



Document Title

**Summary of the fate and behaviour in the environment  
Bixafen + Prothioconazole EC 225 (75 + 150 g/L)**

Data Requirements

**EU Regulation 1107/2009 & EU Regulation 284/2013**

**Document MCP**

**Section 9: Fate and behaviour in the environment**

According to the guidance document, SANCO/10181/2013, for preparing dossiers for the approval of a chemical active substance

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### Version history

Date	Data points containing amendments or additions <sup>1</sup> and brief description	Document identifier and version number

<sup>1</sup> It is suggested that applicants adopt a similar approach to showing revisions and version history as outlined in SANCO/10180/2013 Chapter 4 How to revise an Assessment Report

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## CP 9 FATE AND BEHAVIOUR IN THE ENVIRONMENT

**Introduction**

A dossier on prothioconazole (CAS No. 178928-70-6) was submitted February 2002 by Bayer CropScience to the EU RMS United Kingdom for agricultural use as a fungicide. Prothioconazole was included into Annex I of the Council Directive 91/414/EEC by the Commission Directive 2008/44/EC published 4 April 2008, with an entry into force by 1 August 2008.

This Supplemental Dossier contains only detailed summaries of studies, which were not part of the dossier during the first Annex I inclusion of prothioconazole and were, therefore, not evaluated during the first EU review of this compound. In order to facilitate discrimination between new and old information, the new information is written in black letters whereas *grey letters describe the old information.*

All studies, which have been already submitted by Bayer CropScience for the first Annex I inclusion, are contained in the Monograph and its Addenda and are included in the Baseline dossier provided by Bayer CropScience. The summaries on the different endpoints were taken from the Monograph and its Addenda and supplemented with new information (new studies, references, further comments).

A synonymous name for prothioconazole used at several locations in this Supplemental Dossier is JAU 6476.

The representative formulation (spray use) submitted to the first Annex I listing process is no longer considered as a representative formulation for the renewal of approval of prothioconazole. One of the representative formulations used for the submission of the renewal of the approval of prothioconazole is the spray formulation Bixafen + Prothioconazole EC 225. The summaries of formulation studies and the risk assessment will be presented in this dossier.

In this dossier only endpoints used for the risk assessment are presented. For an overview of all available endpoints for prothioconazole and its metabolites please refer to the respective section of the MCA document. In order to facilitate discrimination between new and information submitted during the Annex I inclusion process, *the previously evaluated information is written in grey letters.*

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Use pattern considered in the environmental exposure and risk assessment

Table CP 9- 1: Intended application pattern

Crop	F G or I (b)	Application				Application rate per treatment			Remarks:
		method kind (f-h)	growth stage & season (j)	number min max (k)	interval between application (min)	a.s./hL min max	water L/ha min max	g a.s./ha min max	
Wheat Triticale Rye Spelt	F	Foliar spray	BBCH 25- 69	1-2	14-21	23.4-93.75 BIX + 40-187.5 PTZ	100-400	93.75 BIX + 187.5 PTZ	1.25 L/ha
Barley Oat	F	Foliar spray	BBCH 25- 61	1-2	14-21	18.8-75 BIX + 37.5-150 PTZ	100-400	75 BIX + 150 PTZ	1.0 L/ha

Compounds addressed in this document

In addition to the active substance prothioconazole, the degradation products summarised in Table CP 9- 2 were addressed in this document as they have to be considered for exposure assessments.

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Document MCP: Section 9 Fate and behaviour in the environment  
Bixafen + Prothioconazole EC 225

Table CP 9- 2: Active substance and degradation products addressed in this document

Compound / Codes	Chemical structure	Considered for
Prothioconazole (JAU 6476)		PEC <sub>soil</sub> PEC <sub>gw</sub> PEC <sub>sw</sub> & PEC <sub>sed</sub>
JAU 6476-S-methyl (M01)		PEC <sub>soil</sub> PEC <sub>gw</sub> PEC <sub>sw</sub> & PEC <sub>sed</sub>
JAU 6476-desthio (M04)		PEC <sub>soil</sub> PEC <sub>gw</sub> PEC <sub>sw</sub> & PEC <sub>sed</sub>
JAU 6476-thiazocine (M12)		PEC <sub>sw</sub> & PEC <sub>sed</sub>
1,2,4-triazole (M13)		PEC <sub>sw</sub> & PEC <sub>sed</sub>
JAU 6476-triazolylketone (M42)		PEC <sub>sw</sub> & PEC <sub>sed</sub>

A list of metabolites, which contains structures, synonyms and code numbers attributed to the compound prothioconazole, is presented in Document N3 of this dossier.



**Definition of the residue for risk assessment**

Justification for the residue definition for risk assessment is provided by MCA Section 7.

**Table CP 9- 3: Definition of the residue for risk assessment**

Compartment	Residue definition for risk assessment
Soil	Prothioconazole, JAU 6476-S-methyl (M01) and JAU 6476-desthio (M04)
Groundwater	Prothioconazole, JAU 6476-S-methyl (M01) and JAU 6476-desthio (M04)
Surface water	Prothioconazole, JAU 6476-S-methyl (M01), JAU 6476-desthio (M04), JAU 6476-thiazocine (M12), 1,2,4-triazole (M13) and JAU 6476-triazolylketone (M42)
Sediment	Prothioconazole, JAU 6476-S-methyl (M01), JAU 6476-desthio (M04), JAU 6476-thiazocine (M12), 1,2,4-triazole (M13) and JAU 6476-triazolylketone (M42)
Air	Prothioconazole and JAU 6476-desthio (M04)

\*Justification for the residue definition for risk assessment is provided in MCA Sec.7, Point 7.4.1

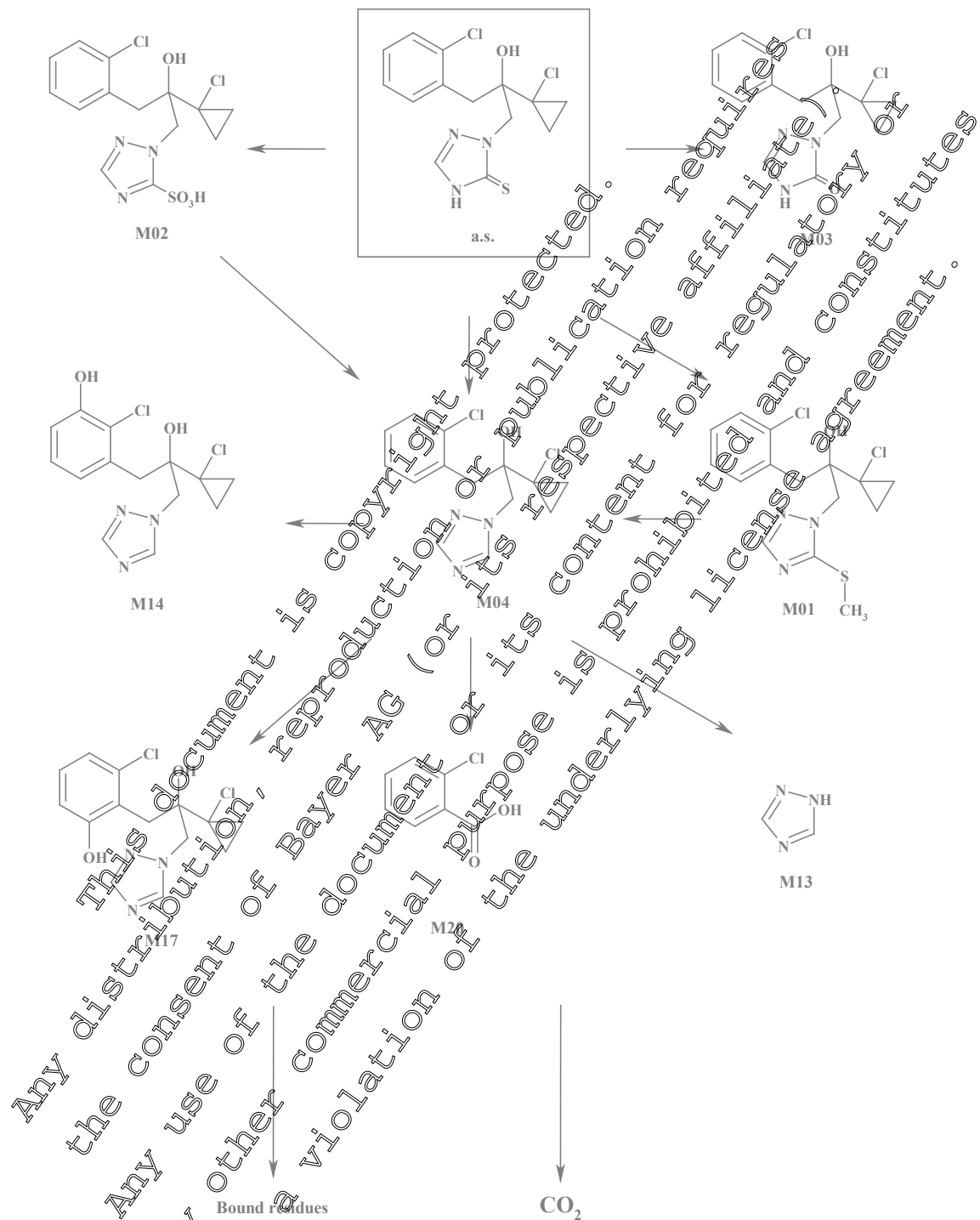
**CP 9.1 Fate and behaviour in soil**

For information on the fate and behaviour in soil please refer to MCA Section 7, data point 7.1. The proposed degradation pathway of prothioconazole in soil is shown in Figure CP 9.1- 1.

