.1/05	Schad, T.	2001	Calculation of degradation rates of JAU6476 based on aerobic soil degradation studies Report No.: MR-383/01 Bayer AG non GLP Unpublished	N	BAY
KCP 9.1.1/06	Schad, T.	2001	Calculation of temperature referenced first order DT50 of JAU6476 and its metabolite JAU6476-desthio based on field dissipation studies conducted in Europe Report No.: MR-468/01 Bayer AG non GLP Unpublished	N	BAY
KCP 9.2/01	Schad, T.	2001	Predicted environmental concentrations of JAU6476 and its metabolites JAU6476-desthio and JAU6476-S-methyl in groundwater recharge based on calculation with FOCUS-PELMO Report No.: MR-380/01 Bayer AG non GLP Unpublished	N	BAY
KCP 9.2/02	Riegner, K.	1998	Hydrolysis of [phenyl-UL-14C]JAU6476 in sterile aqueous buffer solution Report No. MR-623/98 Bayer AG GLP Unpublished	N	BAY
KCP 9.2/03	Hellpointner, E.	2001	Determination of the quantum yield and assessment on the environmental half-life of the direct photodegradation in water of JAU6476 Report No. MR-101/01 Bayer AG GLP Unpublished	N	BAY
KCP 9.2/04	Gilges, M. Bornatsch, W.	2001	Photolysis of JAU 6476 in sterile aqueous buffer Report No. MR-213/01	N	BAY



<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
			Bayer AG GLP Unpublished		
KCP 9.2/05	Hellpointner, E.	1993	Determination of the quantum yield and sessment of the environmental half-life of the direct photodegradation of SXX 0665 in water Report No. PF3852 Bayer AG GLP Unpublished	N	BAY
KCP 9.2/06	Schafer, H.	2001	Calculation of DT-50 values of JAU6476 metabolite thiazocine generated by photolysis in aqueous solution Report No. MR-591/01 Bayer AG non GLP Unpublished	N	BAY
KCP 9.2/07	Schafer, H.	2001	Prediction of maximum amounts of JAU6476-thiazocine in surface water under natural conditions Report No. MR-597/01 Bayer AG non GLP Unpublished	N	BAY
KCP 9.2/08	Brumhard, B. Oi, M.	2001	Aerobic degradation and metabolism of the active ingredient JAU6476 in the water/sediment system Report No. MR-395/01 Bayer AG GLP Unpublished	N	BAY
KCP 9.2/09	Scholz, K.	2001	Anaerobic aquatic metabolism of JAU6476 Report No.: MR-275/01 Bayer AG GLP Unpublished	N	BAY

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
KCP 9.3/01	Hellpointner, E.	1999	Calculation of the chemical lifetime of JAU6476 in the troposphere Report No. MR-093/99 Bayer AG non GLP Unpublished	N	BAY
KCP 9.3/02	Hellpointner, E.	2000	Calculation of the chemical lifetime of JAU 6476-DESTHI in the troposphere Report No. MR-323/00 Bayer AG non GLP Unpublished	N	BAY
Azoxystrobin					
KCP 9.1.1/07	Warinton JS, Chalofiti I, Harvey BR	1996	ICIA5504: Degradation in Soil Under Aerobic and Anaerobic Laboratory Conditions: Final Report. Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ2007B Syngenta File No ICI5504/0782 GLP Unpublished	N	SYN
KCP 9.1.1/08	Jones RN, Entwistle K	1998	R401553: Laboratory Degradation in Three Soil Types. Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ2685B Syngenta File No ICI5504/0841 GLP Unpublished	N	SYN
KCP 9.1.1/09	Jones RN, Campbell A	1998	R402173: Laboratory Degradation in Three Soil Types. Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ2684B GLP, not published Syngenta File No ICI5504/0840	N	SYN
KCP 9.1.1/10	Jones RN, Robertson T	1999	R234886: Laboratory Degradation in Three Soil Types. Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ2683B	N	SYN

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
			Syngenta File No ICI5504/0842 GLP Unpublished		
KCP 9.1.1/11	Emburey S N, Kay J	2002	Residue Levels in Soil following In-furrow treatment from a trial carried out in the United Kingdom during 2000/2001 Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, RJ3281B Syngenta File No ICI5504/1522 GLP Unpublished	N	SYN
KCP 9.1.1/12	Emburey S N, Poppezijn W F B	2002	Residue Levels in Soil following In-furrow Treatment from a Trial carried out in the Netherlands During 2000/2001 Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, RJ3282B File No ICI5504/1593 GLP Unpublished	N	SYN
KCP 9.1.1/13	Emburey SN	2002	Residue Levels in Soil following In-furrow Treatment from a Trial carried out in the United Kingdom During 2000/2001 Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, RJ3283B Syngenta File No ICI5504/1560 GLP Unpublished	N	SYN
KCP 9.1.1/14	Jones R.N., Bouwmann J.J.	2001	Residue Levels in Soil following In-furrow Treatment from Trials carried out in the Netherlands, during 1999-2000 Syngenta Crop Protection AG, Basel, Switzerland Syngenta - Jealott's Hill International, Bracknell, Berkshire, United Kingdom, RJ3219B Syngenta File No ICI5504/1297 GLP Unpublished	N	SYN
KCP 9.1.2/08	Rowe D, Lane MCG	1995	ICIA5504: Adsorption and Desorption Properties in Soil of R401553 Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United	N	SYN

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
			Kingdom, RJ1953B Syngenta File No ICI5504/0792 GLP, Unpublished		
KCP 9.1.2/09	Rowe D, Lane MCG	1995a	ICIA5504: Adsorption and Desorption Properties in Soil of R402173 Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ1850B Syngenta File No ICI5504/0789 GLP Unpublished	N	SYN
KCP 9.1.2/10	Ferguson RE, Muller K, Lane MCG	1994	ICIA5504: Adsorption and Desorption Properties in Soil of R234886 Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ1544B Syngenta File No ICI5504/0783 GLP Unpublished	N	SYN
KCP 9.2/10	Jones RN, Lake A	2000	Azoxystrobin: Dissipation in an Outdoor Experimental Pond. Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom, RJ3062B Syngenta File No ICI5504/0831 GLP Unpublished	N	SYN
9.3/03	Hayes, S.E.	1996	Azoxystrobin - Calculation of Half-Life by Reaction with Atmospheric Hydroxyl Radicals Syngenta File No ICI5504/1559 Zeneca Agrochemicals, Jealott's Hill, United Kingdom Zeneca Agrochemicals, Jealott's Hill, United Kingdom,	N	SYN

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

## **Appendix 2 Detailed evaluation of the new Annex II studies**

### **A 2.1 Study 1**

Reference:	Data point
Report	Title, author(s), year, report No, document No, Authority registration No
Guideline(s):	Yes/No (If yes, give guidelines; If no, give justification, e.g., “ no guidelines available” or “ methods used comparable to guideline(s) xxx” )
Deviations:	Yes/No (If yes, describe deviations from test guidelines)
GLP:	Yes/No (If no, give justification, e.g., state that GLP was not compulsory at the time the study was performed)
Acceptability:	Yes/No/Supplementary

#### **Materials and methods**

#### **Results and discussions**

#### **Conclusion**

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