FINAL REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: JMD-HER 387 OD

Product name(s): Jockey 387 OD

Chemical active substances:
2,4-D, 250 g/L (as 2,4-D 2EHE, 377 g/L)
Iodosulfuron-methyl-sodium, 10 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorization)

Applicant:

Pestila Spółka z ograniczoną odpowiedzialnością

Submission date: December 2022, October 2024

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Version history

When	What
12.2023	Assessment by zRMS
03.2024	Final version of RR after commenting period
10.2024	Update by Applicant
10.2024	Update assessment by zRMS

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8 Fate and behaviour in the environment (KCP 9)

8.1 Critical GAP and overall conclusions

Table 8.1-1: Critical use pattern of the formulated product

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener/ synergist per ha	**Conclusion**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max			Groundwater
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL	Winter wheat, Winter rye, Winter triticale	F	weeds (for details please refer to Section B0 and B3)	spraying	<u>Spring</u> BBCH 23-31	1	n.a	0.8-1.0 L/ha	8-10 g iodosulfuron-methyl-sodium 301.6-377 g 2,4-D	200-300 L/ha	not relevant	not relevant	A
2	PL	Spring wheat, Spring triticale	F	weeds (for details please refer to Section B0 and B3)	spraying	<u>Spring</u> BBCH 23-31	1	n.a	0.8-1.0 L/ha	8-10 g iodosulfuron-methyl-sodium 301.6-377 g 2,4-D	200-300 L/ha	not relevant	not relevant	A
3	BG	Winter wheat	F	weeds (for details please refer to Section B0 and B3)	spraying	<u>Spring</u> BBCH 23-31	1	n.a	0.8-1.0 L/ha	8-10 g iodosulfuron-methyl-sodium 301.6-377 g 2,4-D	200-300 L/ha	not relevant	not relevant	A
Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)														
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Minor uses according to Article 51 (zonal uses)														
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minor uses according to Article 51 (interzonal uses)														
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Explanation for column 15 “Conclusion”

A	Safe use
R	Further refinement and/or risk mitigation measures required
C	To be confirmed by cMS
N	No safe use

Table 8.1-2: Assessed (critical) uses during approval of 2,4-D concerning the Section Environmental Fate

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener/ synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	g or L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
1	EU	Winter wheat, winter barley, winter oats, winter rye & triticale	F	Dicotyledonous weeds	Broadcast	BBCH 21-32 (Feb-May)	a) 1 b) 1	NR	NR	a) 750 b) 750	100-400	NR	NR
2	EU	Spring wheat, spring barley, spring oats & spring rye	F	Dicotyledonous weeds	Broadcast	BBCH 11-32 (March-May)	a) 1 b) 1	NR	NR	a) 750 b) 750	100-400	NR	NR
3	EU	Maize	F	Dicotyledonous weeds	Broadcast	BBCH 11-16 (April-June)	a) 1 b) 1	NR	NR	a) 750 b) 750	100-400	NR	NR

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use-No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener/ synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
1	EU	winter wheat	F	Grassy weed species	Bbroadcast	BBCH 13-32	a) 1 b) 1	-	a) 0.1 b) 0.1	a) 10 b) 10	150-400	NR	-
2	EU	winter barley	F	Grassy weed species	Bbroadcast	BBCH 20-32	a) 1 b) 1	-	a) 0.075 b) 0.075	a) 7.5 b) 7.5	150-400	NR	-

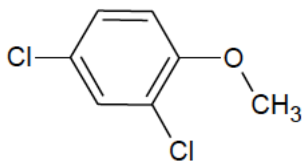
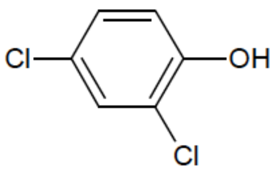
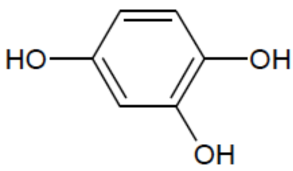
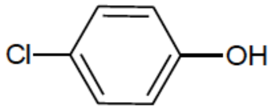
* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

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

zRMS comments:
All comments and conclusions of the zRMS are presented in grey. Minor changes are introduced directly in the text and highlighted in grey. Not agreed or not relevant information is struck through and shaded for transparency.