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Figure CP 9.1- 1: Proposed degradation pathway of prothioconazole in soil under laboratory conditions considering all routes of soil degradation and lysimeter studies.



a.s. = prothioconazole  
M01= JAU 6476-S-methyl  
M02= JAU 6476-sulfonic acid  
M03= JAU 6476-triazolinone  
M04= JAU 6476-desthio

M13 = 1,2,4-triazole  
M14 = JAU 6476-desthio-3-hydroxy  
M17 = JAU 6476-desthio-6-hydroxy  
M20 = 2-chlorobenzoic acid



**CP 9.1.1 Rate of degradation in soil**

No specific studies with the formulation are required. For further information on the fate and behaviour in soil please refer to MCA Section 7, data points 7.1.1 and 7.1.2.

**CP 9.1.1.1 Laboratory studies**

For information on laboratory studies please refer to MCA Section 7, data point 7.1.2.1.

**CP 9.1.1.2 Field studies**

**CP 9.1.1.2.1 Soil dissipation studies**

For information on field dissipation studies please refer to MCA Section 7, data point 7.1.2.1.

**CP 9.1.1.2.2 Soil accumulation studies**

For information on field accumulation studies please refer to MCA Section 7, data point 7.1.2.2.

**CP 9.1.2 Mobility in the soil**

For information on mobility studies please refer to MCA Section 7, data point 7.1.4.

**CP 9.1.2.1 Laboratory studies**

For information on laboratory studies please refer to MCA Section 7, data point 7.1.4.1

**CP 9.1.2.2 Lysimeter studies**

For information on lysimeter studies please refer to MCA Section 7, data point 7.1.4.2.

**CP 9.1.2.3 Field leaching studies**

For information on field leaching studies please refer to MCA Section 7, data point 7.1.4.3

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**CP 9.1.3 Estimation of concentrations in soil**

New calculations were performed to reflect findings from new studies presented in the active substance dossier, section 7 "Fate and behaviour in the environment". In addition these calculations considered the most recent guidance documents for exposure calculations. Calculations of predicted environmental concentrations in soil ( $PEC_{soil}$ ) are presented below.

**Predicted environmental concentrations in soil ( $PEC_{soil}$ )****Endpoints for  $PEC_{soil}$** 

For deriving the respective end points please refer to MCA Section 7, data point 7.1.

**Table CP 9.1.3-1: Key modelling input parameters for prothioconazole and its metabolites**

Compound	Worst case $DT_{50}$ non-normalised [days]	Maximum occurrence in soil [%]	Molar mass [g/mol]	Molar mass correction factor
Prothioconazole	1.6	100	344.3	1
JAU 6476-S-methyl	280	14	358.3	1.0407
JAU 6476-desthio	63.4	36	312.	0.9068

**Report:** KCP 9.1.3.01 [redacted]; 2015; M-536053-01-1  
**Title:** Prothioconazole (PTZ) and metabolites:  $PEC_{soil}$  EUC - Use in cereals as spray application and as seed treatment in Europe  
**Report No.:** EN 15-0493  
**Document No.:** M-536053-01-1  
**Guideline(s):** not applicable  
**Guideline deviation(s):** not applicable  
**GLP/GEP:** no

**Methods and Materials:** The predicted environmental concentrations in soil ( $PEC_{soil}$ ) of prothioconazole and its metabolites were estimated based on a first tier approach using a Microsoft® Excel spreadsheet. A bulk density of 1.5 kg/l and a soil mixing depths of 5 cm were used as recommended by FOCUS (1997) and EU Commission (1995, 2000). The accumulation potential of prothioconazole and metabolites after long term use was also assessed, employing the mixing depth of 20 cm for the calculation of the background concentration.

Detailed application data used for simulation of  $PEC_{soil}$  were compiled in Table CP 9.1.3-2.

**Table CP 9.1.3-2: Application pattern used for  $PEC_{soil}$  calculations of prothioconazole**

Individual crop	FOCUS crop used for interception	Application				Amount reaching soil per season application [g a.s./ha]
		Rate per season [g a.s. /ha]	Interval [days]	Plant interception [%]	BBCH stage	
Winter & spring cereals, GAP	-	2 × 187.5	14	-	2 × 25-69	-
Winter cereals	Winter cereals	2 × 187.5	14	2 × 20	2 × 25-69	2 × 150.0
Spring cereals	Spring cereals	2 × 187.5	14	2 × 20	2 × 25-69	2 × 150.0



**Substance Specific Parameters:** The compound specific input parameters (endpoints for PEC<sub>soil</sub> calculations) are summarized in Table CP 9.1.3-1.

**Findings:** The maximum PEC<sub>soil</sub> values for prothioconazole and its metabolites are summarised in Table CP 9.1.3-3. The maximum, short-term and long-term PEC<sub>soil</sub> values, and the time weighted average values (TWAC<sub>soil</sub>) are provided thereafter.

**Table CP 9.1.3-3: Maximum PEC<sub>soil</sub> of prothioconazole and its metabolites for the uses assessed**

Use Pattern	Prothioconazole	S-methyl	Desthio
	PEC <sub>soil</sub> [mg/kg]	PEC <sub>soil</sub> [mg/kg]	PEC <sub>soil</sub> [mg/kg]
Winter and spring cereals 2×287.5 g a.s./ha, 14 days, 2×20%	0.2	0.058	0.189

**Table CP 9.1.3-4: PEC<sub>soil</sub> (actual) of prothioconazole and its metabolites**

	Time [days]	Winter and spring cereals 2×187.5 g a.s./ha, 14 days, 2×20%		
		Prothioconazole	S-methyl	Desthio
		PEC <sub>soil</sub> [mg/kg]	PEC <sub>soil</sub> [mg/kg]	PEC <sub>soil</sub> [mg/kg]
Initial	0	0.200	0.058	0.189
Short term	1	0.130	0.058	0.187
	2	0.084	0.058	0.185
	4	0.095	0.058	0.181
Long term	7	0.010	0.057	0.175
	14	<0.001	0.056	0.163
	21	<0.001	0.055	0.151
	28	<0.001	0.054	0.139
	42	<0.001	0.052	0.120
	50	<0.001	0.051	0.110
	100	<0.001	0.045	0.063

**Table CP 9.1.3-5: TWAC<sub>soil</sub> of prothioconazole and its metabolites**

	Time [days]	Winter and spring cereals I 2×187.5 g a.s./ha, 14 days, 2×20%		
		Prothioconazole	S-methyl	Desthio
		TWAC <sub>soil</sub> [mg/kg]	TWAC <sub>soil</sub> [mg/kg]	TWAC <sub>soil</sub> [mg/kg]
Initial	0	---	---	---
Short term	1	0.163	0.058	0.188
	2	0.134	0.058	0.187
	4	0.095	0.058	0.185
Long term	7	0.063	0.058	0.182
	14	0.033	0.057	0.176
	21	0.022	0.057	0.169
	28	0.017	0.056	0.163
	42	0.011	0.055	0.152
	50	0.009	0.055	0.146
	100	0.005	0.051	0.115



**Potential accumulation in soil:**

The accumulation potential after long term use was also assessed. The results for a standard-mixing depth of 20 cm for an arable crop with tillage are presented in Table CP 9.1.3- 6.

**Table CP 9.1.3-6: PEC<sub>soil</sub> of prothioconazole and its metabolites taking the effect of accumulation into account (mixing (tillage) depth of 20 cm)**

Use Pattern	PEC <sub>soil</sub>	Prothioconazole	S-methyl	Desthio
		[mg/kg]	[mg/kg]	[mg/kg]
Winter and spring cereals I 2×187.5 g a.s./ha, 14 days, 2×20%	plateau	<0.001	0.010	0.001
	total*	0.200	0.068	0.190

\* total = plateau (background concentration after multi-year use) + max. PEC<sub>soil</sub> (see Table CP 9.1.3-3)

