Document Title

Summary of the Fate and Behaviour in the Environment Isoflucypram EC 50 (50 g/L) (Code: BCS-CN88460 EC 50)

Data Requirement(s)

Regulation (EC) No 1107/2009 & Regulation (EU) No 284/2013

Document MCP

Section 9: Fate and Behaviour in the Environment

According to the Guidance Document SANCO/10181/2013 for applicants on preparing dossiers for the approval of a chemical active substance

Date

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Version history

Date [yyyy-mm-dd]	Data points containing amendments or additions[1] and brief description	Document identifier and version number

[1] 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

The purpose of this MCP-Dossier Section 9 is to support the approval process of the new active substance Isoflucypram in the territory of Europe under Regulation (EC) No 1107/2009.

Isoflucypram EC 50 as the representative formulation is an emulsifiable concentrate (EC) containing 50 g/L Isoflucypram for use in cereal crops.

Isoflucypram is a novel broad spectrum fungicide of the chemical class of N-cyclopropyl-N-benzyl-pyrazole-carboxamides with an outstanding efficacy against the major economically important fungal diseases of cereal crops (wheat, triticale, rye, barley and oats) and excellent crop safety.
Since Isoflucypram is a SDH inhibitor and thus assigned to the FRAC resistance Group 7 the application scope of Isoflucypram-containing products on cereals with only one foliar spray at a maximum of 75 g a.s./ha supports an effective anti-resistance management strategy.
Tailor-made and broad spectrum Isoflucypram combinations show highly beneficial properties in terms of plant physiology beside the long-lasting and certain curative efficacy to control fungal diseases and to maximize the full yield potential of the cereal crops.

This document summarises all data on the environmental fate of Isoflucypram which are relevant for the approval of Isoflucypram alongside the proposed intended uses, including the representative uses, under Regulation (EC) No 1107/2009 in accordance with the requirements laid down in the Commission Regulation (EU) No 284/2013.

Details of the literature search undertaken for Isoflucypram, its metabolites and products have been summarized in the Document MCA Section 9.

Throughout the development of the formulation Isoflucypram EC 50 the following synonyms may have been used and referred to in individual study reports: Bayer Code: BCS-CN88460 EC 50 and the Bayer-internal abbreviation short Code: ISY EC 50. All products described by either of these codes refer to the same formulation with identical composition.

The same applies for the metabolite BCS-CN88460-carboxylic acid for which the Bayer Code is BCS-CY26497 and the Bayer-internal short Code M12.

CP 9.1 Fate and behaviour in soil

For information on the fate and behaviour in soil please refer to Document MCA, Section 7, Point 7.1.

CP 9.1.1 Rate of degradation in soil

For information on the rate of degradation in soil please refer to Document MCA, Section 7, Point 7.1.2.

CP 9.1.1.1 Laboratory studies

For information on laboratory studies please refer to Document MCA, Section7, Section 7.1.2.1.

CP 9.1.1.2 Field studies

For information on field studies please refer to Document MCA, Section 7, Point 7.1.2.2.

CP 9.1.1.2.1 Soil dissipation studies

For information on field dissipation studies please refer to Document MCA, Section 7, Point 7.1.2.2.1.

CP 9.1.1.2.2 Soil accumulation studies

For information on field accumulation studies please refer to Document MCA, Section 7, Point 7.1.2.2.2.

CP 9.1.2 Mobility in the soil

For information on mobility studies esp. adsorption and desorption please refer to Document MCA, Section 7, Point 7.1.3.

CP 9.1.2.1 Laboratory studies

For information on adsorption studies please refer to Document MCA, Section 7, Point 7.1.3.1.

CP 9.1.2.2 Lysimeter studies

For information on lysimeter studies please refer to Document MCA, Section 7, Point 7.1.4.2.

CP 9.1.2.3 Field leaching studies

For information on field leaching studies please refer to Document MCA, Section 7, Point 7.1.4.3.

CP 9.1.3 Estimation of concentrations in soil

Calculations of predicted environmental concentrations in soil (PEC_{soil}) are presented below.

Predicted environmental concentrations in soil (PEC_S)

Endpoints for PEC_{soil}

Table 9.1.3- 1: Modelling input parameters for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)

Endpoint	Value used for modelling
Isoflucypram	
Molecular weight [g/mol]	399.85
DT_{50} soil [days] (maximum lab., not-normalised)	630
BCS-CN88460-carboxylic acid (M12)	
Molecular weight [g/mol]	429.8
DT_{50} soil [days] (maximum lab., not-normalised)	113
Max. occurrence in soil [%]	9.6

PEC_{soil} modelling approach

The predicted environmental concentrations in soil (PEC_{soil}) for the active substance isoflucypram and its metabolite BCS-CN 88460-carboxylic acid (M12) were calculated under the assumption of an even distribution of the compound in the upper 0-5 cm soil layer. A standard soil density of 1.5 g/cm^3 was assumed. Crop interception will reduce the amount of a compound reaching the soil and therefore this has been taken into account depending on the growth stage at application. The interception rates follow the recommendations of the FOCUS groundwater guidance paper (FOCUS 2014a[1]) for cereals.

Predicted environmental concentrations in soil (PECs)

For isoflucypram, the metabolite BCS-CN88460-carboxylic acid (M12) was considered.

Report: KCP 9.1.3/01; [redacted], G.; [redacted], W.; 2017; M-610061-01-1
Title: Isoflucypram (ISY) and metabolite; PECsoil EUR - Use in cereals in Europe
Report No.: EnSa-17-0695
Document No.: M-610061-01-1
Guideline(s): none
Guideline deviation(s): none
GLP/GEP: **no**

Methods and Materials: The predicted environmental concentrations in soil (PEC_{soil}) of isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12) were calculated in a first tier approach using a Microsoft® Excel spreadsheet. The use of isoflucypram in cereals was assessed according to Good Agricultural Practice (GAP) under European cropping conditions. Detailed application data used for simulation of PEC_{soil} were compiled in Table 9.1.3- 2.

[1] FOCUS, 2014a: Generic Guidance for Tier 1 FOCUS Groundwater Assessments, version 2.2

Substance Specific Parameters: PEC_{soil} calculations were based on the DT_{50} of 630 days (non-normalised worst case of laboratory studies) for the parent compound isoflucypram.

Table 9.1.3- 2: Application pattern used for PEC_{soil} calculations of isoflucypram

Individual Crop	FOCUS crop used for Interception	Application				Amount reaching the soil per application [g a.s./ha]
		Rate per Season [g a.s./ha]	Interval [days]	Plant Interception [%]	BBCH Stage	
Cereals, early	Cereals	1 × 75	-	80	30 - 39	1 × 15
Cereals, late	Cereals	1 × 75	-	90	40 - 69	1 × 7.5

Findings: The PEC_{soil} values for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12) are summarized in Table 9.1.3- 3.

Table 9.1.3- 3: PEC_{soil} of isoflucypram and its metabolite for the uses (cereals, early, 1 × 75 g a.s./ha) assessed

PEC_{soil} (mg/kg)		Cereals			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		Actual	TWA	Actual	TWA
Initial		0.020	-	0.002	-
Short term	24 h	0.020	0.020	0.002	0.002
	2 d	0.020	0.020	0.002	0.002
	4 d	0.020	0.020	0.002	0.002
Long term	7 d	0.020	0.020	0.002	0.002
	14 d	0.020	0.020	0.002	0.002
	21 d	0.020	0.020	0.002	0.002
	28 d	0.019	0.020	0.002	0.002
	42 d	0.019	0.020	0.002	0.002
	50 d	0.019	0.019	0.002	0.002
	100 d	0.018	0.019	0.001	0.002
Plateau concentration (20 cm) after year 6		0.010	-	< 0.001	-
PECaccumulation (PEC_{act} + $PEC_{soil\ plateau}$)		0.030	-	0.002	-

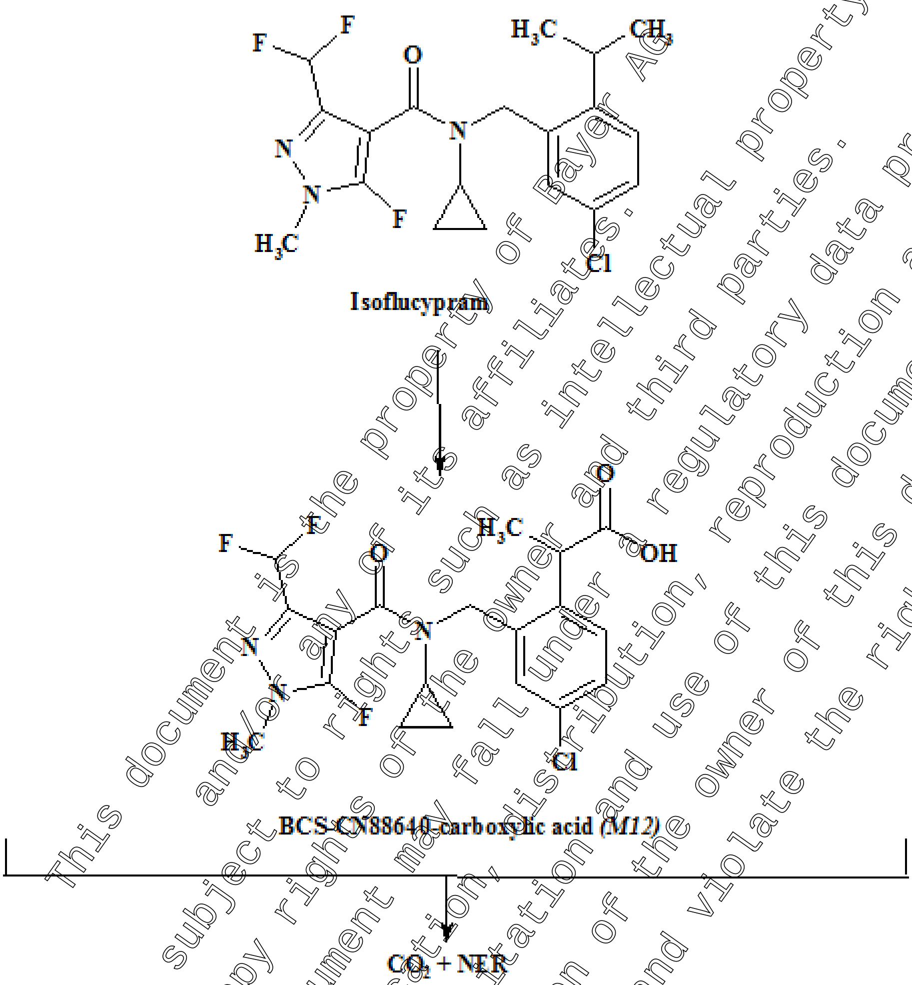
Table 9.1.3- 4: PEC$_{soil}$ of isoflucypram and its metabolite for the uses (cereals, late, 1 × 75 g a.s./ha) assessed

PEC$_{soil}$ (mg/kg)		Cereals			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		Actual	TWA	Actual	TWA
Initial		0.010	-	0.001	-
Short term	24 h	0.010	0.010	0.001	0.001
	2 d	0.010	0.010	0.001	0.001
	4 d	0.010	0.010	0.001	0.001
Long term	7 d	0.010	0.010	0.001	0.001
	14 d	0.010	0.010	0.001	0.001
	21 d	0.010	0.010	0.001	0.001
	28 d	0.010	0.010	0.001	0.001
	42 d	0.010	0.010	0.001	0.001
	50 d	0.009	0.010	0.001	0.001
	100 d	0.009	0.009	0.001	0.001
Plateau concentration (20 cm) after year 6		0.005	-	<0.001	-
PECaccumulation (PEC$_{act}$ + PEC$_{soil\ plateau}$)		0.015	-	0.001	-

CP 9.2 Fate and behaviour in water and sediment

The proposed degradation pathway of isoflucypram in water and sediment is shown in Figure 9.2- 1. For information on the fate and behavior in water and sediment please refer to MCA Section 7, data point 7.2.

Figure 9.2- 1: Proposed degradation pathway of isoflucypram in water and sediment



CP 9.2.1 Aerobic mineralisation in surface water

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

CP 9.2.2 Water/sediment study

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

CP 9.2.3 Irradiated water/sediment study

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

CP 9.2.4 Estimation of concentrations in groundwater

Calculations of predicted environmental concentrations in groundwater (PEC_{gw}) are presented below.