8.2 Metabolites considered in the assessment

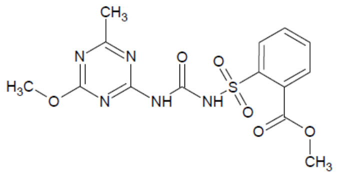
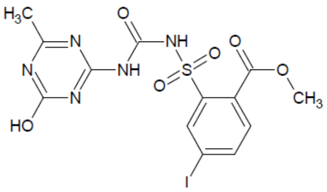
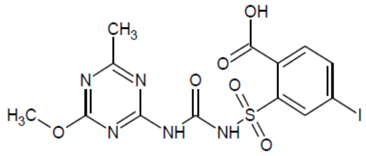
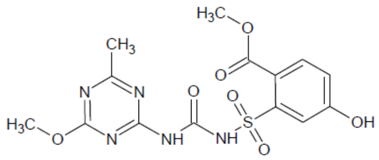
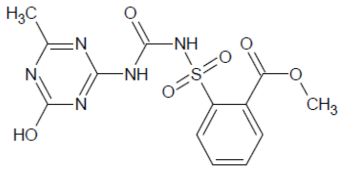
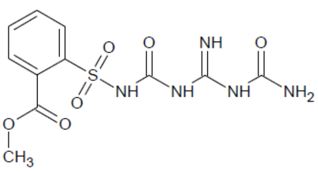
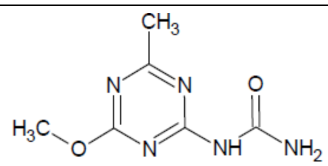
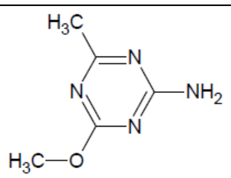
Table 8.2-1: Metabolites of 2,4-D potentially relevant for exposure assessment

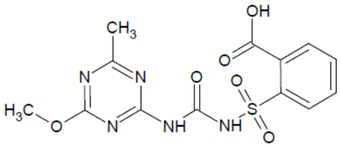
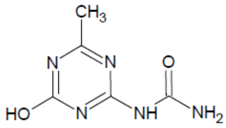
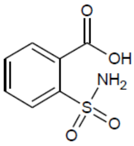
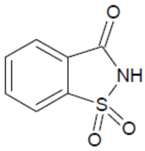
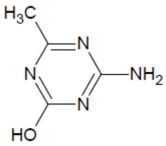
Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required
2,4-DCA	177		Soil: 15% Water/sediment: 5.3%	PEC_{soil} PEC_{gw} $PEC_{sw/sed}$
2,4-DCP	163		Soil: 8.7% Water/sediment: 32.1%	PEC_{soil} PEC_{gw} $PEC_{sw/sed}$
1,2,4-benzene-triol	126.1		Soil: NR Water/sediment: 31.7%	$PEC_{sw/sed}$
4-CP	128.6		Soil: 33% Water/sediment: 6.9%	PEC_{gw} $PEC_{sw/sed}$

zRMS comments:

Metabolites of 2,4-D are in line with EU agreed endpoints as reported in EFSA Report of 2,4-D (EFSA Journal 2014;12(9):3812)

Table 8.2-2: Metabolites of iodosulfuron-methyl-sodium potentially relevant for exposure assessment

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required
AE F075736	381.4		Soil: 88.5% (aerobic), 67.9% (anaerobic) Water: 57.0% Sediment: 15.9% Water/sediment: 67.8%	PECsoil PECgw PECsw/sed
AE F145741	493.2		Soil: 6.9% (aerobic) Water: 7.0% Sediment: 1.9% Water/sediment: 8.7%	PECsoil PECgw PECsw/sed
AE F145740	493.2		Soil: 8.7% (aerobic) Water: 9.2% Sediment: 3.5% Water/sediment: 12.6%	PECsoil PECgw PECsw/sed
AE 0002166	397.4		Soil: 20.0% (photolysis) Water: 25.1% (photolysis in natural water)	PECsoil PECgw PECsw/sed
AE F161778	367.3		Soil: 14.5% (aerobic) Water/sediment: 2.6%	PECsoil PECgw PECsw/sed
BCS-CW81253	343.3		Soil: 35.1% (aerobic) Water/sediment: 0.0001%	PECsoil PECgw PECsw/sed
AE 0000119	183.2		Soil: 19.9% (aerobic) Water: 17.7% Sediment: 15.0% Water/sediment: 24.9%	PECsoil PECgw PECsw/sed
AE F059411	140.2		Soil: 40.9% (aerobic), 23.6% (anaerobic) Water: 19.3% Sediment: 8.3 Water/sediment:	PECsoil PECgw PECsw/sed

			27.5%	
AE 0014966	367.3		Water: 11.8% Sediment: 5.9% Water/sediment: 15.5%	PECsw/sed
AE 0034855	169.1		Water: 16.7% Sediment: 10.7% Water/sediment: 24.2%	PECsw/sed
AE 1234964	201.2		Water: 6.8% Sediment: 0.6% Water/sediment: 7.4%	PECsw/sed
AE F159737	183.2		Water: 6.1% Sediment: 1.6% Water/sediment: 7.8%	PECsw/sed
AE F154781	126.1		Water: 8.7% (aerobic mineralisation in surface water)	PECsw/sed

zRMS Comments:

The listed metabolites are in agreement with the EFSA conclusion on iodosulfuron-methyl-sodium (EFSA Journal 2016;14(4):4453) .