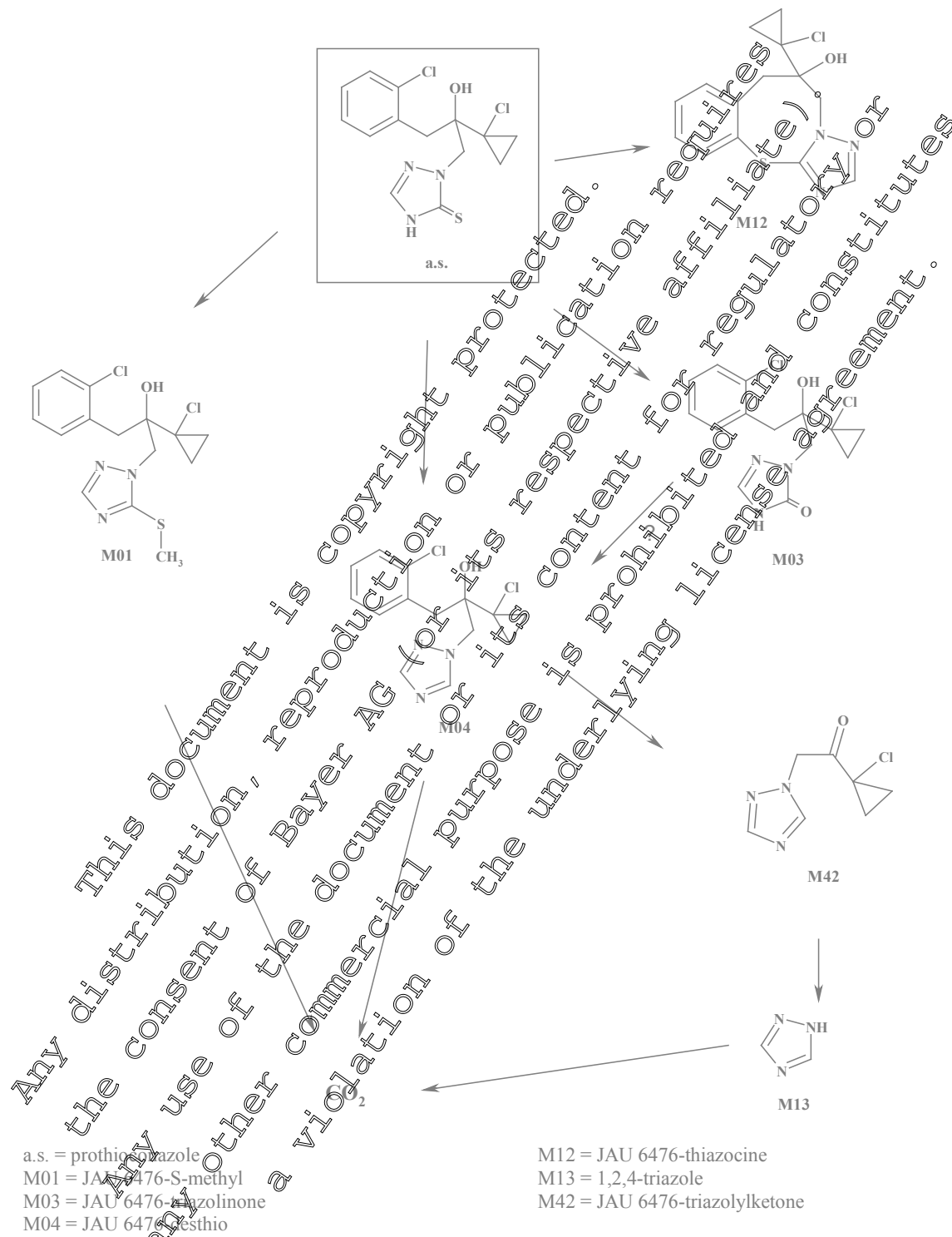
**CP 9.2 Fate and behaviour in water and sediment**

The proposed degradation pathway of prothioconazole in water and sediment is shown in Figure CP 9.2- 1.

For information on the fate and behaviour in water and sediment please refer to MCA Section 7, data point 7.2.

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Figure CP 9.2- 1: Proposed bio-degradation pathway of prothioconazole (JAU 6476-desthio) in water and sediment (major degradation products)



**CP 9.2.1 Aerobic mineralisation in surface water**

For information on aerobic mineralisation in surface water studies please refer to MCA Section 7, data point 7.2.2.2.



**CP 9.2.2 Water/sediment study**

For information on water/sediment studies please refer to MCA Section 7, data point 7.2.2.3.

**CP 9.2.3 Irradiated water/sediment study**

For information on irradiated water/sediment studies please refer to MCA Section 7, data point 7.2.2.4.

**CP 9.2.4 Estimation of concentrations in groundwater**

Calculations were performed, to reflect findings from new studies presented in the active substance dossier, section 7 "Fate and behaviour in the environment". In addition these calculations consider the most recent guidance documents for exposure calculations.

Calculations of predicted environmental concentrations in groundwater (PEC<sub>gw</sub>) are presented below.

**Endpoints for PEC<sub>gw</sub>**

For deriving the respective end points please refer to MCA Section 7, data point 7.1.

**Table CP 9.2.4.1- 1: Compound specific input parameters for prothioconazole and its metabolites**

Parameter	Unit	Prothioconazole	S-methyl	Desthio
<b>Common</b>				
Molar Mass	[g/mol]	344.3	358.3	312.2
Solubility	[mg/L]	22.5	4.6	50.6
Vapour Pressure	[Pa]	1.00E-10	8.20E-06	1.00E-10
Freundlich Exponent		1	0.88	0.81
Plant Uptake Factor		0	0	0
Walker Exponent		0.7	0.7	0.7
<b>PEARL Parameters</b>				
Substance Code		PTZ	Smet	Des
DT50	[days]	9.9	46.4	24.7
Molar Activ. Energy	[kJ/mol]	65.4	65.4	65.4
Kom	[mL/g]	1024	1465	332.7
<b>PELMO Parameters</b>				
Substance Code		A5	A1	B1
Rate Constant	[1/day]	0.77009	0.02806	0.01494
Q10		2.58	2.58	2.58
Koc	[mL/g]	1765	2526	573.5

**Table CP 9.2.4.1- 2: Degradation pathway related parameters for prothioconazole and its metabolites**

Degradation fraction from → to (FOCUS PEARL)	0.11 PTZ -> Smet 0.49 PTZ -> Des 1 Smet -> Des
Degradation rate from → to (FOCUS PELMO)	0.3773080 Active Substance -> A1 0.0847180 Active Substance -> B1 0.3080650 Active Substance -> <BR/CO2 0.0280630 A1 -> B1 0.0149390 B1 -> <BR/CO2



CP 9.2.4.1 Calculation of concentrations in groundwater

Predicted environmental concentrations in soil (PEC<sub>gw</sub>)

**Report:** KCP 9.2.4.1/01 [redacted]; 2015; M-536056-01-1  
**Title:** Prothioconazole (PTZ) and metabolites: PEC<sub>gw</sub> FOCUS PEARL, PELMO, EUR - Use in cereals as spray application and as seed treatment in Europe  
**Report No.:** EnSa-15-0491  
**Document No.:** M-536056-01-1  
**Guideline(s):** not applicable  
**Guideline deviation(s):** not applicable  
**GLP/GEP:** no

The predicted environmental concentrations in groundwater (PEC<sub>gw</sub>) for prothioconazole and its metabolites were calculated using the simulation model FOCUS PEARL (version 4.4.4) and FOCUS PELMO (version 5.5.3). Crop interception was taken into account according to the BBCH growth stage, as recommended by FOCUS (2014). Application dates for the simulation runs were defined following the crop event dates of the respective crop and scenario as given by FOCUS (2000, 2009).

Detailed application data used for simulation of PEC<sub>gw</sub> were compiled in Table CP 9.2.4.1- 1.

Table CP 9.2.4.1- 3: Application pattern used for PEC<sub>gw</sub> calculations

Individual crop	FOCUS crop used for interception	Application			BBCH stage	Amount reaching soil per season application [g a.s./ha]
		Rate per season [g a.s. /ha]	Interval [days]	Plant interception [%]		
Winter & spring cereals, GAP		2 × 187.5	14	-	2 × 25-69	-
Winter cereals I simulation	Winter cereals	2 × 187.5	14	2 × 20	2 × 25-69	2 × 150.0
Spring cereals simulation	Winter cereals	2 × 187.5	14	2 × 20	2 × 25-69	2 × 150.0

For cereal applications, absolute dates were derived for the simulation runs. All application dates are summarised in the table below.

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Table CP 9.2.4.1- 4: First application dates and related information for prothioconazole as used for the simulation runs

Individual crop	Winter cereals	Spring cereals
Repeat Interval for App. Events	Every Year	Every Year
Application Technique	Spray	Spray
Absolute / Relative to	Absolute	Absolute
Scenario	1 <sup>st</sup> App. Date/(Julian day)	1 <sup>st</sup> App. Date/(Julian day)
Chateaudun	14 Feb/(45)	05 Apr/(93)
Hamburg	15 Feb/(46)	02 Apr/(112)
Jokioinen	19 Feb/(50)	01 Jun/(152)
Kremsmuenster	15 Feb/(46)	22 Apr/(112)
Okehampton	06 Feb/(37)	17 Apr/(107)
Piacenza	21 Feb/(52)	-
Porto	15 Feb/(46)	07 Apr/(97)
Sevilla	28 Dec/(362)	-
Thiva	28 Jan/(28)	-

**Findings:** PEC<sub>GW</sub> were evaluated as the 80<sup>th</sup> percentile of the mean annual leachate concentration at 1 m soil depth. FOCUS PEARL and PELMO PEC<sub>GW</sub> results for prothioconazole and its metabolites after application to winter and spring cereals are given in Table CP 9.2.4.1- 5

Table CP 9.2.4.1- 5: Winter & spring cereals: FOCUS PEARL & PELMO PEC<sub>GW</sub> results of prothioconazole and its metabolites

Use Pattern	Winter cereals 2 × 187.5 g a.s./ha, 2 × 20% interception, 14 d interval			Spring cereals 2 × 187.5 g a.s./ha, 2 × 20% interception, 14 d interval		
	PTZ*	S-methyl	Desthio	PTZ*	S-methyl	Desthio
FOCUS PEARL	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]
Chateaudun	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hamburg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Jokioinen	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Kremsmuenster	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Okehampton	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Piacenza	<0.001	<0.001	<0.001	-	-	-
Porto	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sevilla	<0.001	<0.001	<0.001	-	-	-
Thiva	<0.001	<0.001	<0.001	-	-	-
FOCUS PELMO	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]	PEC <sub>GW</sub> [µg/L]
Chateaudun	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hamburg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Jokioinen	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Kremsmuenster	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Okehampton	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Piacenza	<0.001	<0.001	<0.001	-	-	-
Porto	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sevilla	<0.001	<0.001	<0.001	-	-	-
Thiva	<0.001	<0.001	<0.001	-	-	-

\* PTZ = prothioconazole



**Conclusion:** There are no concerns for groundwater from the use of prothioconazole in accordance with the use pattern for the representative formulation.

#### CP 9.2.4.2 Additional field tests

No additional field studies were performed or required due to low  $PEC_{gw}$  values calculated (see CP 9.2.4.1).

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**CP 9.2.5 Estimation of concentrations in surface water and sediment**

New calculations were performed, to reflect findings from new studies presented in the active substance dossier, section 7 “Fate and behaviour in the environment”. In addition these calculations consider the most recent guidance documents for exposure calculations. Calculations of predicted environmental concentrations are presented below.