Endpoints for PEC_{gw}

Table 9.2.4- 1: Modelling parameters for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)

Compound	Isoflucypram	BCS-CN88460-carboxylic acid (M12)
Molecular mass (g/mol)	399.85	429.8
Water solubility (mg/L)	1.8 (20°C)	10100 (20°C)
Saturated vapour pressure (Pa)	1.2×10^{-7} (20°C)	2.6×10^{-13} (20°C)
DT_{50} in soil (d)	Tier 1: 314 (geometric mean lab, normalisation to pF2, 20°C with Q_{10} of 2.58, n =7) Tier 2: 323 (geometric mean lab and field, normalisation to pF2, 20°C with Q_{10} of 2.58, n=13)	Tier 1: 34.4 (geometric mean lab, normalisation to pF2, 20°C with Q_{10} of 2.58, n=4) Tier 2: 84.1 (geometric mean lab and field, normalisation to pF2, 20°C with Q_{10} of 2.58, n =10)
Transformation rate k	Tier 1: 0.0022075 Tier 2: 0.0021460	Tier 1: 0.0201496 Tier 2: 0.0082419
K_{foc} (mL/g)/K_{fom}	1580 / 916.3 (geometric mean, n = 7)	37.1 / 21.5 (geometric mean, pH 7.5, n = 2)
1/n	0.9142 (arithmetic mean, n = 7)	0.9424 (arithmetic mean, pH 7.5, n = 2)
Plant uptake factor	Default: 0 (Tier 1a, Tier 2) Briggs estimate: 0.10 (Tier 1b)	Default: 0
Formation fraction	-	Tier 1: 0.345 from parent Tier 2: 0.043 from parent

PEC_{gw} modelling approach
The predicted environmental concentrations in groundwater (PEC_{gw}) for the active substance isoflucypram was calculated using the simulation models PEARL, PELMO and MACRO (scenario Châteaudun) following the recommendations of the FOCUS working group on groundwater scenarios. The leaching calculations were run over 26 years, as proposed for pesticides which may be applied every year. The first six years are a 'warm up' period; only the last 20 years were considered for the assessment of the leaching potential. The 80th percentile of the average annual groundwater concentrations in the percolate at 1 m depth under a treated plantation were evaluated and were taken as the relevant PEC_{gw} values. In respect to the assessment of a potential groundwater contamination this shallow depth reflects a worst case. The effective long-term groundwater concentrations will be even lower due to dilution in the groundwater layer.
According to FOCUS, the calculations were conducted based on mean soil half-lives, referenced to standard temperature and moisture conditions. Crop interception will reduce the amount of a compound reaching the soil and therefore this has been taken into account depending on the growth stage at application. The interception rates follow the recommendations of FOUCS 2014a[2]. A summary of important substance input parameters is given in Table 9.2.4- 1.

CP 9.2.4.1 Calculation of concentrations in groundwater

Predicted environmental concentrations in groundwater (PEC_{gw}) of isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12).

For isoflucypram, the metabolite BCS-CN88460-carboxlic acid (M12) was considered.

Report:	KCP 9.2.4.1/01; [redacted], G.; [redacted], W.; 2017; M-610062-01-1
Title:	Isoflucypram (ISY) and metabolite; PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in winter cereals and spring cereals in Europe
Report No.:	EnSa-17-0696
Document No.:	M-610062-01-1
Guideline(s):	none
Guideline deviation(s):	none
GLP/GEP:	**no**

Methods and Materials:
Predicted environmental concentrations of the active substance isoflucypram and its major soil degradation products in groundwater recharge (PEC_{gw}) were calculated for the use in Europe, using the simulation models FOCUS PEARL 4.4.4, FOCUS PELMO 5.5.3 and FOCUS MACRO 5.5.4. PEC_{gw} were evaluated as the 80th percentile of the mean annual leachate concentration at 1 m soil depth. Model parameters and scenarios consisting of weather, soil, and crop data were used as proposed by FOCUS (2014a,b[1,3]). The use of isoflucypram in cereals was assessed according to Good Agricultural Practice (GAP) under European cropping conditions.

[2] FOCUS 2014a: Generic Guidance for Tier 1 FOCUS Groundwater Assessments, version 2.2
[3] FOCUS, 2014b: Assessing Potential for Movement of Active Substances and their Metabolites to Ground Water in the EU: The Final Report of the Ground Water Work Group of FOCUS EC Document Reference: Sanco/13144/2010 version 3, 613 pp.

Detailed application data used for simulation of PEC_{gw} were compiled in Table 9.2.4.1- 1.

Table 9.2.4.1- 1: Application pattern used for PEC_{gw} calculations of isoflucypram

Crop	BBCH stage	Rate [g a.s./ha]	Interval [days]	FOCUS crop (crop group)	Plant Interception [%]	Amount reaching the soil per application [g a.s./ha]
Winter cereals, early	30-69	1 × 75	-	Winter cereals	80	1 × 15
Winter cereals, late		1 × 75		Winter cereals	90	1 × 7.5
Spring cereals, early		1 × 75		Spring cereals	80	1 × 15
Spring cereals, late		1 × 75		Spring cereals	90	1 × 7.5

Input parameters – tiered approach

For PEC_{gw} assessments a tiered approach was considered concerning the

- DT_{50} values of isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12),
- the formation fraction of BCS-CN88460-carboxylic acid,
- and the PUF values.

In Tier 1 laboratory data are considered for DT_{50} values and formation fractions (Tier 1a), which can be modified by the PUF values (Tier 1b).
Field data are included in Tier 2 without a further modification by PUF values.
A detailed description of the parameters used at the different steps is presented in Table 9.2.4.1- 2. More details on the selection of input parameter are given in the text below the table.

Table 9.2.4.1- 2: Tiered approach for isoflucypram and its metabolite used for modelling

Compound	Tier 1a			Tier 1b			Tier 2		
	DT_{50} (d)	ff (-)	PUF	DT_{50} (d)	ff (-)	PUF	DT_{50} (d)	ff (-)	PUF
Isoflucypram	314[a)]	n.a.	0.0d	314[a)]	n.a.	0.1[e)]	323[b)]	n.a.	0.0[d)]
BCS-CN88460-carboxylic acid	34.4[a)]	0.345[a)]	0.0d	34.4[a)]	0.345[a)]	0.0[e)]	84.1[b)]	0.043[c)]	0.0[d)]

a) From laboratory data
b) From laboratory and field data
c) From field data
d) PUF representing worst case default
e) PUF based on Briggs equation

Rate of degradation of isoflucypram and BCS-CN88460-carboxylic acid (M12):

The geometric mean DT_{50} values of 314 days and 34.4 days derived from laboratory degradation studies were used at Tier 1a and Tier 1b for isoflucypram and BCS-CN88460-carboxylic acid (M12). Based on the EFSA endpoint selector (EFSA 2014[4]) degradation rates of isoflucypram and BCS-CN88460-carboxylic acid (M12) derived from laboratory and field degradation studies are not

[4] EFSA, 2014: EFSA Guidance Document for evaluating laboratory and field dissipation studies to obtain $DegT_{50}$ values of active substances of plant protection products and transformation products of these active substances in soil. 23.7.2014. EFSA Journal 2014; 12(5):3662.

systematically different and can therefore be pooled to derive a $DegT_{50matrix}$ value for input into simulation models.
Consequently, the geometric mean $DegT_{50matrix}$ values of 323 and 84.1 days for isoflucypram and BCS-CN88460-carboxylic acid (M12), respectively, derived from lab and field data (n=13) were used for the leaching assessment at Tier 2.

Formation fraction of BCS-CN88460-carboxylic acid (M12)
A population test was conducted for the kinetic formation fraction (f. f. k_f / k_{dp}) of BCS-CN88460-carboxylic acid (M12). The arithmetic mean formation fraction in laboratory studies is 0.345 (n = 6) whereas the arithmetic mean formation fraction in field studies is 0.043 (n = 6). Based on the EFSA endpoint selector kinetic formation fraction of BCS-CN88460-carboxylic acid (M12) derived from laboratory and field degradation studies are systematically different.
Consequently, the arithmetic mean value of 0.043 derived from field data was used for the leaching assessment at Tier 2.

Plant uptake (PUF/TSCF) of isoflucypram
According to EFSA (2013[5]), the use of a worst case default Transpiration Stream Concentration Factor (TSCF) of 0 in the leaching assessment is recommended as a first step.
As a second step EFSA (2013) proposes the use of a TSCF derived from the equation given by Briggs *et al* (1982[6]), based on the relationship between plant uptake and octanol water partition coefficient. This is also in line with the approach recommended by FOCUS (2014b).
The Briggs estimation leads to a TSCF of 0.10 for isoflucypram which was used as refined input for the leaching assessment (Tier 1b).

Input parameters for isoflucypram and its metabolites were used as summarised in Table 9.2.4.1- 3.

[5] EFSA, 2013: Scientific Opinion on the report of the FOCUS groundwater working groups (FOCUS 2009): assessment of higher tiers, EFSA Journal 2013; 1(6):3291.
[6] Briggs G.G., Bromilow, R.H., and Evans A.A., 1982: Relationships between lipophilicity and root uptake and translocation of non-ionized chemicals by barley. Pestic. Sci. 13, 495-504.

Table 9.2.4.1- 3: Compound input parameters for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)

Parameter	Unit	Isoflucypram	BCS-CN88460-carboxylic acid (M12)
Common			
Molar mass	(g/mol)	399.85	429.8
Solubility	(mg/L)	1.8	10100
Vapour pressure	(Pa)	1.20E-07	2.60E-13
Freundlich exponent	(-)	0.9142	0.9424
Plant uptake factor	(-)	0^{C} / 0.1^{D}	0.0
Walker exponent	(-)	0.7	0.7
PEARL parameters			
Substance code	(-)	ISY	M12
DT_{50}	(days)	314^{A} / 323^{B}	34.4^{A} / 84.1^{B}
Molar activ. energy	(kJ/mol)	65.4	65.4
K_{OM}	(mL/g)	916.3	21.5
PELMO parameters			
Substance code	(-)	AS	A1
Rate constant	(1/day)	0.0022075^{A} / 0.0021460^{B}	0.0201496^{A} / 0.0082419^{B}
Q_{10}	(-)	2.58	2.58
Koc	(mL/g)	1580	37.1
MACRO parameters			
Substance code	(-)	ISY	M12
Exponent moisture	(-)	0.49	0.49
Exponent temperature	(1/K)	0.0948	0.0948

[A] Value used in tier 1a and 1b (from laboratory data)
[B] Refined values used in tier 2 (from laboratory and field data)
[C] Value used in tier 1a, tier 2 (PUF representing worst case default)
[D] Value used in tier 1b (PUF based on Briggs equation)

Table 9.2.4.1- 4: Degradation pathway related parameters for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)

Tier 1: Degradation fraction from → to (-) (FOCUS PEARL)	ISY -> M12: 0.345
Tier 2: Degradation fraction from → to (-) (FOCUS PEARL)	ISY -> M12: 0.043
Tier 1: Degradation rate from → to (1/day) (FOCUS PELMO) [A]	Active Substance -> A1: 7.62E-04 Active Substance -> BR/CO2: 0.0014459 A1 -> BR/CO2: 0.0201496
Tier 2: Degradation rate from → to (1/day) (FOCUS PELMO) [A]	Active Substance -> A1: 9.23E-05 Active Substance -> BR/CO2: 0.0020537 A1 -> BR/CO2: 0.0082419
Tier 1: Conversion factor from → to (-) (FOCUS MACRO) [B]	ISY -> M12: 0.3708416
Tier 2: Conversion factor from → to (-) (FOCUS MACRO) [B]	ISY -> M12: 0.0462208

[A] Calculated as ln(2) / DT_{50} × formation fraction
[B] Calculated as molar mass / molar mass predecessor × formation fraction

Application dates for the simulation runs were defined following the crop event dates of the respective crop and scenario (see Table 9.2.4.1- 5) as given by FOCUS (2014b). Crop interception was taken into account according to the BBCH growth stage, as recommended by FOCUS (2014a).

Table 9.2.4.1- 5: First application dates and related information for isoflucypram as used for the simulation runs; offset is relevant only for relative application dates, two sets of data are provided for crops with two seasons

Individual crop	**Winter cereals, early**	**Winter cereals, late**	**Spring cereals, early**	**Spring cereals, late**
Repeat interval for app. events	Every Year	Every Year	Every Year	Every Year
Application technique	Spray	Spray	Spray	Spray
Absolute / Relative to	Absolute	Absolute	Absolute	Absolute
Scenario	1st app. date (Julian day) Offset	1st app. date (Julian day) Offset	1st app. date (Julian day) Offset	1st app. date (Julian day) Offset
[redacted]	21 Apr (111) -	14 Jun (165) -	10 Apr (100) -	22 Jun (173) -
[redacted]	19 Apr (109) -	22 Jun (173) -	28 Apr (118) -	28 Jun (179) -
[redacted]	25 May (145) -	10 Jul (191) -	05 Jun (156) -	17 Jul (198) -
[redacted]	19 Apr (109) -	22 Jun (173) -	28 Apr (118) -	28 Jun (179) -
[redacted]	15 Apr (105) -	07 Jun (158) -	22 Apr (112) -	18 Jun (169) -
[redacted]	10 Apr (100) -	25 May (145) -	- - -	- - -
[redacted]	30 Mar (89) -	24 May (144) -	16 Apr (106) -	22 Jun (173) -
[redacted]	06 Jan (6) -	28 Mar (87) -	- - -	- - -
[redacted]	02 Mar (61) -	27 Apr (117) -	- - -	- - -

Findings:

PEC_{gw} were evaluated as the 80th percentile of the mean annual leachate at 1 m soil depth PEC_{gw} values for isoflucypram and its metabolite BCS-CN88460-carboxylic acid are given in the following tables.