**Predicted environmental concentrations in water (PEC<sub>sw</sub>) and in the sediment (PEC<sub>sed</sub>)**

**Endpoints for PEC<sub>sw</sub> and sediment (PEC<sub>sed</sub>)**

For deriving the respective end points please refer to MCA Section 7, data point 7.

**Table CP 9.2.5- 1: Key modelling input parameters for prothioconazole and its metabolites at Steps 1/2 level PEC calculations**

Parameter	Unit	Prothioconazole	JAU 6476- Desthio	JAU 6456 S- Methyl	1,2,4-Triazole	Thiazocine	Triazolylketone
Molar Mass	g/mol	344.26	312.2	358.3	89.1	307.8	185.7
Water Solubility	mg/L	2.5	50.6	4.6	700000	20	1000000
Koc	mL/g	1765	573.5	2526	83	165	1
Degradation							
Soil	days	14	39.6	62.6	1000	1000	1000
Total System	days	4.2	5.6	80.7	1000	1000	1000
Water	days	1.2	20	10.4	1000	122.1	1000
Sediment	days	80.1	57	53	1000	1000	1000
Max Occurrence							
Water / Sediment	%	100	4.5	12.7	41.8	15.2	9.1
Soil	%	100	36.2	14.2	0.0001	0.0001	0.0001

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Table CP 9.2.5- 2: Additional modelling input parameters for prothioconazole and its metabolites at Steps 3/4 level PEC calculations

Parameter	Unit	Prothioconazole	JAU 6476-desthio
SWASH code		PTZ	Des
<b>General</b>			
Molar mass	g/mol	344.3	312.2
Water solubility (temp.)	mg/L	22.5 (20 °C)	50.0 (20 °C)
Vapour pressure (temp.)	Pa	1E-10 (20 °C)	1E-10 (20 °C)
<b>Crop processes</b>			
Coefficient for uptake by plant (TSCF)	-	0	0
Wash-off factor	l/m	50	50
<b>Sorption</b>			
KOC	mL/g	1765.38	573.57
KOM	mL/g	1024	332
Freundlich exponent (1/n)	-	1	0.81
<b>Transformation</b>			
DT50 in soil	days	0.9	24.7
temperature	°C	20	20
moisture content (relative to pF)	log(cm)	-	2
formation fraction in soil	-	-	0.6
DT50 in water	days	14.2	55.6
temperature	°C	20	20
formation fraction in water	-	-	0.638
DT50 in sediment	days	1000	1000
temperature	°C	20	20
formation fraction in sediment	-	-	0.638
DT50 on canopy	days	10	4
<b>Exponent for the effect of moisture</b>			
PRZM and TOXSWA (Walker exp.)	-	0.7	0.7
MACRO (calibrated value)	-	0.49	0.49
<b>Effect of temperature</b>			
TOXSWA (molar activation energy)	kJ/mol	65.4	65.4
MACRO (effect of temperature)	1/K	0.0948	0.0948
PRZM (Q10)	-	2.58	2.58

**Report:** KCP 9.2.5/01 [redacted]; 2015; M-536090-01-1  
**Title:** Prothioconazole (PTZ) and metabolites: PEC<sub>sw,sed</sub> FOCUS EUR - Use in winter and spring cereals in Europe  
**Report No.:** EnSa-15-0824  
**Document No.:** M-536090-01-1  
**Guideline(s):** not applicable  
**Guideline deviation(s):** not applicable  
**GLP/GEP:** no

**Report:** KCP 9.2.5/02 [redacted]; 2015; M-536126-01-1  
**Title:** Prothioconazole (PTZ) and metabolites: PEC<sub>sw,sed</sub> FOCUS EUR - Use in winter and spring cereals in Europe  
**Report No.:** EnSa-15-0834  
**Document No.:** M-536126-01-1  
**Guideline(s):** not applicable  
**Guideline deviation(s):** not applicable  
**GLP/GEP:** no



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**Materials and Methods:** Predicted environmental concentrations in surface water and sediment (PEC<sub>sw</sub> and PEC<sub>sed</sub>) of prothioconazole and its metabolites have been calculated for the use in winter and spring cereals in Europe. All relevant entry routes of a compound into surface water were considered in these calculations.

At FOCUS Step 2 the application period was set from October to February for winter cereals and from March to May for spring cereals. Additionally, the use in Northern and Southern Europe was considered. Details of the application pattern used in the Step 2 calculations are summarised in Table CP 9.2.5- 3.

**Table CP 9.2.5- 3: Application pattern used for PEC<sub>sw, sed</sub> calculations at FOCUS Steps 1&2**

Crop	Rate [g a.s./ha]	Interval [days]	BBCH stage	FOCUS crop (crop group)	Season	Crop cover
Winter & spring cereals, GAP & simulation	2 × 187.5	14	25-69	cereals, winter & spring (arable crops)	Spring (Mar. - May)	average crop cover
Winter & spring cereals, GAP & simulation	2 × 150	14	25-61	cereals, winter & spring (arable crops)	Spring (Mar. - May)	average crop cover

In FOCUS Step 3, the application date for each scenario was determined by the Pesticide Application Timer (PAT), which is part of the FOCUS SW Scenarios. The user may only define an application time window. The actual application date is then set by the PAT in such a way that there are at least 10 mm of rainfall in the first 10 days after application, and at the same time less than 2 mm of rain per day in a five day period around the date of application. If no such date can be found within the application time window, the above rules are step-wise relaxed. Details of the parameters used in the Step 3 calculations are summarised in Table CP 9.2.5- 4 and Table CP 9.2.5- 5.

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Table CP 9.2.5- 4: Application dates of prothioconazole for the FOCUS Step3 calculations (2 × 187.5, BBCH 25-69)

Parameter	Winter cereals		Spring cereals	
PAT start date rel./absolute	absolute		absolute	
Appl. method (appl. type)	ground spray (CAM 2 – appln foliar linear, 4 cm)		ground spray <sup>o</sup> (CAM 2 – appln foliar linear, 4 cm)	
PAT window range	107		60	
Application Details	PAT Start/End Date (Julian Day)	Appl. Date	PAT Start/End Date (Julian Day)	Appl. Date
D1 Ditch/Stream	28-Feb/15-Jun (59/166)	07 Mar 29 Mar	22-May/22-Jul (142/203)	27 Jun 02 Jul
D2 Ditch/Stream	01-Apr/17-Jul (91/198)	01 Apr 07 May		
D3 Ditch	08-May/23-Aug (128/235)	15 May 29 May	22-Apr/22-Jun (112/173)	21 Apr 05 May
D4 Pond/Stream	21-Feb/08-Jun (52/159)	24 Feb 19 Mar	13-May/13-Jul (133/194)	30 May 04 Jul
D5 Pond/Stream	12-Feb/30-May (43/150)	12 Feb 07 Mar	03-Apr/03-Jun (93/154)	08 Apr 22 Apr
D6 Ditch	28-Jan/15-May (28/135)	27 Feb 14 Mar		
R1 Pond/Stream	12-Mar/27-Jun (71/178)	17 Mar 25 Apr		
R3 Stream	21-Feb/08-Jun (52/159)	21 Feb 20 Mar		
R4 Stream	0-Feb/30-May (43/150)	02 Mar 04 Apr	03-Apr/03-Jun (93/154)	04 May 27 May

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Table CP 9.2.5- 5: Application dates of prothioconazole for the FOCUS Step3 calculations (2 × 150, BBCH 25-61)

Parameter	Winter cereals		Spring cereals	
PAT start date rel./absolute	absolute		absolute	
Appl. method (appl. type)	ground spray (CAM 2 – appln foliar linear, 4 cm)		ground spray <sup>o</sup> (CAM 2 – appln foliar linear, 4 cm)	
PAT window range	44		44	
Application Details	PAT Start/End Date (Julian Day)	Appl. Date	PAT Start/End Date (Julian Day)	Appl. Date
D1 Ditch/Stream	28-Feb/13-Apr (59/103)	07 Mar 29 Mar	22-May/05-Jul (142/186)	07 Jun 02 Jul
D2 Ditch/Stream	01-Apr/15-May (91/135)	01 Apr 07 May		
D3 Ditch	08-May/21-Jun (128/172)	15 May 29 May	22-Apr/05-Jun (112/156)	21 Apr 05 May
D4 Pond/Stream	21-Feb/06-Apr (52/96)	24 Feb 19 Mar	19-May/26-Jun (133/177)	30 May 16 Jun
D5 Pond/Stream	12-Feb/28-Mar (43/87)	12 Feb 07 Mar	03-Apr/17-May (93/137)	08 Apr 22 Apr
D6 Ditch	28-Jan/12-Mar (28/72)	27 Feb 13 Mar		
R1 Pond/Stream	12-Mar/25-Apr (71/115)	17 Mar 07 Apr		
R3 Stream	21-Feb/06-Apr (52/96)	21 Feb 20 Mar		
R4 Stream	02-Feb/28-Mar (43/87)	02 Mar 16 Mar	03-Apr/17-May (93/137)	29 Apr 13 May

Compound input parameters for the Steps 1&2 simulation runs are summarised in Table CP 9.2.5- 1 and for the Steps 3&4 simulation runs in Table CP 9.2.5- 2.

**Findings: Steps 1&2** The maximum PEC<sub>sw</sub>, PEC<sub>sed</sub> and 21d-TWA<sub>sw</sub> values for prothioconazole and its metabolites at Steps 1&2 are summarised in Table CP 9.2.5- 6 and Table CP 9.2.5- 7.



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Table CP 9.2.5- 6: Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values and 21d-TWA<sub>sw</sub> values for prothioconazole and its metabolites at Steps 1&2

Use pattern	Scenario	Prothioconazole			JAU 6476-desthio			JAU 6476-S-methyl		
		PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]
Winter & spring cereals 2 × 187.5 g a.s./ha	Step 1	40.73	24.02	657.9	73.39	63.94	41.1	8.468	7.453	202.3
	Step 2									
	N-EU Multi	1.551	0.223	11.44	6.011	4.563	33.48	0.730	0.531	7.80
	S-EU Multi	1.551	0.316	18.71	11.28	8.626	63.31	1.372	1.012	34.03
	N-EU Single	1.724	0.232	11.61	6.747	2.746	20.14	0.790	0.308	10.29
S-EU Single	1.724	0.324	18.87	6.747	5.056	37.84	0.790	0.581	19.52	
Winter & spring cereals 2 × 150 g a.s./ha	Step 1	32.58	19.22	526.3	57.72	57.15	39.2	6.774	5.948	162.6
	Step 2									
	N-EU Multi	1.241	0.197	10.61	5.862	4.463	32.73	0.712	0.521	17.48
	S-EU Multi	1.241	0.290	17.83	11.13	8.526	62.73	1.355	1.061	33.72
	N-EU Single	1.380	0.204	10.74	6.646	2.679	19.65	0.778	0.301	10.08
S-EU Single	1.380	0.297	18.00	6.646	5.089	37.39	0.778	0.574	19.31	

Table CP 9.2.5- 7: Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values and 21d-TWA<sub>sw</sub> values for prothioconazole and its metabolites at Steps 1&2 (contd.)

Use pattern	Scenario	1,2,4-triazole			Thiazocine			Triazolylketone		
		PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	21d-TWA [µg/L]	PEC <sub>sed</sub> [µg/kg]
Winter & spring cereals 2 × 187.5 g a.s./ha	Step 1	9.732	0.634	8.048	14.39	14.21	23.59	6.297	6.251	0.063
	Step 2									
	N-EU Multi	0.340	0.381	0.276	0.501	0.463	0.792	0.216	0.214	0.002
	S-EU Multi	0.405	0.434	0.363	0.655	0.611	1.045	0.284	0.282	0.003
	N-EU Single	0.343	0.233	0.194	0.509	0.331	0.566	0.220	0.151	0.002
S-EU Single	0.343	0.336	0.281	0.509	0.479	0.819	0.220	0.218	0.002	
Winter & spring cereals 2 × 150 g a.s./ha	Step 1	7.786	7.703	6.438	11.52	11.37	18.87	5.038	5.001	0.050
	Step 2									
	N-EU Multi	0.293	0.285	0.238	0.431	0.400	0.684	0.186	0.185	0.002
	S-EU Multi	0.398	0.389	0.325	0.585	0.549	0.938	0.254	0.252	0.003
	N-EU Single	0.316	0.207	0.173	0.469	0.294	0.503	0.203	0.134	0.001
S-EU Single	0.316	0.310	0.259	0.469	0.443	0.757	0.203	0.201	0.002	

Step 3: The maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values of prothioconazole and its metabolite JAU 6476-desthio for relevant FOCUS Step 3 scenarios are given in the following tables.

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Table CP 9.2.5- 8: **Winter cereals ( 2 × 187.5 g a.s./ha, BBCH 25-69): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for prothioconazole at Step 3**

Use pattern	Prothioconazole					
	Winter cereals, 2 × 187.5 g a.s./ha					
	Single application			Multiple application		
FOCUS scenario	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	S	1.1790	0.4095	S	1.0400	0.8120
D1 (Stream)	S	0.7862	0.0143	S	0.9999	0.0543
D2 (Ditch)	S	1.1960	1.5270	S	1.0550	2.1550
D2 (Stream)	S	0.9891	0.0876	S	0.9179	1.5900
D3 (Ditch)	S	1.1880	0.6531	S	1.0300	0.7586
D4 (Pond)	S	0.0410	0.1392	S	0.0332	0.2202
D4 (Stream)	S	0.9195	0.0360	S	0.7951	0.0111
D5 (Pond)	S	0.0410	0.1494	S	0.05000	0.1960
D5 (Stream)	S	0.8953	0.0188	S	0.8105	0.0238
D6 (Ditch)	S	1.1730	0.3176	S	1.0430	0.9570
R1 (Pond)	S	0.0410	0.1417	S	0.0477	0.2022
R1 (Stream)	S	0.7844	0.1025	S	0.6784	0.1245
R3 (Stream)	S	1.1060	0.2615	S	0.9566	0.2533
R4 (Stream)	S	0.7830	0.1839	S	0.6738	1.3670

\* Entry route: letters S, D, and R correspond to the dominant entry path – spray drift, drainage, and runoff.

Table CP 9.2.5- 9: **Spring cereals ( 2 × 187.5 g a.s./ha, BBCH 25-69): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for prothioconazole at Step 3**

Use pattern	Prothioconazole					
	Spring cereals, 2 × 187.5 g a.s./ha					
	Single application			Multiple application		
FOCUS scenario	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	S	4.2010	2.7700	S	1.5240	4.1110
D1 (Stream)	S	1.0500	0.5089	S	0.9085	0.5386
D3 (Ditch)	S	1.1830	0.6168	S	1.0380	0.7097
D4 (Pond)	S	0.0410	0.1058	S	0.0428	0.1527
D4 (Stream)	S	0.9708	0.0646	S	0.8846	0.1612
D5 (Pond)	S	0.0410	0.1232	S	0.0554	0.1935
D5 (Stream)	S	0.9425	0.0261	S	0.8925	0.0566
R4 (Stream)	S	0.7837	0.2724	S	0.6790	0.5364

\* Entry route: letters S, D, and R correspond to the dominant entry path – spray drift, drainage, and runoff.



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Table CP 9.2.5- 10: Winter cereals ( 2 × 187.5 g a.s./ha, BBCH 25-69): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for JAU 6476-desthio at Step 3

Use pattern	JAU 6476-desthio			
	Winter cereals, 2 × 187.5 g a.s./ha			
	Single application		Multiple application	
FOCUS scenario	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	0.0057	0.0776	0.0310	0.4312
D1 (Stream)	0.0235	0.0435	0.0282	0.2513
D2 (Ditch)	0.0362	0.1094	0.1388	0.4227
D2 (Stream)	0.0594	0.0453	0.0887	0.3171
D3 (Ditch)	0.0122	0.0124	0.0116	0.0190
D4 (Pond)	0.0049	0.0944	0.0086	0.1521
D4 (Stream)	0.0091	0.0049	0.0122	0.0120
D5 (Pond)	0.0054	0.1011	0.0100	0.1731
D5 (Stream)	0.0154	0.0004	0.0140	0.0307
D6 (Ditch)	0.0030	0.0025	0.0144	0.0246
R1 (Pond)	0.0284	0.3013	0.0692	0.6206
R1 (Stream)	0.4046	0.2380	0.6404	0.5868
R3 (Stream)	0.3580	0.1289	0.3580	0.2648
R4 (Stream)	0.7553	0.6315	0.9976	1.4830

Table CP 9.2.5- 11: Spring cereals ( 2 × 187.5 g a.s./ha, BBCH 25-69): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for JAU 6476-desthio at Step 3

Use pattern	JAU 6476-desthio			
	Spring cereals, 2 × 187.5 g a.s./ha			
	Single application		Multiple application	
FOCUS scenario	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	0.1284	1.0210	0.2392	1.7870
D1 (Stream)	0.0325	0.0814	0.0328	0.4281
D3 (Ditch)	0.0059	0.0656	0.0107	0.0139
D4 (Pond)	0.0084	0.0173	0.0137	0.1997
D4 (Stream)	0.0098	0.0052	0.0210	0.0203
D5 (Pond)	0.0077	0.1192	0.0132	0.1912
D5 (Stream)	0.0162	0.0005	0.0154	0.0013
R4 (Stream)	0.6119	0.9103	0.5745	0.8786



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Table CP 9.2.5- 12: Winter cereals ( 2 × 150 g a.s./ha, BBCH 25-61): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for prothioconazole at Step 3

Use pattern	Prothioconazole					
	Winter cereals, 2 × 150 g a.s./ha					
	Single application			Multiple application		
FOCUS scenario	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	S	0.9433	0.3275	S	0.8325	0.6497
D1 (Stream)	S	0.6291	0.0114	S	0.6400	0.0275
D2 (Ditch)	S	0.9564	1.2210	S	0.8442	1.7240
D2 (Stream)	S	0.7914	0.0701	S	0.7345	0.2720
D3 (Ditch)	S	0.9500	0.5224	S	0.8306	0.6070
D4 (Pond)	S	0.0328	0.1115	S	0.0426	0.1763
D4 (Stream)	S	0.7357	0.0788	S	0.6362	0.0749
D5 (Pond)	S	0.0328	0.0956	S	0.0400	0.1569
D5 (Stream)	S	0.7164	0.0150	S	0.6485	0.0190
D6 (Ditch)	S	0.9381	0.2540	S	0.8341	0.7717
R1 (Pond)	S	0.0328	0.1133	S	0.0446	0.1726
R1 (Stream)	S	0.6276	0.0900	S	0.5428	0.1129
R3 (Stream)	S	0.8851	0.2092	S	0.7654	0.2027
R4 (Stream)	S	0.6281	0.1471	R	1.0700	0.9007

\* Entry route: letters S, D, and R correspond to the dominant entry path – spray drift, drainage, and runoff.