Tier 1a - DT$_{50}$ soil and formation fraction based on laboratory data. Default used for PUF

Table 9.2.4.1- 6: Tier 1 a - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, early, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, early	[redacted]	<0.001	<0.001	0.028	0.024
		<0.001	<0.001	0.120	0.124
		<0.001	<0.001	0.065	0.077
		<0.001	<0.001	0.070	0.075
		<0.001	<0.001	0.098	0.110
		<0.001	<0.001	0.052	0.074
		<0.001	<0.001	0.057	0.090
		<0.001	<0.001	0.004	0.006
		<0.001	<0.001	0.015	0.013
		MACRO		MACRO	
Winter cereals, early	[redacted]	<0.001		0.026	

Table 9.2.4.1- 7: Tier 1 a - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, late, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, late	[redacted]	<0.001	<0.001	0.013	0.011
		<0.001	<0.001	0.056	0.058
		<0.001	<0.001	0.030	0.035
		<0.001	<0.001	0.033	0.035
		<0.001	<0.001	0.046	0.052
		<0.001	<0.001	0.024	0.036
		<0.001	<0.001	0.028	0.044
		<0.001	<0.001	0.002	0.003
		<0.001	<0.001	0.007	0.006
		MACRO		MACRO	
Winter cereals, late	[redacted]	<0.001		0.012	

Table 9.2.4.1- 8: Tier 1 a - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (<u>spring cereals, early</u>, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, early	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.025 0.137 0.065 0.072 0.102 0.066	0.019 0.116 0.064 0.069 0.104 0.082
		MACRO		MACRO	
Spring cereals, early	[redacted]	<0.001		0.025	

Table 9.2.4.1- 9: Tier 1 a - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (<u>spring cereals, late</u>, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, late	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.012 0.064 0.030 0.033 0.047 0.032	0.009 0.054 0.029 0.032 0.049 0.040
		MACRO		MACRO	
Spring cereals, late	[redacted]	<0.001		0.012	

Tier 1b - **DT_{50} soil and formation fraction based on laboratory data. PUF based on Briggs equation used for isoflucypram and default PUF used for BCS-CN88460-carboxylic acid (M12).**

Table 9.2.4.1- 10: Tier 1 b - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, early, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, early	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.028 0.120 0.065 0.070 0.098 0.052 0.057 0.004 0.015	0.023 0.123 0.077 0.074 0.109 0.073 0.089 0.006 0.013
		MACRO		MACRO	
Winter cereals, early	[redacted]	<0.001		0.026	

Table 9.2.4.1- 11: Tier 1 b - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, late, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, late	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.013 0.056 0.030 0.032 0.046 0.024 0.028 0.002 0.007	0.011 0.058 0.035 0.035 0.052 0.035 0.043 0.003 0.006
		MACRO		MACRO	
Winter cereals, late	[redacted]	<0.001		0.012	

Table 9.2.4.1- 12: Tier 1 b - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (spring cereals, early, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, early	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.025 0.136 0.065 0.072 0.101 0.066	0.018 0.114 0.063 0.068 0.102 0.080
		MACRO		MACRO	
Spring cereals, early	[redacted]	<0.001		0.025	

Table 9.2.4.1- 13: Tier 1 b - FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (spring cereals, late, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, late	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.012 0.064 0.030 0.033 0.047 0.032	0.008 0.053 0.029 0.032 0.048 0.039
		MACRO		MACRO	
Spring cereals, late	[redacted]	<0.001		0.012	

Tier 2 – DT_{50} soil based on laboratory and field data. Formation fraction based on field data. Default used for PUF.

Table 9.2.4.1- 14: Tier 2: FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, early, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, early	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.032 0.060 0.045 0.040 0.044 0.033 0.029 0.003 0.032	0.031 0.063 0.046 0.047 0.047 0.041 0.034 0.009 0.022
		MACRO		MACRO	
Winter cereals, early	[redacted]	<0.001		0.029	

Table 9.2.4.1- 15: Tier 2: FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (winter cereals, late, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Winter cereals, late	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.015 0.028 0.021 0.019 0.021 0.016 0.014 0.001 0.016	0.015 0.031 0.022 0.022 0.023 0.020 0.017 0.004 0.010
		MACRO		MACRO	
Winter cereals, late	[redacted]	<0.001		0.014	

Table 9.2.4.1- 16: Tier 2: FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (<u>spring cereals, early</u>, 1 × 75 g a.s./ha, 80% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, early	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.030 0.071 0.041 0.044 0.045 0.030	0.025 0.060 0.038 0.044 0.044 0.032
		MACRO		MACRO	
Spring cereals, early	[redacted]	<0.001		0.026	

Table 9.2.4.1- 17: Tier 2: FOCUS PEARL, PELMO and MACRO PEC_{gw} results of isoflucypram and its metabolite (<u>spring cereals, late</u>, 1 × 75 g a.s./ha, 90% interception)

Crop	Scenario	80th percentile PEC_{gw} at 1 m soil depth (µg/L)			
		Isoflucypram		BCS-CN88460-carboxylic acid (M12)	
		PEARL	PELMO	PEARL	PELMO
Spring cereals, late	[redacted]	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.014 0.034 0.019 0.021 0.022 0.015	0.012 0.028 0.018 0.021 0.021 0.016
		MACRO		MACRO	
Spring cereals, late	[redacted]	<0.001		0.013	

Conclusion:
Following a tiered approach for all intended uses of Isoflucypram EC 50 in winter and spring cereals at the highest application rate of 75 g a.s/ha there are no concerns for groundwater from the active substance isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12).

CP 9.2.4.2 Additional field tests

No additional field studies were performed based on the conclusions derived from calculated PEC_{gw} values (see Section CP 9.2.4.1).

CP 9.2.5 Estimation of concentrations in surface water and sediment

Calculations of predicted environmental concentrations in surface water (PEC_{sw}) and sediment (PEC_{sed}) are presented below.

Endpoints for PEC_{sw}

Table 9.2.5- 1: **Modelling input parameters for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)**

Compound	Isoflucypram	BCS-CN88460-carboxylic acid (M12)
Molecular mass (g/mol)	399.85	429.8
Water solubility (mg/L)	1.8 (20°C)	10100 (20°C)
Saturated vapour pressure (Pa)	1.2×10^{-7} (20°C)	2.6×10^{-13} (20°C)
K_{foc} (mL/g)/K_{fom}	1580 / 916.3 (geometric mean, n = 7)	37.1 / - (geometric mean, pH 7.5, n = 2)
1/n	0.9142 (arithmetic mean, n = 7)	Not required
Plant uptake factor	0	0
Wash off factor from crop (1/m)	required for Steps 3-4: 50	not required
DT_{50} in soil (d)	314 (geometric mean lab, normalisation to pF2, 20°C with Q_{10} of 2.58, n =7)	34.4 (geometric mean lab, normalisation to pF2, 20°C with Q_{10} of 2.58, n=4)
DT_{50} in water (d)	354 (Step 2) 354[a)]/1000[b)] (Step 3)	1000 (default value)
DT_{50} in sediment (d)	354 (Step 2) 1000[a)]/354[b)] (Step 3)	1000 (default value)
DT_{50} in total system (d)	354 (Step 2)	1000 (default value)
Maximum occurrence observed (% molar basis with respect to parent)	Soil: 100 Total system: 100	Soil: 9.6 Total system: 6.6

According to FOCUS (2015) for substances with a Koc between 100 and 2000 mL/g two options should be tested:
a) $DegT_{50,system}$ used for degradation in water, default DT_{50} of 1000 days used for degradation in sediment
b) $DegT_{50,system}$ used for degradation in sediment, default DT_{50} of 1000 days used for degradation in water

PEC_{sw} modelling approach

Calculation of PEC values for the active substance according to FOCUS

$FOCUS_{sw}$ is a four step tiered approach:

Step 1: In this, the most conservative step, all inputs are considered as a single loading to the water body and a worst-case PEC_{sw} and PEC_{sed} is calculated.
Step 2: Individual loadings into the water body from different entry routes are considered. Scenarios are also considered for Northern and Southern Europe separately but no specific crop scenarios are defined.
Step 3: An exposure assessment using realistic worst-case scenarios is made. The scenarios are representative of agricultural conditions in Europe and consider weather, soil, crop and different water-bodies. Simulations use the models PRZM, MACRO and TOXSWA.
Step 4: PEC values are refined by considering mitigation measures or specific scenario descriptions on a case-by-case basis.

Predicted environmental concentrations in surface water (PEC_{sw}) and sediment (PEC_{sed}) of isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12)

For isoflucypram, the metabolite BCS-CN88460-carboxylic acid (M12) was considered.

Report:	KCP 9.2.5/01; [redacted], G.; [redacted], W.; 2017; M-610045-01-1
Title:	Isoflucypram (ISY) and metabolite: PECsw,sed FOCUS EUR - Use in cereals in Europe
Report No.:	EnSa-17-0697
Document No.:	M-610045-01-1
Guideline(s):	none
Guideline deviation(s):	none
GLP/GEP:	**no**

Methods and Materials: Predicted environmental concentrations of the active substance isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12) in surface water (PEC_{sw}) and sediment (PEC_{sed}) were calculated for the use in Europe, employing the tiered FOCUS Surface Water (SW) approach (FOCUS 2001, 2015). All relevant entry routes of a compound into surface water (principally a combination of spray drift and runoff/erosion or drain flow) were considered in these calculations.
The use of isoflucypram in cereals was assessed according to Good Agricultural Practice (GAP) in Europe. Detailed application parameters are presented in Table 9.2.5-2.

Table 9.2.5-2: FOCUS Step 1-2 specific data for the GAPs assessed

Crop	BBCH stage	Rate [g a.s./ha]	Interval [days]	FOCUS crop (crop group)	Season	Crop cover
Cereals	30-69	1 × 75	-	Winter cereals	Spring (Mar. - May)	Average crop cover
		1 × 75		Winter cereals	Summer (Jun. – Sep.)	Full canopy
		1 × 75		Spring cereals	Spring (Mar. - May)	Average crop cover
		1 × 75		Spring cereals	Summer (Jun. – Sep.)	Full canopy

Substance input parameter are summarised in Table 9.2.5-3.

Table 9.2.5-3: Substance parameters used for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12) at Steps 1-2 level

Parameter	Unit	Isoflucypram	BCS-CN88460-carboxylic acid (M12)
Molar mass	(g/mol)	399.85	429.8
Water solubility	(mg/L)	1.8	10100
Koc	(mL/g)	1579.6	37.1
Degradation			
Soil	(days)	314	34.4
Total system	(days)	354	1000
Water	(days)	354	1000
Sediment	(days)	354	1000
Max occurrence			
Water / sediment	(%)	100	6.6
Soil	(%)	100	9.6

For the use in cereals, in addition to FOCUS Step 1-2 values, FOCUS Step 3 values were calculated for the active substance isoflucypram. In FOCUS Step 3, the application date for each scenario is 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. Information on application dates can be found in Table 9.2.5-4.

Table 9.2.5-4: Application dates of isoflucypram for the FOCUS Step 3 calculations

Parameter	**Winter cereals, early**		**Winter cereals, late**		**Spring cereals, early**		**Spring cereals, late**	
PAT start date rel./absolute	Absolute		Absolute		Absolute		Absolute	
Appl. method (appl. type)	ground spray (CAM 2)		ground spray (CAM 2)		ground spray (CAM 2)		ground spray (CAM 2)	
No of appl.	1		1		1		1	
PAT window range	30		30		30		30	
Appl. interval	-		-		-		-	
Drainage scenarios	**PAT start/end date (Julian day)**	**Appli-cation date**	**PAT start/end date (Julian day)**	**Appli-cation date**	**PAT start/end date (Julian day)**	**Appli-cation date**	**PAT start/end date (Julian day)**	**Appli-cation date**
D1 Ditch/Stream	20-Apr/20-May (110/140)	25-Apr	12-Jun/12-Jul (163/193)	17-Jun	27-May/26-Jun (147/177)	17-Jun	18-Jun/18-Jul (169/199)	24-Jun
D2 Ditch/Stream	23-May/22-Jun (143/173)	23-May	11-Jun/11-Jul (162/192)	13-Jun	-	-	-	-
D3 Ditch	02-Jul/01-Aug (183/213)	08-Jul	01-Jul/31-Jul (182/212)	08-Jul	28-Apr/28-May (118/148)	04-May	29-May/28-Jun (149/179)	28-May
D4 Pond/Stream	21-Apr/21-May (111/141)	21-Apr	09-Jun/09-Jul (160/190)	04-Jul	18-May/17-Jun (138/168)	30-May	09-Jun/09-Jul (160/190)	04-Jul
D5 Pond/Stream	15-Mar/14-Apr (74/104)	08-Apr	03-May/02-Jun (123/153)	11-May	09-Apr/09-May (99/129)	14-Apr	05-May/04-Jun (125/155)	11-May
D6 Ditch	02-Mar/01-Apr (61/91)	05-Mar	28-Mar/27-Apr (87/117)	09-Apr	-	-	-	-
R1 Pond/Stream	20-Apr/20-May (110/140)	26-Apr	26-May/25-Jun (146/176)	13-Jun	-	-	-	-
R3 Stream	10-Apr/10-May (100/130)	11-Apr	25-Apr/25-May (115/145)	25-Apr	-	-	-	-
R4 Stream	15-Mar/14-Apr (74/104)	21-Mar	03-May/02-Jun (123/153)	04-May	09-Apr/09-May (99/129)	04-May	05-May/04-Jun (125/155)	05-May

Findings:

FOCUS Step 1 and 2: The maximum PEC_{sw} and PEC_{sed} values for FOCUS Step 1 and 2 are given in the tables below for isoflucypram and its metabolite BCS-CN88460-carboxylic acid (M12).

Isoflucypram

Table 9.2.5-5: FOCUS Step 1-2 results for isoflucypram (winter and spring cereals, spring)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7d-$PEC_{sw,twa}$ (µg/L)	21d-$PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	-	8.7383	RunOff/Drain.	8.2476	8.1141	130.39
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	1.5622 2.8386	RunOff/Drain. RunOff/Drain.	1.4912 2.7590	1.4680 2.7186	23.597 43.720

Table 9.2.5-6: FOCUS Step 1-2 results for isoflucypram (winter and spring cereals, summer)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7d-$PEC_{sw,twa}$ (µg/L)	21d-$PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	-	8.7383	RunOff/Drain.	8.2476	8.1141	130.39
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.7644 1.0037	RunOff/Drain. RunOff/Drain.	0.6989 0.9366	0.6864 0.9209	11.020 14.793

BCS-CN88460-carboxylic acid (M12)

Table 9.2.5-7: FOCUS Step 1-2 results for BCS-CN88460-carboxylic acid (M12) (winter and spring cereals, spring)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7d-$PEC_{sw,twa}$ (µg/L)	21d-$PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	-	4.1971	RunOff/Drain.	4.1848	4.1645	1.5552
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.6781 1.3090	RunOff/Drain. RunOff/Drain.	0.6758 1.3051	0.6725 1.2988	0.2511 0.4850

Table 9.2.5-8: FOCUS Step 1-2 results for BCS-CN88460-carboxylic acid (M12) (winter and spring cereals, summer)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7d-$PEC_{sw,twa}$ (µg/L)	21d-$PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Step 1	-	4.1971	RunOff/Drain.	4.1848	4.1645	1.5552
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.2838 0.4021	RunOff/Drain. RunOff/Drain.	0.2824 0.4004	0.2810 0.3985	0.1050 0.1488

FOCUS Step 3: The maximum PEC values for FOCUS Step 3 are given in the tables below for isoflucypram considering application in cereals. The reported PEC_{sw} and PEC_{sed} values represent loadings via all relevant entry routes.

Results are presented on the basis of calculations which were done with two slightly different input parameters. In the first four tables results are presented which were based on calculations with a DT_{50} of 354 days for the water phase and 1000 days for the sediment phase. In the next four tables results are presented which were based on calculations with a DT_{50} of 1000 days for the water phase and 354 days for the sediment phase. All other input parameters used for calculations were equal.

<u>DT_{50} system (354 days) assigned to water phase</u>

Table 9.2.5-9: PEC_{sw} and PEC_{sed} values of isoflucypram (winter cereals, early)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	7d-$PEC_{sw,twa}$ (µg/L)	21d-$PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Step 3						
D1	Ditch	1.2430	Drainage	1.1750	1.1340	16.430
D1	Stream	0.7788	Drainage	0.7338	0.7067	9.1470
D2	Ditch	1.1690	Drainage	0.7295	0.6593	12.700
D2	Stream	0.7315	Drainage	0.4417	0.4082	7.4690
D3	Ditch	0.4754	Spray drift	0.0989	0.0338	0.3744
D4	Pond	0.0783	Drainage	0.0744	0.0722	0.7220
D4	Stream	0.3654	Spray drift	0.0849	0.0406	0.2768
D5	Pond	0.0817	Drainage	0.0790	0.0728	0.9655
D5	Stream	0.3792	Spray drift	0.0443	0.0230	0.2141
D6	Ditch	0.6339	Drainage	0.1568	0.0776	0.7453
R1	Pond	0.0396	Runoff	0.0374	0.0343	0.5535
R1	Stream	0.3123	Spray drift	0.0290	0.0174	0.4369
R3	Stream	0.4414	Spray drift	0.0374	0.0202	0.7174
R4	Stream	0.3929	Runoff	0.1210	0.0534	0.6550

Table 9.2.5-10: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (winter cereals, late)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.6397	Spray drift	0.5314	0.5000	8.6720
D1	Stream	0.4214	Spray drift	0.3233	0.3116	4.5310
D2	Ditch	0.7501	Spray drift	0.6346	0.5448	8.9680
D2	Stream	0.5827	Spray drift	0.4925	0.4221	5.3850
D3	Ditch	0.4754	Spray drift	0.0989	0.0338	0.3744
D4	Pond	0.0432	Drainage	0.0408	0.0384	0.4074
D4	Stream	0.4102	Spray drift	0.0432	0.0193	0.1519
D5	Pond	0.0401	Drainage	0.0387	0.0356	0.5091
D5	Stream	0.4425	Spray drift	0.0242	0.0106	0.1306
D6	Ditch	0.4766	Spray drift	0.1989	0.0804	0.6669
R1	Pond	0.0482	Runoff	0.0459	0.0444	0.6357
R1	Stream	0.3133	Spray drift	0.0396	0.0200	0.9673
R3	Stream	0.4414	Spray drift	0.0384	0.0237	0.2617
R4	Stream	0.3506	Runoff	0.1110	0.0514	0.9201

Table 9.2.5-11: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (spring cereals, early)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.9975	Drainage	0.9033	0.8723	16.080
D1	Stream	0.6255	Drainage	0.5626	0.5420	8.8970
D3	Ditch	0.4745	Spray drift	0.0771	0.0261	0.3108
D4	Pond	0.0870	Drainage	0.0852	0.0823	0.8852
D4	Stream	0.3879	Spray drift	0.0932	0.0502	0.3017
D5	Pond	0.0762	Drainage	0.0738	0.0680	0.9143
D5	Stream	0.3988	Spray drift	0.0387	0.0201	0.1941
R4	Stream	0.3751	Runoff	0.1199	0.0550	0.9664

Table 9.2.5-12: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (spring cereals, late)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.6774	Spray drift	0.5657	0.4696	8.9790
D1	Stream	0.4225	Spray drift	0.2933	0.2824	4.8240
D3	Ditch	0.4749	Spray drift	0.0859	0.0292	0.3373
D4	Pond	0.0539	Drainage	0.0515	0.0496	0.5277
D4	Stream	0.4089	Spray drift	0.0565	0.0272	0.1927
D5	Pond	0.0428	Drainage	0.0413	0.0380	0.5494
D5	Stream	0.4140	Spray drift	0.0207	0.0107	0.1072
R4	Stream	0.3893	Runoff	0.1242	0.0592	1.0030

DT$_{50}$ system (354 days) assigned to sediment phase

Table 9.2.5-13: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (winter cereals, early)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	1.2430	Drainage	1.1750	1.1340	15.650
D1	Stream	0.7788	Drainage	0.7338	0.7067	8.7690
D2	Ditch	1.1690	Drainage	0.7299	0.6592	11.950
D2	Stream	0.7315	Drainage	0.4417	0.4082	7.0280
D3	Ditch	0.4754	Spray drift	0.0990	0.0338	0.3742
D4	Pond	0.0785	Drainage	0.0746	0.0725	0.7155
D4	Stream	0.3651	Spray drift	0.0849	0.0406	0.2764
D5	Pond	0.0821	Drainage	0.0795	0.0734	0.9352
D5	Stream	0.3792	Spray drift	0.0443	0.0230	0.2104
D6	Ditch	0.6339	Drainage	0.1568	0.0776	0.7159
R1	Pond	0.0401	Runoff	0.0380	0.0354	0.5471
R1	Stream	0.3123	Spray drift	0.0290	0.0174	0.4309
R3	Stream	0.4414	Spray drift	0.0374	0.0202	0.7169
R4	Stream	0.3930	Runoff	0.1210	0.0534	0.6540

Table 9.2.5-14: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (winter cereals, late)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.6392	Spray drift	0.5314	0.5000	8.1880
D1	Stream	0.4214	Spray drift	0.3233	0.3116	4.3170
D2	Ditch	0.7502	Spray drift	0.6355	0.5464	8.4110
D2	Stream	0.5827	Spray drift	0.4932	0.4235	5.0410
D3	Ditch	0.4754	Spray drift	0.0990	0.0338	0.3742
D4	Pond	0.0435	Drainage	0.0411	0.0387	0.4052
D4	Stream	0.4102	Spray drift	0.0432	0.0193	0.1511
D5	Pond	0.0404	Drainage	0.0390	0.0359	0.4941
D5	Stream	0.4425	Spray drift	0.0242	0.0106	0.1301
D6	Ditch	0.4766	Spray drift	0.1992	0.0804	0.6639
R1	Pond	0.0493	Runoff	0.0470	0.0455	0.6307
R1	Stream	0.3133	Spray drift	0.0396	0.0200	0.9214
R3	Stream	0.4414	Spray drift	0.0384	0.0237	0.2598
R4	Stream	0.3506	Runoff	0.1110	0.0515	0.9191

Table 9.2.5-15: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (spring cereals, early)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.9975	Drainage	0.9032	0.8722	15.210
D1	Stream	0.6255	Drainage	0.5626	0.5420	8.4590
D3	Ditch	0.4745	Spray drift	0.0771	0.0262	0.3107
D4	Pond	0.0874	Drainage	0.0856	0.0826	0.8793
D4	Stream	0.3879	Spray drift	0.0932	0.0502	0.3012
D5	Pond	0.0766	Drainage	0.0742	0.0686	0.8863
D5	Stream	0.3988	Spray drift	0.0387	0.0201	0.1907
R4	Stream	0.3751	Runoff	0.1199	0.0550	0.9653

Table 9.2.5-16: PEC$_{sw}$ and PEC$_{sed}$ values of isoflucypram (spring cereals, late)

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	7d-PEC$_{sw,twa}$ (µg/L)	21d-PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Step 3						
D1	Ditch	0.6771	Spray drift	0.5659	0.4705	8.4800
D1	Stream	0.4224	Spray drift	0.2933	0.2824	4.5840
D3	Ditch	0.4749	Spray drift	0.0859	0.0293	0.3372
D4	Pond	0.0542	Drainage	0.0518	0.0499	0.5248
D4	Stream	0.4089	Spray drift	0.0565	0.0272	0.1920
D5	Pond	0.0431	Drainage	0.0416	0.0384	0.5330
D5	Stream	0.4140	Spray drift	0.0207	0.0107	0.1054
R4	Stream	0.3893	Runoff	0.1242	0.0592	1.0020

FOCUS Step 4:
FOCUS Step 4 calculations considering different buffer zones in combination with mitigation by drift reducing nozzles (where applicable) where conducted based on the Step results. In the following a summary of PEC values resulting from application in cereals is given for isoflucypram.