Table CP 9.2.5- 13: Spring cereals ( 2 × 150 g a.s./ha, BBCH 25-61): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for prothioconazole at Step 3

Use pattern	Prothioconazole					
	Spring cereals, 2 × 150 g a.s./ha					
	Single application			Multiple application		
FOCUS scenario	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	Entry route*	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	S	0.9606	2.0960	S	1.2200	3.2890
D1 (Stream)	S	0.8403	0.4072	S	0.7269	0.4309
D3 (Ditch)	S	0.9492	0.4934	S	0.8309	0.5678
D4 (Pond)	S	0.0328	0.0847	S	0.0406	0.1346
D4 (Stream)	S	0.7768	0.0517	S	0.6935	0.0828
D5 (Pond)	S	0.0328	0.0987	S	0.0444	0.1549
D5 (Stream)	S	0.7549	0.0208	S	0.7141	0.0453
R4 (Stream)	S	0.6270	0.2179	R	1.0620	1.1870

\* Entry route: letters S, D, and R correspond to the dominant entry path – spray drift, drainage, and runoff.

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Table CP 9.2.5- 14: **Winter cereals (2 × 150 g a.s./ha. BBCH 25-61): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for JAU 6476-desthio at Step 3**

Use pattern	JAU 6476-desthio			
	Winter cereals, 2 × 150 g a.s./ha			
	Single application		Multiple application	
FOCUS scenario	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	0.0034	0.0443	0.0170	0.2322
D1 (Stream)	0.0184	0.0244	0.0228	0.1332
D2 (Ditch)	0.0255	0.0731	0.1021	0.2895
D2 (Stream)	0.0475	0.0296	0.0642	0.2345
D3 (Ditch)	0.0098	0.0100	0.0093	0.0153
D4 (Pond)	0.0039	0.0767	0.0068	0.1228
D4 (Stream)	0.0073	0.0035	0.0091	0.0087
D5 (Pond)	0.0043	0.0820	0.0080	0.1341
D5 (Stream)	0.0123	0.0065	0.0112	0.0305
D6 (Ditch)	0.0024	0.0020	0.0117	0.0206
R1 (Pond)	0.0222	0.2414	0.0509	0.4717
R1 (Stream)	0.3096	0.1938	0.4642	0.4218
R3 (Stream)	0.2749	0.0998	0.2749	0.2113
R4 (Stream)	0.5823	0.519	1.0650	1.2400

Table CP 9.2.5- 15: **Spring cereals (2 × 150 g a.s./ha. BBCH 25-61): Maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for JAU 6476-desthio at Step 3**

Use pattern	JAU 6476-desthio			
	Spring cereals, 2 × 150 g a.s./ha			
	Single application		Multiple application	
FOCUS scenario	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]	PEC <sub>sw</sub> [µg/L]	PEC <sub>sed</sub> [µg/kg]
D1 (Ditch)	0.1019	0.8277	0.1906	1.4740
D1 (Stream)	0.0260	0.0530	0.0246	0.2748
D3 (Ditch)	0.0044	0.0045	0.0085	0.0112
D4 (Pond)	0.0067	0.0954	0.0111	0.1530
D4 (Stream)	0.0078	0.0038	0.0100	0.0091
D5 (Pond)	0.0062	0.0969	0.0105	0.1555
D5 (Stream)	0.0130	0.0004	0.0123	0.0011
R4 (Stream)	0.4738	0.7312	1.2860	1.7310

**Step 4:** The maximum PEC<sub>sw</sub> values of prothioconazole and its metabolite JAU 6476-destio for relevant FOCUS Step 4 scenarios are given in the following tables including mitigation measures [i.e. spray drift buffer (SD) and runoff buffer (RO)]; as well as drift reduction (50, 75 or 90%).

First, the higher application rate (2 × 187.5 g a.s./ha) will be presented for winter and spring cereals and thereafter, the lower application rate (2 × 150 g a.s./ha).



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Table CP 9.2.5- 16: Winter cereals (2 × 187.5, BBCH 25-69): Maximum PEC<sub>sw</sub> values for prothioconazole at Step 4 after single and multiple applications

		Prothioconazole							
		Winter cereals, 2 × 187.5 g a.s./ha							
		Single application				Multiple application			
Buffer Width & Type*	Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.1697	0.0849	0.0424	0.0170	0.1401	0.0700	0.0350	0.0140
	D1 (Stream)	0.1523	0.0761	0.0381	0.0152	0.1469	0.0735	0.0368	0.0147
	D2 (Ditch)	0.1721	0.0860	0.0430	0.0172	0.1420	0.0710	0.0355	0.0142
	D2 (Stream)	0.1915	0.0958	0.0479	0.0192	0.1686	0.0843	0.0422	0.0169
	D3 (Ditch)	0.1709	0.0855	0.0427	0.0171	0.1399	0.0700	0.0350	0.0140
	D4 (Pond)	0.0255	0.0128	0.0064	0.0026	0.0325	0.0163	0.0081	0.0032
	D4 (Stream)	0.1781	0.0890	0.0445	0.0178	0.1460	0.0730	0.0365	0.0146
	D5 (Pond)	0.0255	0.0128	0.0064	0.0026	0.0305	0.0153	0.0076	0.0030
	D5 (Stream)	0.1734	0.0867	0.0434	0.0173	0.1489	0.0744	0.0372	0.0149
	D6 (Ditch)	0.1688	0.0844	0.0422	0.0169	0.1404	0.0702	0.0351	0.0140
	R1 (Pond)	0.0255	0.0128	0.0064	0.0030	0.0287	0.0147	0.0077	0.0035
	R1 (Stream)	0.1519	0.0760	0.0382	0.0152	0.1246	0.0623	0.0312	0.0125
	R3 (Stream)	0.2142	0.1207	0.1207	0.1207	0.1757	0.1207	0.1207	0.1207
	R4 (Stream)	0.1520	0.0987	0.0987	0.0987	0.2499	0.2499	0.2499	0.2499
20m SD & RO	D1 (Ditch)	0.0881	0.0441	0.0220	0.0088	0.0712	0.0356	0.0178	0.0071
	D1 (Stream)	0.0792	0.0396	0.0198	0.0079	0.0648	0.0324	0.0187	0.0075
	D2 (Ditch)	0.0894	0.0447	0.0223	0.0089	0.0722	0.0361	0.0181	0.0072
	D2 (Stream)	0.0996	0.0498	0.0249	0.0100	0.0858	0.0429	0.0215	0.0086
	D3 (Ditch)	0.0888	0.0444	0.0222	0.0089	0.0717	0.0356	0.0178	0.0071
	D4 (Pond)	0.0171	0.0085	0.0043	0.0017	0.0214	0.0107	0.0054	0.0021
	D4 (Stream)	0.0922	0.0461	0.0232	0.0093	0.0743	0.0372	0.0186	0.0074
	D5 (Pond)	0.0170	0.0085	0.0043	0.0017	0.0201	0.0100	0.0050	0.0020
	D5 (Stream)	0.0902	0.0451	0.0225	0.0090	0.0758	0.0379	0.0189	0.0076
	D6 (Ditch)	0.0876	0.0438	0.0219	0.0088	0.0713	0.0357	0.0178	0.0071
	R1 (Pond)	0.0171	0.0085	0.0043	0.0019	0.0188	0.0096	0.0050	0.0022
	R1 (Stream)	0.0790	0.0395	0.0198	0.0079	0.0634	0.0317	0.0159	0.0064
	R3 (Stream)	0.1114	0.0625	0.0625	0.0625	0.0894	0.0625	0.0625	0.0625
	R4 (Stream)	0.0791	0.0517	0.0517	0.0517	0.1311	0.1311	0.1311	0.1311

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 17: Spring cereals (2 × 187.5, BBCH 25-69): Maximum PEC<sub>sw</sub> values for prothioconazole at Step 4 after single and multiple applications

Buffer Width & Type*		Prothioconazole							
		Spring cereals, 2 × 187.5 g a.s./ha							
		Single application				Multiple application			
Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction				
	0%	50%	75%	90%	0%	50%	75%	90%	
10m SD & RO	D1 (Ditch)	0.1728	0.0864	0.0432	0.0173	0.2052	0.1026	0.0513	0.0205
	D1 (Stream)	0.2034	0.1017	0.0509	0.0203	0.1669	0.0834	0.0417	0.0167
	D3 (Ditch)	0.1708	0.0854	0.0427	0.0171	0.1598	0.0799	0.0350	0.0140
	D4 (Pond)	0.0255	0.0128	0.0064	0.0026	0.0261	0.0131	0.0065	0.0026
	D4 (Stream)	0.1880	0.0940	0.0470	0.0188	0.1625	0.0812	0.0406	0.0163
	D5 (Pond)	0.0255	0.0128	0.0064	0.0026	0.0338	0.0169	0.0085	0.0034
	D5 (Stream)	0.1826	0.0913	0.0457	0.0185	0.1639	0.0820	0.0410	0.0164
	R4 (Stream)	0.1518	0.1032	0.1032	0.1032	0.2098	0.2098	0.2098	0.2098
20m SD & RO	D1 (Ditch)	0.0898	0.0449	0.0224	0.0090	0.1043	0.0521	0.0261	0.0104
	D1 (Stream)	0.1058	0.0529	0.0264	0.0106	0.0844	0.0425	0.0212	0.0085
	D3 (Ditch)	0.0887	0.0443	0.0222	0.0089	0.0711	0.0355	0.0178	0.0071
	D4 (Pond)	0.0171	0.0085	0.0043	0.0017	0.0172	0.0086	0.0043	0.0017
	D4 (Stream)	0.0978	0.0489	0.0244	0.0098	0.0827	0.0413	0.0207	0.0083
	D5 (Pond)	0.0170	0.0085	0.0043	0.0017	0.0223	0.0111	0.0056	0.0022
	D5 (Stream)	0.0949	0.0475	0.0237	0.0095	0.0834	0.0417	0.0209	0.0083
	R4 (Stream)	0.0789	0.0539	0.0539	0.0539	0.1095	0.1095	0.1095	0.1095