DT$_{50}$ system (354 days) assigned to water phase (PEC$_{sw}$)

Table 9.2.5-17: Single application FOCUS Step 4 results for isoflucypram (winter cereals, early)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
50 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
75 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
90 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
None	D1 Stream	0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
50 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
75 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
90 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
None	D2 Ditch	1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
50 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
75 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
90 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
None	D2 Stream	0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
50 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
75 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
90 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
None	D3 Ditch	0.4754	0.1289	0.0684	0.0355	0.0684	0.0355
50 %		0.2377	0.0645	0.0342	0.0178	0.0342	0.0178
75 %		0.1188	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0783	0.0779	0.0772	0.0767	0.0772	0.0767
50 %		0.0769	0.0767	0.0764	0.0761	0.0764	0.0761
75 %		0.0762	0.0761	0.0759	0.0758	0.0759	0.0758
90 %		0.0758	0.0757	0.0757	0.0756	0.0757	0.0756
None	D4 Stream	0.3651	0.2266	0.2266	0.2266	0.2266	0.2266
50 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
75 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
90 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
None	D5 Pond	0.0817	0.0814	0.0810	0.0806	0.0810	0.0806
50 %		0.0808	0.0806	0.0804	0.0802	0.0804	0.0802
75 %		0.0803	0.0802	0.0801	0.0800	0.0801	0.0800
90 %		0.0800	0.0800	0.0800	0.0799	0.0800	0.0799

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.3792	0.1389	0.1289	0.1289	0.1289	0.1289
50 %		0.1899	0.1289	0.1289	0.1289	0.1289	0.1289
75 %		0.1289	0.1289	0.1289	0.1289	0.1289	0.1289
90 %		0.1289	0.1289	0.1289	0.1289	0.1289	0.1289
None	D6 Ditch	0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
50 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
75 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
90 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
None	R1 Pond	0.0396	0.0386	0.0368	0.0353	0.0177	0.0096
50 %		0.0359	0.0354	0.0345	0.0339	0.0153	0.0081
75 %		0.0340	0.0339	0.0337	0.0335	0.0142	0.0073
90 %		0.0335	0.0335	0.0334	0.0333	0.0137	0.0069
None	R1 Stream	0.3123	0.2235	0.2235	0.2235	0.1015	0.0532
50 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
75 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
90 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
None	R3 Stream	0.4414	0.2679	0.2679	0.2679	0.1222	0.0641
50 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
75 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
90 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
None	R4 Stream	0.3929	0.3929	0.3929	0.3929	0.1773	0.0926
50 %		0.3929	0.3929	0.3929	0.3929	0.1773	0.0926
75 %		0.3929	0.3929	0.3929	0.3929	0.1773	0.0926
90 %		0.3929	0.3929	0.3929	0.3929	0.1773	0.0926

Table 9.2.5-18: Single application FOCUS Step 4 results for isoflucypram (winter cereals, late)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.6397	0.5504	0.5504	0.5504	0.5504	0.5504
50 %		0.5505	0.5504	0.5504	0.5504	0.5504	0.5504
75 %		0.5504	0.5504	0.5504	0.5504	0.5504	0.5504
90 %		0.5504	0.5504	0.5504	0.5504	0.5504	0.5504
None	D1 Stream	0.4214	0.3448	0.3448	0.3448	0.3448	0.3448
50 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
75 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
90 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
None	D2 Ditch	0.7501	0.7168	0.7168	0.7168	0.7168	0.7168
50 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
75 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
90 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
None	D2 Stream	0.5827	0.4488	0.4488	0.4488	0.4488	0.4488
50 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
75 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
90 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
None	D3 Ditch	0.4754	0.1289	0.0684	0.0355	0.0684	0.0355
50 %		0.2377	0.0645	0.0342	0.0178	0.0342	0.0178
75 %		0.1188	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0432	0.0427	0.0417	0.0408	0.0417	0.0408
50 %		0.0412	0.0409	0.0404	0.0400	0.0404	0.0400
75 %		0.0402	0.0400	0.0398	0.0396	0.0398	0.0396
90 %		0.0395	0.0395	0.0394	0.0393	0.0394	0.0393
None	D4 Stream	0.4102	0.1498	0.1254	0.1254	0.1254	0.1254
50 %		0.2051	0.1254	0.1254	0.1254	0.1254	0.1254
75 %		0.1254	0.1254	0.1254	0.1254	0.1254	0.1254
90 %		0.1254	0.1254	0.1254	0.1254	0.1254	0.1254
None	D5 Pond	0.0401	0.0399	0.0393	0.0389	0.0393	0.0389
50 %		0.0391	0.0389	0.0387	0.0385	0.0387	0.0385
75 %		0.0386	0.0385	0.0384	0.0383	0.0384	0.0383
90 %		0.0382	0.0382	0.0382	0.0381	0.0382	0.0381

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.4425	0.1616	0.0856	0.0721	0.0856	0.0721
50 %		0.2212	0.0808	0.0721	0.0721	0.0721	0.0721
75 %		0.1106	0.0721	0.0721	0.0721	0.0721	0.0721
90 %		0.0721	0.0721	0.0721	0.0721	0.0721	0.0721
None	D6 Ditch	0.4766	0.2978	0.2978	0.2978	0.2978	0.2978
50 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
75 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
90 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
None	R1 Pond	0.0482	0.0475	0.0463	0.0452	0.0207	0.0110
50 %		0.0456	0.0453	0.0446	0.0441	0.0191	0.0098
75 %		0.0443	0.0442	0.0438	0.0436	0.0183	0.0093
90 %		0.0436	0.0435	0.0434	0.0432	0.0178	0.0090
None	R1 Stream	0.3133	0.2129	0.2129	0.2129	0.0968	0.0507
50 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
75 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
90 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
None	R3 Stream	0.4414	0.2657	0.2657	0.2657	0.1195	0.0623
50 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
75 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
90 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
None	R4 Stream	0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
50 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
75 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
90 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835

Table 9.2.5-19: Single application FOCUS Step 4 results for isoflucypram (spring cereals, early)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
50 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
75 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
90 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
None	D1 Stream	0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
50 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
75 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
90 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
None	D3 Ditch	0.4745	0.1287	0.0683	0.0354	0.0683	0.0354
50 %		0.2372	0.0643	0.0341	0.0177	0.0341	0.0177
75 %		0.1186	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0474	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0870	0.0867	0.0861	0.0855	0.0861	0.0855
50 %		0.0857	0.0856	0.0852	0.0850	0.0852	0.0850
75 %		0.0851	0.0850	0.0848	0.0847	0.0848	0.0847
90 %		0.0847	0.0847	0.0846	0.0845	0.0846	0.0845
None	D4 Stream	0.3879	0.2240	0.2240	0.2240	0.2240	0.2240
50 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
75 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
90 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
None	D5 Pond	0.0762	0.0759	0.0755	0.0751	0.0755	0.0751
50 %		0.0753	0.0752	0.0750	0.0748	0.0750	0.0748
75 %		0.0749	0.0748	0.0747	0.0746	0.0747	0.0746
90 %		0.0746	0.0746	0.0745	0.0745	0.0745	0.0745
None	D5 Stream	0.3988	0.1459	0.1212	0.1212	0.1212	0.1212
50 %		0.1996	0.1212	0.1212	0.1212	0.1212	0.1212
75 %		0.1212	0.1212	0.1212	0.1212	0.1212	0.1212
90 %		0.1212	0.1212	0.1212	0.1212	0.1212	0.1212
None	R4 Stream	0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
50 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
75 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
90 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894

Table 9.2.5-20: Single application FOCUS Step 4 results for isoflucypram (spring cereals, late)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.6774	0.5177	0.5177	0.5177	0.5177	0.5177
50 %		0.5178	0.5177	0.5177	0.5177	0.5177	0.5177
75 %		0.5177	0.5177	0.5177	0.5177	0.5177	0.5177
90 %		0.5177	0.5177	0.5177	0.5177	0.5177	0.5177
None	D1 Stream	0.4225	0.3247	0.3247	0.3247	0.3247	0.3247
50 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
75 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
90 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
None	D3 Ditch	0.4749	0.1288	0.0683	0.0355	0.0683	0.0355
50 %		0.2374	0.0644	0.0342	0.0177	0.0342	0.0177
75 %		0.1187	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0539	0.0534	0.0525	0.0518	0.0525	0.0518
50 %		0.0521	0.0518	0.0514	0.0510	0.0514	0.0510
75 %		0.0512	0.0510	0.0508	0.0506	0.0508	0.0506
90 %		0.0506	0.0506	0.0505	0.0504	0.0505	0.0504
None	D4 Stream	0.4089	0.1508	0.1508	0.1508	0.1508	0.1508
50 %		0.2044	0.1508	0.1508	0.1508	0.1508	0.1508
75 %		0.1508	0.1508	0.1508	0.1508	0.1508	0.1508
90 %		0.1508	0.1508	0.1508	0.1508	0.1508	0.1508
None	D5 Pond	0.0428	0.0426	0.0421	0.0417	0.0421	0.0417
50 %		0.0418	0.0417	0.0415	0.0413	0.0415	0.0413
75 %		0.0414	0.0413	0.0412	0.0411	0.0412	0.0411
90 %		0.0411	0.0410	0.0410	0.0409	0.0410	0.0409
None	D5 Stream	0.4140	0.1512	0.0801	0.0737	0.0801	0.0737
50 %		0.2070	0.0756	0.0737	0.0737	0.0737	0.0737
75 %		0.1035	0.0737	0.0737	0.0737	0.0737	0.0737
90 %		0.0737	0.0737	0.0737	0.0737	0.0737	0.0737
None	R4 Stream	0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
50 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
75 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
90 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928

DT$_{50}$ system (354 days) assigned to water phase (PEC$_{sed}$)

Table 9.2.5-21: Single application FOCUS Step 4 results for isoflucypram (winter cereals, early)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	16.430	16.290	16.270	16.250	16.270	16.250
50 %		16.330	16.260	16.250	16.240	16.250	16.240
75 %		16.290	16.250	16.240	16.240	16.240	16.240
90 %		16.260	16.240	16.240	16.240	16.240	16.240
None	D1 Stream	9.1470	9.1450	9.1440	9.1440	9.1440	9.1440
50 %		9.1450	9.1440	9.1440	9.1440	9.1440	9.1440
75 %		9.1440	9.1440	9.1440	9.1440	9.1440	9.1440
90 %		9.1440	9.1440	9.1430	9.1430	9.1430	9.1430
None	D2 Ditch	12.700	12.580	12.560	12.550	12.560	12.550
50 %		12.620	12.560	12.550	12.550	12.550	12.550
75 %		12.580	12.550	12.550	12.550	12.550	12.550
90 %		12.560	12.550	12.540	12.540	12.540	12.540
None	D2 Stream	7.4690	7.4670	7.4660	7.4660	7.4660	7.4660
50 %		7.4670	7.4660	7.4660	7.4660	7.4660	7.4660
75 %		7.4660	7.4660	7.4660	7.4660	7.4660	7.4660
90 %		7.4660	7.4660	7.4660	7.4660	7.4660	7.4660
None	D3 Ditch	0.3744	0.1040	0.0558	0.0293	0.0558	0.0293
50 %		0.1896	0.0526	0.0282	0.0148	0.0282	0.0148
75 %		0.0960	0.0266	0.0143	0.0075	0.0143	0.0075
90 %		0.0390	0.0108	0.0058	0.0030	0.0058	0.0030
None	D4 Pond	0.7220	0.7100	0.6882	0.6696	0.6882	0.6696
50 %		0.6772	0.6712	0.6602	0.6508	0.6602	0.6508
75 %		0.6547	0.6517	0.6461	0.6414	0.6461	0.6414
90 %		0.6411	0.6399	0.6376	0.6357	0.6376	0.6357
None	D4 Stream	0.2768	0.2761	0.2759	0.2758	0.2759	0.2758
50 %		0.2763	0.2759	0.2758	0.2758	0.2758	0.2758
75 %		0.2760	0.2758	0.2758	0.2758	0.2758	0.2758
90 %		0.2758	0.2758	0.2757	0.2757	0.2757	0.2757
None	D5 Pond	0.9655	0.9522	0.9280	0.9074	0.9280	0.9074
50 %		0.9159	0.9092	0.8971	0.8867	0.8971	0.8867
75 %		0.8910	0.8876	0.8816	0.8764	0.8816	0.8764
90 %		0.8760	0.8747	0.8723	0.8702	0.8723	0.8702

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.2141	0.2137	0.2136	0.2136	0.2136	0.2136
50 %		0.2138	0.2136	0.2136	0.2136	0.2136	0.2136
75 %		0.2137	0.2136	0.2136	0.2135	0.2136	0.2135
90 %		0.2136	0.2136	0.2135	0.2135	0.2135	0.2135
None	D6 Ditch	0.7453	0.7315	0.7290	0.7277	0.7290	0.7277
50 %		0.7358	0.7289	0.7277	0.7270	0.7277	0.7270
75 %		0.7311	0.7276	0.7270	0.7266	0.7270	0.7266
90 %		0.7282	0.7268	0.7265	0.7264	0.7265	0.7264
None	R1 Pond	0.5535	0.5423	0.5220	0.5047	0.2512	0.1387
50 %		0.5118	0.5062	0.4960	0.4874	0.2237	0.1198
75 %		0.4909	0.4881	0.4830	0.4787	0.2100	0.1103
90 %		0.4784	0.4773	0.4752	0.4735	0.2017	0.1047
None	R1 Stream	0.4369	0.4333	0.4323	0.4318	0.1134	0.0519
50 %		0.4340	0.4322	0.4317	0.4315	0.1128	0.0516
75 %		0.4326	0.4317	0.4315	0.4313	0.1125	0.0514
90 %		0.4318	0.4314	0.4313	0.4312	0.1123	0.0513
None	R3 Stream	0.7174	0.6922	0.6852	0.6813	0.1650	0.0727
50 %		0.6977	0.6847	0.6811	0.6791	0.1609	0.0705
75 %		0.6875	0.6809	0.6790	0.6780	0.1587	0.0694
90 %		0.6812	0.6785	0.6777	0.6773	0.1574	0.0687
None	R4 Stream	0.6550	0.6512	0.6501	0.6496	0.2436	0.1240
50 %		0.6520	0.6501	0.6495	0.6492	0.2430	0.1236
75 %		0.6505	0.6495	0.6492	0.6491	0.2427	0.1235
90 %		0.6495	0.6491	0.6490	0.6490	0.2425	0.1234

Table 9.2.5-22: Single application FOCUS Step 4 results for isoflucypram (winter cereals, late)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	8.6720	8.2610	8.1890	8.1490	8.1890	8.1490
50 %		8.3900	8.1840	8.1480	8.1280	8.1480	8.1280
75 %		8.2490	8.1460	8.1280	8.1180	8.1280	8.1180
90 %		8.1640	8.1230	8.1150	8.1110	8.1150	8.1110
None	D1 Stream	4.5310	4.5230	4.5210	4.5200	4.5210	4.5200
50 %		4.5250	4.5210	4.5200	4.5190	4.5200	4.5190
75 %		4.5220	4.5200	4.5190	4.5190	4.5190	4.5190
90 %		4.5200	4.5190	4.5190	4.5190	4.5190	4.5190
None	D2 Ditch	8.9680	8.4960	8.4140	8.3690	8.4140	8.3690
50 %		8.6440	8.4090	8.3680	8.3450	8.3680	8.3450
75 %		8.4830	8.3650	8.3440	8.3330	8.3440	8.3330
90 %		8.3860	8.3390	8.3310	8.3260	8.3310	8.3260
None	D2 Stream	5.3850	5.0980	5.0200	4.9780	5.0200	4.9780
50 %		5.1590	5.0150	4.9760	4.9550	4.9760	4.9550
75 %		5.0460	4.9740	4.9540	4.9440	4.9540	4.9440
90 %		4.9780	4.9490	4.9410	4.9370	4.9410	4.9370
None	D3 Ditch	0.3744	0.1040	0.0558	0.0293	0.0558	0.0293
50 %		0.1896	0.0526	0.0282	0.0148	0.0282	0.0148
75 %		0.0960	0.0266	0.0143	0.0075	0.0143	0.0075
90 %		0.0390	0.0108	0.0058	0.0030	0.0058	0.0030
None	D4 Pond	0.4074	0.3942	0.3704	0.3501	0.3704	0.3501
50 %		0.3584	0.3519	0.3400	0.3298	0.3400	0.3298
75 %		0.3340	0.3307	0.3248	0.3197	0.3248	0.3197
90 %		0.3193	0.3180	0.3156	0.3136	0.3156	0.3136
None	D4 Stream	0.1519	0.1472	0.1459	0.1451	0.1459	0.1451
50 %		0.1482	0.1458	0.1451	0.1447	0.1451	0.1447
75 %		0.1463	0.1451	0.1447	0.1445	0.1447	0.1445
90 %		0.1451	0.1446	0.1445	0.1444	0.1445	0.1444
None	D5 Pond	0.5091	0.4951	0.4695	0.4477	0.4695	0.4477
50 %		0.4567	0.4497	0.4368	0.4259	0.4368	0.4259
75 %		0.4304	0.4269	0.4204	0.4150	0.4204	0.4150
90 %		0.4146	0.4132	0.4106	0.4084	0.4106	0.4084

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.1306	0.1032	0.1019	0.1012	0.1019	0.1012
50 %		0.1042	0.1018	0.1011	0.1008	0.1011	0.1008
75 %		0.1023	0.1011	0.1007	0.1006	0.1007	0.1006
90 %		0.1011	0.1007	0.1005	0.1005	0.1005	0.1005
None	D6 Ditch	0.6669	0.2907	0.2819	0.2771	0.2819	0.2771
50 %		0.3807	0.2813	0.2769	0.2744	0.2769	0.2744
75 %		0.2892	0.2766	0.2743	0.2731	0.2743	0.2731
90 %		0.2788	0.2737	0.2728	0.2723	0.2728	0.2723
None	R1 Pond	0.6357	0.6245	0.6041	0.5868	0.2815	0.1538
50 %		0.5940	0.5884	0.5782	0.5695	0.2540	0.1349
75 %		0.5731	0.5703	0.5652	0.5608	0.2402	0.1254
90 %		0.5605	0.5594	0.5574	0.5556	0.2319	0.1198
None	R1 Stream	0.9673	0.9645	0.9637	0.9633	0.2059	0.0864
50 %		0.9651	0.9637	0.9633	0.9631	0.2054	0.0862
75 %		0.9640	0.9633	0.9631	0.9630	0.2052	0.0861
90 %		0.9633	0.9630	0.9629	0.9629	0.2050	0.0860
None	R3 Stream	0.2617	0.2560	0.2549	0.2543	0.0962	0.0494
50 %		0.2570	0.2548	0.2542	0.2539	0.0942	0.0483
75 %		0.2553	0.2542	0.2539	0.2537	0.0931	0.0477
90 %		0.2542	0.2538	0.2537	0.2536	0.0925	0.0474
None	R4 Stream	0.9201	0.9118	0.9095	0.9082	0.2758	0.1326
50 %		0.9136	0.9094	0.9082	0.9075	0.2744	0.1318
75 %		0.9103	0.9081	0.9075	0.9072	0.2737	0.1315
90 %		0.9082	0.9073	0.9071	0.9070	0.2733	0.1312

Table 9.2.5-23: Single application FOCUS Step 4 results for isoflucypram (spring cereals, early)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	16.080	15.700	15.640	15.600	15.640	15.600
50 %		15.820	15.630	15.600	15.580	15.600	15.580
75 %		15.690	15.600	15.580	15.570	15.580	15.570
90 %		15.620	15.580	15.570	15.570	15.570	15.570
None	D1 Stream	8.8970	8.8890	8.8870	8.8860	8.8870	8.8860
50 %		8.8910	8.8870	8.8860	8.8850	8.8860	8.8850
75 %		8.8880	8.8860	8.8850	8.8850	8.8850	8.8850
90 %		8.8860	8.8850	8.8850	8.8850	8.8850	8.8850
None	D3 Ditch	0.3108	0.0861	0.0461	0.0242	0.0461	0.0242
50 %		0.1571	0.0435	0.0233	0.0122	0.0233	0.0122
75 %		0.0794	0.0220	0.0118	0.0062	0.0118	0.0062
90 %		0.0322	0.0089	0.0048	0.0025	0.0048	0.0025
None	D4 Pond	0.8852	0.8733	0.8518	0.8334	0.8518	0.8334
50 %		0.8410	0.8350	0.8242	0.8149	0.8242	0.8149
75 %		0.8187	0.8157	0.8103	0.8056	0.8103	0.8056
90 %		0.8053	0.8041	0.8019	0.8000	0.8019	0.8000
None	D4 Stream	0.3017	0.3004	0.3000	0.2998	0.3000	0.2998
50 %		0.3006	0.3000	0.2998	0.2997	0.2998	0.2997
75 %		0.3001	0.2998	0.2997	0.2996	0.2997	0.2996
90 %		0.2998	0.2996	0.2996	0.2996	0.2996	0.2996
None	D5 Pond	0.9143	0.9012	0.8775	0.8572	0.8775	0.8572
50 %		0.8656	0.8590	0.8471	0.8370	0.8471	0.8370
75 %		0.8412	0.8379	0.8319	0.8269	0.8319	0.8269
90 %		0.8265	0.8252	0.8228	0.8208	0.8228	0.8208
None	D5 Stream	0.1941	0.1935	0.1934	0.1933	0.1934	0.1933
50 %		0.1936	0.1933	0.1933	0.1932	0.1933	0.1932
75 %		0.1934	0.1933	0.1932	0.1932	0.1932	0.1932
90 %		0.1933	0.1932	0.1932	0.1932	0.1932	0.1932
None	R4 Stream	0.9664	0.9582	0.9559	0.9546	0.2930	0.1413
50 %		0.9599	0.9557	0.9546	0.9539	0.2917	0.1406
75 %		0.9566	0.9545	0.9539	0.9536	0.2910	0.1402
90 %		0.9546	0.9537	0.9535	0.9533	0.2906	0.1400

Table 9.2.5-24: Single application FOCUS Step 4 results for isoflucypram (spring cereals, late)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	8.9790	8.5980	8.5310	8.4950	8.5310	8.4950
50 %		8.7180	8.5270	8.4940	8.4760	8.4940	8.4760
75 %		8.5870	8.4920	8.4750	8.4660	8.4750	8.4660
90 %		8.5080	8.4700	8.4640	8.4600	8.4640	8.4600
None	D1 Stream	4.8240	4.8150	4.8130	4.8120	4.8130	4.8120
50 %		4.8170	4.8130	4.8120	4.8110	4.8120	4.8110
75 %		4.8140	4.8120	4.8110	4.8110	4.8110	4.8110
90 %		4.8120	4.8110	4.8110	4.8110	4.8110	4.8110
None	D3 Ditch	0.3373	0.0935	0.0501	0.0263	0.0501	0.0263
50 %		0.1707	0.0473	0.0253	0.0133	0.0253	0.0133
75 %		0.0863	0.0239	0.0128	0.0067	0.0128	0.0067
90 %		0.0350	0.0097	0.0052	0.0027	0.0052	0.0027
None	D4 Pond	0.5277	0.5155	0.4932	0.4744	0.4932	0.4744
50 %		0.4821	0.4760	0.4649	0.4555	0.4649	0.4555
75 %		0.4593	0.4563	0.4507	0.4460	0.4507	0.4460
90 %		0.4456	0.4444	0.4421	0.4402	0.4421	0.4402
None	D4 Stream	0.1927	0.1884	0.1872	0.1866	0.1872	0.1866
50 %		0.1894	0.1871	0.1865	0.1862	0.1865	0.1862
75 %		0.1876	0.1865	0.1862	0.1860	0.1862	0.1860
90 %		0.1865	0.1861	0.1859	0.1859	0.1859	0.1859
None	D5 Pond	0.5494	0.5358	0.5110	0.4899	0.5110	0.4899
50 %		0.4986	0.4917	0.4793	0.4687	0.4793	0.4687
75 %		0.4731	0.4696	0.4634	0.4581	0.4634	0.4581
90 %		0.4577	0.4564	0.4539	0.4517	0.4539	0.4517
None	D5 Stream	0.1072	0.1062	0.1060	0.1058	0.1060	0.1058
50 %		0.1064	0.1059	0.1058	0.1057	0.1058	0.1057
75 %		0.1060	0.1058	0.1057	0.1057	0.1057	0.1057
90 %		0.1058	0.1057	0.1057	0.1057	0.1057	0.1057
None	R4 Stream	1.0030	0.9942	0.9918	0.9905	0.3038	0.1465
50 %		0.9960	0.9917	0.9905	0.9898	0.3024	0.1458
75 %		0.9926	0.9904	0.9898	0.9895	0.3017	0.1454
90 %		0.9905	0.9896	0.9894	0.9892	0.3013	0.1452

DT$_{50}$ system (354 days) assigned to sediment phase (PEC$_{sw}$)

Table 9.2.5-25: Single application FOCUS Step 4 results for isoflucypram (winter cereals, early)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
50 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
75 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
90 %		1.2430	1.2430	1.2430	1.2430	1.2430	1.2430
None	D1 Stream	0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
50 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
75 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
90 %		0.7788	0.7788	0.7788	0.7788	0.7788	0.7788
None	D2 Ditch	1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
50 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
75 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
90 %		1.1690	1.1690	1.1690	1.1690	1.1690	1.1690
None	D2 Stream	0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
50 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
75 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
90 %		0.7315	0.7315	0.7315	0.7315	0.7315	0.7315
None	D3 Ditch	0.4754	0.1289	0.0684	0.0355	0.0684	0.0355
50 %		0.2377	0.0645	0.0342	0.0178	0.0342	0.0178
75 %		0.1188	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0785	0.0781	0.0774	0.0768	0.0774	0.0768
50 %		0.0770	0.0768	0.0765	0.0762	0.0765	0.0762
75 %		0.0763	0.0762	0.0760	0.0759	0.0760	0.0759
90 %		0.0759	0.0758	0.0757	0.0757	0.0757	0.0757
None	D4 Stream	0.3651	0.2266	0.2266	0.2266	0.2266	0.2266
50 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
75 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
90 %		0.2266	0.2266	0.2266	0.2266	0.2266	0.2266
None	D5 Pond	0.0821	0.0819	0.0814	0.0810	0.0814	0.0810
50 %		0.0812	0.0810	0.0808	0.0806	0.0808	0.0806
75 %		0.0807	0.0806	0.0805	0.0804	0.0805	0.0804
90 %		0.0804	0.0803	0.0803	0.0803	0.0803	0.0803