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 18: Winter cereals (2 × 187.5, BBCH 25-69): Maximum PEC<sub>sw</sub> values for JAU 6476-desthio at Step 4 after single and multiple applications

Buffer Width & Type*		JAU 6476-desthio							
		Winter cereals, 2 × 187.5 g a.s./ha							
		Single application				Multiple application			
		PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.0057	0.0057	0.0057	0.0057	0.0312	0.0312	0.0312	0.0312
	D1 (Stream)	0.0061	0.0040	0.0037	0.0037	0.0198	0.0198	0.0198	0.0198
	D2 (Ditch)	0.0362	0.0362	0.0362	0.0362	0.1388	0.1388	0.1388	0.1388
	D2 (Stream)	0.0233	0.0233	0.0233	0.0233	0.0887	0.0887	0.0887	0.0887
	D3 (Ditch)	0.0018	0.0009	0.0004	0.0002	0.0016	0.0008	0.0004	0.0002
	D4 (Pond)	0.0030	0.0015	0.0013	0.0012	0.0052	0.0026	0.0022	0.0029
	D4 (Stream)	0.0051	0.0051	0.0051	0.0051	0.0122	0.0122	0.0122	0.0122
	D5 (Pond)	0.0033	0.0016	0.0008	0.0003	0.0060	0.0030	0.0015	0.0006
	D5 (Stream)	0.0030	0.0015	0.0007	0.0003	0.0026	0.0014	0.0014	0.0014
	D6 (Ditch)	0.0004	0.0002	0.0002	0.0002	0.0010	0.0005	0.0005	0.0007
	R1 (Pond)	0.0126	0.0108	0.0099	0.0090	0.0298	0.0257	0.0252	0.0243
	R1 (Stream)	0.1830	0.1830	0.1830	0.1830	0.2909	0.2909	0.2909	0.2909
	R3 (Stream)	0.1582	0.1582	0.1582	0.1582	0.1582	0.1582	0.1582	0.1582
	R4 (Stream)	0.3435	0.3435	0.3435	0.3435	0.4549	0.4549	0.4549	0.4549
20m SD & RO	D1 (Ditch)	0.0057	0.0057	0.0057	0.0057	0.0312	0.0312	0.0312	0.0312
	D1 (Stream)	0.0041	0.0037	0.0037	0.0037	0.0198	0.0198	0.0198	0.0198
	D2 (Ditch)	0.0362	0.0362	0.0362	0.0362	0.1388	0.1388	0.1388	0.1388
	D2 (Stream)	0.0233	0.0233	0.0233	0.0233	0.0887	0.0887	0.0887	0.0887
	D3 (Ditch)	0.0009	0.0005	0.0002	<0.001	0.0008	0.0004	0.0002	<0.001
	D4 (Pond)	0.0020	0.0014	0.0012	0.0011	0.0038	0.0033	0.0030	0.0029
	D4 (Stream)	0.0051	0.0051	0.0051	0.0051	0.0122	0.0122	0.0122	0.0122
	D5 (Pond)	0.0022	0.0011	0.0005	0.0002	0.0039	0.0019	0.0010	0.0004
	D5 (Stream)	0.0016	0.0008	0.0004	0.0003	0.0014	0.0014	0.0014	0.0014
	D6 (Ditch)	0.0002	0.0002	0.0002	0.0002	0.0010	0.0007	0.0007	0.0007
	R1 (Pond)	0.0069	0.0051	0.0051	0.0047	0.0158	0.0138	0.0128	0.0122
	R3 (Stream)	0.0956	0.0956	0.0956	0.0956	0.1523	0.1523	0.1523	0.1523
	R3 (Stream)	0.0819	0.0819	0.0819	0.0819	0.0819	0.0819	0.0819	0.0819
	R4 (Stream)	0.1800	0.1800	0.1800	0.1800	0.2386	0.2386	0.2386	0.2386

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 19: Spring cereals (2 × 187.5, BBCH 25-69): Maximum PEC<sub>sw</sub> values for JAU 6476-desthio at Step 4 after single and multiple applications

		JAU 6476-desthio							
		Spring cereals, 2 × 187.5 g a.s./ha							
		Single application				Multiple application			
Buffer Width & Type*	Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.0186	0.0118	0.0118	0.0118	0.0525	0.0525	0.0525	0.0525
	D1 (Stream)	0.0075	0.0075	0.0075	0.0075	0.0328	0.0328	0.0328	0.0328
	D3 (Ditch)	0.0008	0.0004	0.0002	<0.001	0.0074	0.0007	0.0004	<0.0001
	D4 (Pond)	0.0052	0.0025	0.0015	0.0013	0.0083	0.0061	0.0054	0.0050
	D4 (Stream)	0.0061	0.0061	0.0061	0.0061	0.0210	0.0210	0.0210	0.0210
	D5 (Pond)	0.0048	0.0023	0.0012	0.0005	0.0089	0.0070	0.0070	0.0008
	D5 (Stream)	0.0031	0.0016	0.0008	0.0008	0.0028	0.0015	0.0015	0.0015
	R4 (Stream)	0.2783	0.2783	0.2783	0.2783	0.2613	0.2613	0.2613	0.2613
20m SD & RO	D1 (Ditch)	0.0118	0.0118	0.0118	0.0118	0.0525	0.0525	0.0525	0.0525
	D1 (Stream)	0.0075	0.0075	0.0075	0.0075	0.0328	0.0328	0.0328	0.0328
	D3 (Ditch)	0.0004	0.0002	0.0001	<0.001	0.0007	0.0004	0.0002	<0.001
	D4 (Pond)	0.0034	0.0017	0.0014	0.0013	0.0066	0.0056	0.0052	0.0049
	D4 (Stream)	0.0061	0.0061	0.0061	0.0061	0.0210	0.0210	0.0210	0.0210
	D5 (Pond)	0.0032	0.0016	0.0008	0.0003	0.0052	0.0026	0.0013	0.0005
	D5 (Stream)	0.0016	0.0008	0.0005	0.0005	0.0015	0.0015	0.0015	0.0015
	R4 (Stream)	0.1458	0.1458	0.1458	0.1458	0.1369	0.1369	0.1369	0.1369

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 20: Winter cereals (2 × 150, BBCH 25-61): Maximum PEC<sub>sw</sub> values for prothioconazole at Step 4 after single and multiple applications

		Prothioconazole							
		Winter cereals, 2 × 150 g a.s./ha							
		Single application				Multiple application			
Buffer Width & Type*	Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.1358	0.0679	0.0340	0.0136	0.1121	0.0566	0.0289	0.0112
	D1 (Stream)	0.1220	0.0610	0.0305	0.0122	0.1173	0.0587	0.0293	0.0117
	D2 (Ditch)	0.1377	0.0688	0.0344	0.0138	0.1136	0.0568	0.0284	0.0114
	D2 (Stream)	0.1534	0.0767	0.0384	0.0153	0.1346	0.0673	0.0337	0.0135
	D3 (Ditch)	0.1368	0.0684	0.0342	0.0137	0.1119	0.0560	0.0280	0.0112
	D4 (Pond)	0.0203	0.0102	0.0051	0.0020	0.0269	0.0139	0.0065	0.0026
	D4 (Stream)	0.1426	0.0713	0.0357	0.0143	0.1166	0.0583	0.0292	0.0117
	D5 (Pond)	0.0203	0.0102	0.0051	0.0020	0.0244	0.0122	0.0061	0.0024
	D5 (Stream)	0.1389	0.0694	0.0347	0.0139	0.1189	0.0594	0.0297	0.0119
	D6 (Ditch)	0.1350	0.0675	0.0338	0.0135	0.1123	0.0561	0.0281	0.0112
	R1 (Pond)	0.0203	0.0102	0.0051	0.0020	0.0267	0.0138	0.0074	0.0035
	R1 (Stream)	0.1217	0.0608	0.0594	0.0594	0.0995	0.0594	0.0594	0.0594
	R3 (Stream)	0.1716	0.0965	0.0965	0.0965	0.1403	0.0965	0.0965	0.0965
	R4 (Stream)	0.1218	0.0790	0.0790	0.0790	0.4894	0.4894	0.4894	0.4894
20m SD & RO	D1 (Ditch)	0.0705	0.0353	0.0176	0.0071	0.0570	0.0285	0.0143	0.0057
	D1 (Stream)	0.0633	0.0317	0.0158	0.0063	0.0598	0.0299	0.0150	0.0060
	D2 (Ditch)	0.0715	0.0357	0.0179	0.0071	0.0578	0.0289	0.0145	0.0058
	D2 (Stream)	0.0796	0.0398	0.0199	0.0080	0.0686	0.0343	0.0172	0.0069
	D3 (Ditch)	0.0710	0.0355	0.0178	0.0071	0.0570	0.0285	0.0143	0.0057
	D4 (Pond)	0.0136	0.0068	0.0034	0.0014	0.0171	0.0085	0.0043	0.0017
	D4 (Stream)	0.0740	0.0370	0.0188	0.0074	0.0595	0.0297	0.0149	0.0059
	D5 (Pond)	0.0136	0.0068	0.0034	0.0014	0.0161	0.0080	0.0040	0.0016
	D5 (Stream)	0.0721	0.0360	0.0180	0.0072	0.0606	0.0303	0.0152	0.0061
	D6 (Ditch)	0.0701	0.0351	0.0175	0.0070	0.0571	0.0286	0.0143	0.0057
	R1 (Pond)	0.0136	0.0068	0.0034	0.0015	0.0175	0.0090	0.0047	0.0022
	R1 (Stream)	0.0632	0.0316	0.0011	0.0311	0.0507	0.0311	0.0311	0.0311
	R3 (Stream)	0.0891	0.0500	0.0500	0.0500	0.0715	0.0500	0.0500	0.0500
	R4 (Stream)	0.0632	0.0414	0.0414	0.0414	0.2564	0.2564	0.2564	0.2564