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.3792	0.1389	0.1289	0.1289	0.1289	0.1289
50 %		0.1899	0.1289	0.1289	0.1289	0.1289	0.1289
75 %		0.1289	0.1289	0.1289	0.1289	0.1289	0.1289
90 %		0.1289	0.1289	0.1289	0.1289	0.1289	0.1289
None	D6 Ditch	0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
50 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
75 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
90 %		0.6339	0.6339	0.6339	0.6339	0.6339	0.6339
None	R1 Pond	0.0401	0.0391	0.0372	0.0357	0.0179	0.0098
50 %		0.0363	0.0358	0.0353	0.0349	0.0155	0.0082
75 %		0.0350	0.0349	0.0347	0.0345	0.0145	0.0074
90 %		0.0344	0.0344	0.0343	0.0342	0.0141	0.0071
None	R1 Stream	0.3123	0.2235	0.2235	0.2235	0.1015	0.0532
50 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
75 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
90 %		0.2235	0.2235	0.2235	0.2235	0.1015	0.0532
None	R3 Stream	0.4414	0.2679	0.2679	0.2679	0.1222	0.0641
50 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
75 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
90 %		0.2679	0.2679	0.2679	0.2679	0.1222	0.0641
None	R4 Stream	0.3930	0.3930	0.3930	0.3930	0.1773	0.0926
50 %		0.3930	0.3930	0.3930	0.3930	0.1773	0.0926
75 %		0.3930	0.3930	0.3930	0.3930	0.1773	0.0926
90 %		0.3930	0.3930	0.3930	0.3930	0.1773	0.0926

Table 9.2.5-26: Single application FOCUS Step 4 results for isoflucypram (winter cereals, late)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.6392	0.5504	0.5504	0.5504	0.5504	0.5504
50 %		0.5505	0.5504	0.5504	0.5504	0.5504	0.5504
75 %		0.5504	0.5504	0.5504	0.5504	0.5504	0.5504
90 %		0.5504	0.5504	0.5504	0.5504	0.5504	0.5504
None	D1 Stream	0.4214	0.3448	0.3448	0.3448	0.3448	0.3448
50 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
75 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
90 %		0.3448	0.3448	0.3448	0.3448	0.3448	0.3448
None	D2 Ditch	0.7502	0.7168	0.7168	0.7168	0.7168	0.7168
50 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
75 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
90 %		0.7168	0.7168	0.7168	0.7168	0.7168	0.7168
None	D2 Stream	0.5827	0.4488	0.4488	0.4488	0.4488	0.4488
50 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
75 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
90 %		0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
None	D3 Ditch	0.4754	0.1289	0.0684	0.0355	0.0684	0.0355
50 %		0.2377	0.0645	0.0342	0.0178	0.0342	0.0178
75 %		0.1188	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0435	0.0429	0.0418	0.0409	0.0418	0.0409
50 %		0.0413	0.0410	0.0405	0.0401	0.0405	0.0401
75 %		0.0402	0.0401	0.0398	0.0396	0.0398	0.0396
90 %		0.0396	0.0395	0.0394	0.0393	0.0394	0.0393
None	D4 Stream	0.4102	0.1498	0.1254	0.1254	0.1254	0.1254
50 %		0.2051	0.1254	0.1254	0.1254	0.1254	0.1254
75 %		0.1254	0.1254	0.1254	0.1254	0.1254	0.1254
90 %		0.1254	0.1254	0.1254	0.1254	0.1254	0.1254
None	D5 Pond	0.0404	0.0401	0.0396	0.0391	0.0396	0.0391
50 %		0.0393	0.0391	0.0389	0.0386	0.0389	0.0386
75 %		0.0387	0.0387	0.0385	0.0384	0.0385	0.0384
90 %		0.0384	0.0384	0.0383	0.0383	0.0383	0.0383

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.4425	0.1616	0.0856	0.0721	0.0856	0.0721
50 %		0.2212	0.0808	0.0721	0.0721	0.0721	0.0721
75 %		0.1106	0.0721	0.0721	0.0721	0.0721	0.0721
90 %		0.0721	0.0721	0.0721	0.0721	0.0721	0.0721
None	D6 Ditch	0.4766	0.2978	0.2978	0.2978	0.2978	0.2978
50 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
75 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
90 %		0.2978	0.2978	0.2978	0.2978	0.2978	0.2978
None	R1 Pond	0.0493	0.0485	0.0472	0.0460	0.0212	0.0112
50 %		0.0465	0.0461	0.0455	0.0449	0.0195	0.0101
75 %		0.0451	0.0450	0.0446	0.0443	0.0186	0.0095
90 %		0.0443	0.0442	0.0441	0.0440	0.0181	0.0091
None	R1 Stream	0.3133	0.2129	0.2129	0.2129	0.0968	0.0507
50 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
75 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
90 %		0.2129	0.2129	0.2129	0.2129	0.0968	0.0507
None	R3 Stream	0.4414	0.2657	0.2657	0.2657	0.1195	0.0623
50 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
75 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
90 %		0.2657	0.2657	0.2657	0.2657	0.1195	0.0623
None	R4 Stream	0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
50 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
75 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835
90 %		0.3506	0.3506	0.3506	0.3506	0.1595	0.0835

Table 9.2.5-27: Single application FOCUS Step 4 results for isoflucypram (spring cereals, early)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
50 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
75 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
90 %		0.9975	0.9975	0.9975	0.9975	0.9975	0.9975
None	D1 Stream	0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
50 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
75 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
90 %		0.6255	0.6255	0.6255	0.6255	0.6255	0.6255
None	D3 Ditch	0.4745	0.1287	0.0683	0.0354	0.0683	0.0354
50 %		0.2372	0.0643	0.0341	0.0177	0.0341	0.0177
75 %		0.1186	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0474	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0874	0.0871	0.0864	0.0858	0.0864	0.0858
50 %		0.0861	0.0859	0.0855	0.0852	0.0855	0.0852
75 %		0.0854	0.0853	0.0851	0.0850	0.0851	0.0850
90 %		0.0850	0.0849	0.0848	0.0848	0.0848	0.0848
None	D4 Stream	0.3879	0.2240	0.2240	0.2240	0.2240	0.2240
50 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
75 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
90 %		0.2240	0.2240	0.2240	0.2240	0.2240	0.2240
None	D5 Pond	0.0766	0.0763	0.0759	0.0755	0.0759	0.0755
50 %		0.0757	0.0755	0.0753	0.0751	0.0753	0.0751
75 %		0.0752	0.0751	0.0750	0.0749	0.0750	0.0749
90 %		0.0749	0.0749	0.0748	0.0748	0.0748	0.0748
None	D5 Stream	0.3988	0.1459	0.1212	0.1212	0.1212	0.1212
50 %		0.1996	0.1212	0.1212	0.1212	0.1212	0.1212
75 %		0.1212	0.1212	0.1212	0.1212	0.1212	0.1212
90 %		0.1212	0.1212	0.1212	0.1212	0.1212	0.1212
None	R4 Stream	0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
50 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
75 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894
90 %		0.3751	0.3751	0.3751	0.3751	0.1706	0.0894

Table 9.2.5-28: Single application FOCUS Step 4 results for isoflucypram (spring cereals, late)

PECsw (µg/L)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	0.6771	0.5177	0.5177	0.5177	0.5177	0.5177
50 %		0.5178	0.5177	0.5177	0.5177	0.5177	0.5177
75 %		0.5177	0.5177	0.5177	0.5177	0.5177	0.5177
90 %		0.5177	0.5177	0.5177	0.5177	0.5177	0.5177
None	D1 Stream	0.4224	0.3247	0.3247	0.3247	0.3247	0.3247
50 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
75 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
90 %		0.3247	0.3247	0.3247	0.3247	0.3247	0.3247
None	D3 Ditch	0.4749	0.1288	0.0683	0.0355	0.0683	0.0355
50 %		0.2374	0.0644	0.0342	0.0177	0.0342	0.0177
75 %		0.1187	0.0322	0.0171	0.0089	0.0171	0.0089
90 %		0.0475	0.0129	0.0068	0.0035	0.0068	0.0035
None	D4 Pond	0.0542	0.0536	0.0527	0.0519	0.0527	0.0519
50 %		0.0522	0.0520	0.0515	0.0511	0.0515	0.0511
75 %		0.0513	0.0511	0.0509	0.0507	0.0509	0.0507
90 %		0.0507	0.0506	0.0505	0.0505	0.0505	0.0505
None	D4 Stream	0.4089	0.1508	0.1508	0.1508	0.1508	0.1508
50 %		0.2044	0.1508	0.1508	0.1508	0.1508	0.1508
75 %		0.1508	0.1508	0.1508	0.1508	0.1508	0.1508
90 %		0.1508	0.1508	0.1508	0.1508	0.1508	0.1508
None	D5 Pond	0.0431	0.0428	0.0423	0.0419	0.0423	0.0419
50 %		0.0421	0.0419	0.0417	0.0415	0.0417	0.0415
75 %		0.0415	0.0415	0.0413	0.0412	0.0413	0.0412
90 %		0.0412	0.0412	0.0411	0.0411	0.0411	0.0411
None	D5 Stream	0.4140	0.1512	0.0801	0.0737	0.0801	0.0737
50 %		0.2070	0.0756	0.0737	0.0737	0.0737	0.0737
75 %		0.1035	0.0737	0.0737	0.0737	0.0737	0.0737
90 %		0.0737	0.0737	0.0737	0.0737	0.0737	0.0737
None	R4 Stream	0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
50 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
75 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928
90 %		0.3893	0.3893	0.3893	0.3893	0.1771	0.0928

DT_{50} system (354 days) assigned to sediment phase (PEC_{sed})

Table 9.2.5-29: Single application FOCUS Step 4 results for isoflucypram (winter cereals, early)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	15.650	15.530	15.510	15.500	15.510	15.500
50 %		15.570	15.510	15.500	15.490	15.500	15.490
75 %		15.530	15.500	15.490	15.490	15.490	15.490
90 %		15.500	15.490	15.490	15.490	15.490	15.490
None	D1 Stream	8.7690	8.7680	8.7670	8.7670	8.7670	8.7670
50 %		8.7680	8.7670	8.7670	8.7670	8.7670	8.7670
75 %		8.7670	8.7670	8.7670	8.7670	8.7670	8.7670
90 %		8.7670	8.7670	8.7670	8.7670	8.7670	8.7670
None	D2 Ditch	11.950	11.850	11.840	11.830	11.840	11.830
50 %		11.880	11.830	11.830	11.820	11.830	11.820
75 %		11.850	11.830	11.820	11.820	11.820	11.820
90 %		11.830	11.820	11.820	11.820	11.820	11.820
None	D2 Stream	7.0280	7.0260	7.0260	7.0250	7.0260	7.0250
50 %		7.0260	7.0260	7.0250	7.0250	7.0250	7.0250
75 %		7.0260	7.0250	7.0250	7.0250	7.0250	7.0250
90 %		7.0250	7.0250	7.0250	7.0250	7.0250	7.0250
None	D3 Ditch	0.3742	0.1040	0.0558	0.0293	0.0558	0.0293
50 %		0.1895	0.0526	0.0282	0.0148	0.0282	0.0148
75 %		0.0960	0.0266	0.0143	0.0075	0.0143	0.0075
90 %		0.0390	0.0108	0.0058	0.0030	0.0058	0.0030
None	D4 Pond	0.7155	0.7039	0.6828	0.6649	0.6828	0.6649
50 %		0.6723	0.6665	0.6559	0.6469	0.6559	0.6469
75 %		0.6506	0.6477	0.6424	0.6379	0.6424	0.6379
90 %		0.6376	0.6365	0.6343	0.6325	0.6343	0.6325
None	D4 Stream	0.2764	0.2759	0.2757	0.2756	0.2757	0.2756
50 %		0.2760	0.2757	0.2756	0.2756	0.2756	0.2756
75 %		0.2758	0.2756	0.2756	0.2756	0.2756	0.2756
90 %		0.2756	0.2756	0.2756	0.2755	0.2756	0.2755
None	D5 Pond	0.9352	0.9226	0.8996	0.8801	0.8996	0.8801
50 %		0.8881	0.8818	0.8703	0.8605	0.8703	0.8605
75 %		0.8645	0.8614	0.8556	0.8507	0.8556	0.8507
90 %		0.8504	0.8491	0.8468	0.8448	0.8468	0.8448

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.2104	0.2101	0.2100	0.2099	0.2100	0.2099
50 %		0.2101	0.2100	0.2099	0.2099	0.2099	0.2099
75 %		0.2100	0.2099	0.2099	0.2099	0.2099	0.2099
90 %		0.2099	0.2099	0.2099	0.2099	0.2099	0.2099
None	D6 Ditch	0.7159	0.7062	0.7045	0.7036	0.7045	0.7036
50 %		0.7093	0.7044	0.7035	0.7031	0.7035	0.7031
75 %		0.7059	0.7035	0.7031	0.7028	0.7031	0.7028
90 %		0.7039	0.7029	0.7028	0.7027	0.7028	0.7027
None	R1 Pond	0.5471	0.5363	0.5166	0.4999	0.2480	0.1367
50 %		0.5068	0.5014	0.4915	0.4832	0.2215	0.1185
75 %		0.4866	0.4839	0.4790	0.4748	0.2082	0.1093
90 %		0.4745	0.4734	0.4715	0.4698	0.2002	0.1038
None	R1 Stream	0.4309	0.4275	0.4265	0.4260	0.1120	0.0513
50 %		0.4282	0.4265	0.4260	0.4257	0.1115	0.0510
75 %		0.4268	0.4260	0.4257	0.4256	0.1112	0.0509
90 %		0.4260	0.4257	0.4256	0.4255	0.1110	0.0508
None	R3 Stream	0.7169	0.6918	0.6848	0.6809	0.1649	0.0727
50 %		0.6973	0.6844	0.6808	0.6788	0.1607	0.0705
75 %		0.6871	0.6805	0.6787	0.6777	0.1586	0.0693
90 %		0.6809	0.6781	0.6774	0.6770	0.1573	0.0686
None	R4 Stream	0.6540	0.6503	0.6493	0.6488	0.2432	0.1238
50 %		0.6511	0.6492	0.6487	0.6484	0.2427	0.1235
75 %		0.6496	0.6487	0.6484	0.6483	0.2423	0.1233
90 %		0.6487	0.6484	0.6483	0.6482	0.2422	0.1232

Table 9.2.5-30: Single application FOCUS Step 4 results for isoflucypram (winter cereals, late)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	8.1880	7.8180	7.7540	7.7180	7.7540	7.7180
50 %		7.9350	7.7490	7.7170	7.6990	7.7170	7.6990
75 %		7.8080	7.7150	7.6990	7.6900	7.6990	7.6900
90 %		7.7310	7.6940	7.6880	7.6840	7.6880	7.6840
None	D1 Stream	4.3170	4.3100	4.3080	4.3070	4.3080	4.3070
50 %		4.3110	4.3080	4.3070	4.3060	4.3070	4.3060
75 %		4.3090	4.3070	4.3060	4.3060	4.3060	4.3060
90 %		4.3070	4.3060	4.3060	4.3060	4.3060	4.3060
None	D2 Ditch	8.4110	7.9880	7.9140	7.8740	7.9140	7.8740
50 %		8.1210	7.9090	7.8720	7.8520	7.8720	7.8520
75 %		7.9760	7.8700	7.8520	7.8420	7.8520	7.8420
90 %		7.8890	7.8460	7.8390	7.8350	7.8390	7.8350
None	D2 Stream	5.0410	4.7840	4.7150	4.6770	4.7150	4.6770
50 %		4.8390	4.7100	4.6750	4.6570	4.6750	4.6570
75 %		4.7380	4.6730	4.6560	4.6460	4.6560	4.6460
90 %		4.6770	4.6510	4.6440	4.6400	4.6440	4.6400
None	D3 Ditch	0.3742	0.1040	0.0558	0.0293	0.0558	0.0293
50 %		0.1895	0.0526	0.0282	0.0148	0.0282	0.0148
75 %		0.0960	0.0266	0.0143	0.0075	0.0143	0.0075
90 %		0.0390	0.0108	0.0058	0.0030	0.0058	0.0030
None	D4 Pond	0.4052	0.3921	0.3684	0.3483	0.3684	0.3483
50 %		0.3566	0.3500	0.3382	0.3281	0.3382	0.3281
75 %		0.3323	0.3290	0.3231	0.3180	0.3231	0.3180
90 %		0.3177	0.3164	0.3140	0.3120	0.3140	0.3120
None	D4 Stream	0.1511	0.1468	0.1456	0.1450	0.1456	0.1450
50 %		0.1478	0.1455	0.1449	0.1446	0.1449	0.1446
75 %		0.1460	0.1449	0.1446	0.1444	0.1446	0.1444
90 %		0.1450	0.1445	0.1444	0.1443	0.1444	0.1443
None	D5 Pond	0.4941	0.4806	0.4560	0.4350	0.4560	0.4350
50 %		0.4437	0.4369	0.4245	0.4140	0.4245	0.4140
75 %		0.4183	0.4149	0.4087	0.4035	0.4087	0.4035
90 %		0.4031	0.4017	0.3992	0.3971	0.3992	0.3971

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D5 Stream	0.1301	0.1014	0.1003	0.0997	0.1003	0.0997
50 %		0.1022	0.1002	0.0997	0.0994	0.0997	0.0994
75 %		0.1007	0.0996	0.0994	0.0992	0.0994	0.0992
90 %		0.0997	0.0993	0.0992	0.0991	0.0992	0.0991
None	D6 Ditch	0.6639	0.2746	0.2683	0.2648	0.2683	0.2648
50 %		0.3778	0.2679	0.2647	0.2629	0.2647	0.2629
75 %		0.2736	0.2645	0.2629	0.2620	0.2629	0.2620
90 %		0.2661	0.2624	0.2618	0.2614	0.2618	0.2614
None	R1 Pond	0.6307	0.6196	0.5995	0.5824	0.2797	0.1529
50 %		0.5894	0.5839	0.5738	0.5652	0.2525	0.1341
75 %		0.5688	0.5660	0.5609	0.5567	0.2389	0.1248
90 %		0.5564	0.5552	0.5532	0.5515	0.2307	0.1191
None	R1 Stream	0.9214	0.9188	0.9181	0.9177	0.1978	0.0834
50 %		0.9193	0.9180	0.9177	0.9175	0.1974	0.0832
75 %		0.9183	0.9176	0.9175	0.9174	0.1972	0.0831
90 %		0.9177	0.9174	0.9173	0.9173	0.1970	0.0830
None	R3 Stream	0.2598	0.2474	0.2440	0.2421	0.0956	0.0491
50 %		0.2501	0.2437	0.2420	0.2411	0.0936	0.0480
75 %		0.2451	0.2419	0.2410	0.2405	0.0926	0.0474
90 %		0.2421	0.2408	0.2404	0.2402	0.0920	0.0471
None	R4 Stream	0.9191	0.9109	0.9086	0.9073	0.2754	0.1324
50 %		0.9126	0.9085	0.9073	0.9067	0.2741	0.1317
75 %		0.9094	0.9072	0.9066	0.9063	0.2734	0.1313
90 %		0.9073	0.9065	0.9062	0.9061	0.2730	0.1311

Table 9.2.5-31: Single application FOCUS Step 4 results for isoflucypram (spring cereals, early)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	15.210	14.880	14.820	14.780	14.820	14.780
50 %		14.980	14.810	14.780	14.770	14.780	14.770
75 %		14.870	14.780	14.770	14.760	14.770	14.760
90 %		14.800	14.760	14.760	14.750	14.760	14.750
None	D1 Stream	8.4590	8.4520	8.4500	8.4490	8.4500	8.4490
50 %		8.4530	8.4500	8.4490	8.4480	8.4490	8.4480
75 %		8.4500	8.4490	8.4480	8.4480	8.4480	8.4480
90 %		8.4490	8.4480	8.4480	8.4480	8.4480	8.4480
None	D3 Ditch	0.3107	0.0860	0.0461	0.0242	0.0461	0.0242
50 %		0.1571	0.0435	0.0233	0.0122	0.0233	0.0122
75 %		0.0794	0.0219	0.0117	0.0062	0.0117	0.0062
90 %		0.0322	0.0089	0.0048	0.0025	0.0048	0.0025
None	D4 Pond	0.8793	0.8677	0.8467	0.8288	0.8467	0.8288
50 %		0.8362	0.8304	0.8198	0.8108	0.8198	0.8108
75 %		0.8145	0.8116	0.8063	0.8018	0.8063	0.8018
90 %		0.8015	0.8004	0.7982	0.7964	0.7982	0.7964
None	D4 Stream	0.3012	0.3000	0.2997	0.2995	0.2997	0.2995
50 %		0.3003	0.2997	0.2995	0.2994	0.2995	0.2994
75 %		0.2998	0.2995	0.2994	0.2994	0.2994	0.2994
90 %		0.2995	0.2994	0.2994	0.2993	0.2994	0.2993
None	D5 Pond	0.8863	0.8739	0.8513	0.8321	0.8513	0.8321
50 %		0.8400	0.8338	0.8225	0.8129	0.8225	0.8129
75 %		0.8168	0.8137	0.8080	0.8032	0.8080	0.8032
90 %		0.8029	0.8016	0.7994	0.7975	0.7994	0.7975
None	D5 Stream	0.1907	0.1902	0.1901	0.1900	0.1901	0.1900
50 %		0.1903	0.1901	0.1900	0.1900	0.1900	0.1900
75 %		0.1901	0.1900	0.1900	0.1899	0.1900	0.1899
90 %		0.1900	0.1899	0.1899	0.1899	0.1899	0.1899
None	R4 Stream	0.9653	0.9571	0.9549	0.9536	0.2927	0.1412
50 %		0.9589	0.9547	0.9536	0.9529	0.2913	0.1404
75 %		0.9556	0.9535	0.9529	0.9526	0.2907	0.1401
90 %		0.9536	0.9527	0.9525	0.9524	0.2903	0.1399

Table 9.2.5-32: Single application FOCUS Step 4 results for isoflucypram (spring cereals, late)

PECsed (µg/kg)	Scenario	STEP 4 isoflucypram					
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m
None	D1 Ditch	8.4800	8.1370	8.0770	8.0440	8.0770	8.0440
50 %		8.2450	8.0730	8.0430	8.0270	8.0430	8.0270
75 %		8.1270	8.0410	8.0260	8.0180	8.0260	8.0180
90 %		8.0560	8.0220	8.0160	8.0130	8.0160	8.0130
None	D1 Stream	4.5840	4.5760	4.5740	4.5730	4.5740	4.5730
50 %		4.5780	4.5740	4.5730	4.5730	4.5730	4.5730
75 %		4.5750	4.5730	4.5730	4.5730	4.5730	4.5730
90 %		4.5730	4.5730	4.5730	4.5720	4.5730	4.5720
None	D3 Ditch	0.3372	0.0935	0.0501	0.0263	0.0501	0.0263
50 %		0.1706	0.0473	0.0253	0.0133	0.0253	0.0133
75 %		0.0863	0.0239	0.0128	0.0067	0.0128	0.0067
90 %		0.0350	0.0097	0.0052	0.0027	0.0052	0.0027
None	D4 Pond	0.5248	0.5126	0.4906	0.4719	0.4906	0.4719
50 %		0.4796	0.4735	0.4625	0.4532	0.4625	0.4532
75 %		0.4570	0.4540	0.4485	0.4438	0.4485	0.4438
90 %		0.4434	0.4422	0.4400	0.4381	0.4400	0.4381
None	D4 Stream	0.1920	0.1880	0.1870	0.1864	0.1870	0.1864
50 %		0.1889	0.1869	0.1863	0.1860	0.1863	0.1860
75 %		0.1873	0.1863	0.1860	0.1858	0.1860	0.1858
90 %		0.1863	0.1859	0.1858	0.1857	0.1858	0.1857
None	D5 Pond	0.5330	0.5199	0.4960	0.4757	0.4960	0.4757
50 %		0.4841	0.4775	0.4656	0.4554	0.4656	0.4554
75 %		0.4596	0.4563	0.4503	0.4452	0.4503	0.4452
90 %		0.4448	0.4435	0.4411	0.4390	0.4411	0.4390
None	D5 Stream	0.1054	0.1045	0.1043	0.1042	0.1043	0.1042
50 %		0.1047	0.1043	0.1042	0.1041	0.1042	0.1041
75 %		0.1044	0.1042	0.1041	0.1041	0.1041	0.1041
90 %		0.1042	0.1041	0.1041	0.1041	0.1041	0.1041
None	R4 Stream	1.0020	0.9931	0.9908	0.9895	0.3034	0.1463
50 %		0.9950	0.9907	0.9895	0.9888	0.3021	0.1456
75 %		0.9916	0.9894	0.9888	0.9884	0.3014	0.1452
90 %		0.9895	0.9886	0.9884	0.9882	0.3009	0.1450

CP 9.3 Fate and behaviour in air

For information on the fate and behaviour in air please refer to Document MCA, Section 7, 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 Document MCA, Section 7, Point 7.3.1 and 7.3.2.

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.