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 21: Spring cereals (2 × 150, BBCH 25-61): Maximum PEC<sub>sw</sub> values for prothioconazole at Step 4 after single and multiple applications

Buffer Width & Type*		Prothioconazole							
		Spring cereals, 2 × 150 g a.s./ha							
		Single application				Multiple application			
Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction				
	0%	50%	75%	90%	0%	50%	75%	90%	
10m SD & RO	D1 (Ditch)	0.1383	0.0691	0.0346	0.0138	0.1642	0.0821	0.0410	0.0164
	D1 (Stream)	0.1629	0.0815	0.0407	0.0163	0.1332	0.0666	0.0333	0.0133
	D3 (Ditch)	0.1366	0.0683	0.0342	0.0137	0.1418	0.0559	0.0280	0.0112
	D4 (Pond)	0.0203	0.0102	0.0051	0.0020	0.0247	0.0124	0.0062	0.0025
	D4 (Stream)	0.1506	0.0753	0.0377	0.0151	0.1271	0.0636	0.0318	0.0127
	D5 (Pond)	0.0203	0.0102	0.0051	0.0020	0.0221	0.0111	0.0068	0.0027
	D5 (Stream)	0.1462	0.0731	0.0366	0.0149	0.1399	0.0654	0.0327	0.0131
	R4 (Stream)	0.1216	0.0825	0.0825	0.0825	0.1491	0.4791	0.4791	0.4791
20m SD & RO	D1 (Ditch)	0.0718	0.0359	0.0180	0.0072	0.0835	0.0418	0.0209	0.0084
	D1 (Stream)	0.0846	0.0423	0.0212	0.0085	0.0679	0.0340	0.0170	0.0068
	D3 (Ditch)	0.0709	0.0355	0.0177	0.0071	0.0569	0.0285	0.0142	0.0057
	D4 (Pond)	0.0136	0.0068	0.0034	0.0014	0.0163	0.0081	0.0041	0.0016
	D4 (Stream)	0.0782	0.0391	0.0196	0.0078	0.0648	0.0324	0.0162	0.0065
	D5 (Pond)	0.0136	0.0068	0.0034	0.0014	0.0178	0.0089	0.0045	0.0018
	D5 (Stream)	0.0759	0.0380	0.0190	0.0076	0.0660	0.0334	0.0167	0.0067
	R4 (Stream)	0.0631	0.0431	0.0431	0.0431	0.2501	0.2501	0.2501	0.2501

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 22: Winter cereals (2 × 150, BBCH 25-61): Maximum PEC<sub>sw</sub> values for JAU 6476-desthio at Step 4 after single and multiple applications

		JAU 6476-desthio							
		Winter cereals, 2 × 150 g a.s./ha							
		Single application				Multiple application			
Buffer Width & Type*	Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.0028	0.0028	0.0028	0.0028	0.0173	0.0173	0.0173	0.0173
	D1 (Stream)	0.0044	0.0027	0.0019	0.0018	0.0110	0.0110	0.0110	0.0110
	D2 (Ditch)	0.0255	0.0255	0.0255	0.0255	0.1021	0.1021	0.1021	0.1021
	D2 (Stream)	0.0160	0.0160	0.0160	0.0160	0.0642	0.0642	0.0642	0.0642
	D3 (Ditch)	0.0014	0.0007	0.0004	0.0001	0.0012	0.0006	0.0003	0.0001
	D4 (Pond)	0.0024	0.0012	0.0010	0.0009	0.0041	0.0026	0.0023	0.0021
	D4 (Stream)	0.0038	0.0038	0.0038	0.0038	0.0091	0.0091	0.0091	0.0091
	D5 (Pond)	0.0026	0.0013	0.0009	0.0002	0.0048	0.0024	0.0012	0.0005
	D5 (Stream)	0.0024	0.0012	0.0006	0.0002	0.0020	0.0010	0.0005	0.0008
	D6 (Ditch)	0.0003	0.0002	0.0002	0.0002	0.0016	0.0008	0.0005	0.0005
	R1 (Pond)	0.0099	0.0084	0.0077	0.0073	0.0220	0.0196	0.0184	0.0177
	R1 (Stream)	0.1400	0.1400	0.1400	0.1400	0.2108	0.2108	0.2108	0.2108
	R3 (Stream)	0.1215	0.1215	0.1215	0.1215	0.1215	0.1215	0.1215	0.1215
	R4 (Stream)	0.2649	0.2649	0.2649	0.2649	0.4699	0.4699	0.4699	0.4699
20m SD & RO	D1 (Ditch)	0.0028	0.0028	0.0028	0.0028	0.0173	0.0173	0.0173	0.0173
	D1 (Stream)	0.0028	0.0019	0.0018	0.0018	0.0110	0.0110	0.0110	0.0110
	D2 (Ditch)	0.0255	0.0255	0.0255	0.0255	0.1021	0.1021	0.1021	0.1021
	D2 (Stream)	0.0160	0.0160	0.0160	0.0160	0.0642	0.0642	0.0642	0.0642
	D3 (Ditch)	0.0007	0.0004	0.0002	<0.001	0.0006	0.0003	0.0002	<0.001
	D4 (Pond)	0.0016	0.0010	0.0009	0.0008	0.0028	0.0024	0.0022	0.0021
	D4 (Stream)	0.0038	0.0038	0.0038	0.0038	0.0091	0.0091	0.0091	0.0091
	D5 (Pond)	0.0013	0.0009	0.0004	0.0002	0.0031	0.0015	0.0008	0.0003
	D5 (Stream)	0.0012	0.0006	0.0003	0.0002	0.0010	0.0008	0.0008	0.0008
	D6 (Ditch)	0.0002	0.0002	0.0002	0.0002	0.0008	0.0005	0.0005	0.0005
	R1 (Pond)	0.0054	0.0044	0.0040	0.0037	0.0117	0.0101	0.0093	0.0089
	R1 (Stream)	0.0732	0.0732	0.0732	0.0732	0.1104	0.1104	0.1104	0.1104
	R3 (Stream)	0.0629	0.0629	0.0629	0.0629	0.0629	0.0629	0.0629	0.0629
	R4 (Stream)	0.1387	0.1387	0.1387	0.1387	0.2444	0.2444	0.2444	0.2444

\* SD and RO denote spray drift- and runoff buffer

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Table CP 9.2.5- 23: **Spring cereals (2 × 150, BBCH 25-61): Maximum PEC<sub>sw</sub> values for JAU 6476-desthio at Step 4 after single and multiple applications**

		JAU 6476-desthio							
		Spring cereals, 2 × 150 g a.s./ha							
		Single application				Multiple application			
Buffer Width & Type*	Scenario	PEC <sub>sw</sub> [µg/L] Drift Reduction				PEC <sub>sw</sub> [µg/L] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (Ditch)	0.0148	0.0078	0.0058	0.0058	0.0344	0.0344	0.0344	0.0344
	D1 (Stream)	0.0051	0.0037	0.0037	0.0037	0.0216	0.0216	0.0216	0.0216
	D3 (Ditch)	0.0007	0.0003	0.0002	<0.001	0.0011	0.0006	0.0003	<0.0001
	D4 (Pond)	0.0041	0.0020	0.0011	0.0009	0.0067	0.0033	0.0025	0.0022
	D4 (Stream)	0.0045	0.0045	0.0045	0.0045	0.0100	0.0100	0.0100	0.0100
	D5 (Pond)	0.0038	0.0019	0.0009	0.0004	0.0064	0.0031	0.0015	0.0006
	D5 (Stream)	0.0025	0.0013	0.0006	0.0004	0.0023	0.0011	0.0011	0.0011
	R4 (Stream)	0.2155	0.2155	0.2155	0.2155	0.5849	0.5849	0.5849	0.5849
20m SD & RO	D1 (Ditch)	0.0081	0.0058	0.0058	0.0058	0.0344	0.0344	0.0344	0.0344
	D1 (Stream)	0.0037	0.0037	0.0037	0.0037	0.0216	0.0216	0.0216	0.0216
	D3 (Ditch)	0.0003	0.0002	<0.001	<0.001	0.0006	0.0003	0.0001	<0.001
	D4 (Pond)	0.0027	0.0014	0.0008	0.0009	0.0044	0.0027	0.0024	0.0022
	D4 (Stream)	0.0045	0.0045	0.0045	0.0045	0.0100	0.0100	0.0100	0.0100
	D5 (Pond)	0.0025	0.0012	0.0006	0.0002	0.0041	0.0020	0.0010	0.0004
	D5 (Stream)	0.0013	0.0007	0.0004	0.0004	0.0011	0.0011	0.0011	0.0011
	R4 (Stream)	0.1129	0.1129	0.1129	0.1129	0.3064	0.3064	0.3064	0.3064

\* SD and RO denote spray drift- and runoff buffer

### CP 9.3 Fate and behaviour in air

For information on the fate and behaviour in air please refer to MCA Section 7, data point 7.3.

#### CP 9.3.1 Route and rate of degradation in air and transport via air

For information on route and rate of degradation in air and transport via air please refer to MCA Section 7, data points 7.3.1 and 7.3.2.

Due to the low volatility and short half-life in air no PEC calculations are required.

#### CP 9.4 Estimation of concentrations for other routes of exposure

There are no other routes of exposure if the product is used according to good agricultural practice. Therefore no further estimations are considered necessary.