8.3 Rate of degradation in soil (KCP 9.1.1)

8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

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

8.3.1.1 2,4-D and its metabolites

The aerobic soil degradation of 2,4-D and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2014; 12(9):3812). No further studies are required.

Table 8.3-1: Summary of aerobic degradation rates for 2,4-D - laboratory studies

2,4-D, Laboratory studies, aerobic conditions										
Soil name	**Soil type**	**pH**	**t°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level Y/N Reference**
Missis-sippi	Silt Loam	7.4	25	- [a)]	58.9	195.6	94.6 [b)]	7.4	SFO	Y, EFSA Jour-nal 2014; 12(9):3812
Fayette	Clay loam	6.2	20	50	58.9	195.6	5.3	6.3	SFO	Y, EFSA Jour-nal 2014; 12(9):3812
RefSol 03-G	Clay loam	6.2	20	50	1.6	5.4	1.2	6.3	SFO	Y, EFSA Jour-nal 2014; 12(9):3812
Site E1	Sandy loam	6.7	20	50	2.2	7.4	1.6	4.5	SFO	Y, EFSA Jour-nal 2014; 12(9):3812
Site I2	Sandy loam	7.8	20	50	2.0	6.5	1.8	7.8	SFO	Y, EFSA Jour-nal 2014; 12(9):3812
Geometric mean DT_{50} (n=5)							**4.4 (PECsw/sed modelling, PECgw modelling)**			
Worst case DT_{50} (n=5)							**94.6 (PECs modelling)**			
pH-dependency:							N			

a) moisture content not reported in the study summary in the RAR
b) normalized only for temperature.

Table 8.3-2: Summary of aerobic degradation rates for 2,4-DCP - laboratory studies

2,4-DCP, laboratory studies, aerobic conditions										
Soil name	**Soil type**	**pH**	**t°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level Y/N Reference**
Fayette	Clay loam	6.2	20	50	-	-	-	-	-	Y, EFSA Journal 2014; 12(9):3812
RefSol 03-G	Clay loam	6.2	20	50	15.5	-	11.1	6.3	HS	Y, EFSA Journal 2014; 12(9):3812
Site E1	Sandy loam	6.7	20	50	6.2	-	4.4	9.2	SFO	Y, EFSA Journal 2014; 12(9):3812
Site I2	Sandy loam	7.8	20	50	7.7	-	6.9	12.8	FOMC	Y, EFSA Journal 2014; 12(9):3812
Geometric mean (n=3)							**7[a)] (PECsw/sed modelling, PECgw modelling)**			
Worst case (DT_{50}) (n=3)							**14[b)] (PECs modelling)**			
pH-dependency:							N			

a) according to FOCUS (2006) the DT50 was back-calculated from DT90/3.32 of the FOMC kinetic model and should be used for modeling
b) in the EFSA conclusion, this DT_{50} value was used, although it is not listed in the aerobic soil degradation section of the list of endpoints; this is DT_{50} value from best-fit kinetic (DFOP, RAR Volume 3, Annex B.8, p. 697, 698) which are not recommended for modelling by the FOCUS kinetics guidance

Table 8.3-3: Summary of aerobic degradation rates for 2,4-DCA - laboratory studies

2,4-DCA, laboratory studies, aerobic conditions										
Soil name	**Soil type**	**pH**	**t°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level Y/N Reference**
Fayette	Clay loam	6.2	20	50	-	-	-	-	-	Y, EFSA Journal 2014; 12(9):3812
RefSol 03-G	Clay loam	6.2	20	50	16.3	-	11.7	3.7	SFO	Y, EFSA Journal 2014; 12(9):3812
Site E1	Sandy loam	6.7	20	50	13.7	-	9.8	6.3	SFO	Y, EFSA Journal 2014; 12(9):3812
Site I2	Sandy loam	7.8	20	50	10.9	-	9.8	8.5	SFO	Y, EFSA Journal 2014; 12(9):3812
Geometric mean DT_{50} (n=3)							**10.4 (PECsw/sed modelling, PECgw modelling)**			
Worst case DT_{50} (n=3)							**15.4[a)] (PECs modelling)**			
pH-dependency:							N			

a) in the EFSA conclusion, this DT_{50} value was used, although it is not listed in the aerobic soil degradation section of the list of end-points; this is DT_{50} value from best-fit kinetic (DFOP, RAR Volume 3, Annex B.8, p. 697, 698) which are not recommended for modelling by the FOCUS kinetics guidance

zRMS comments:

Soil degradation data of 2,4-D are in line with EU agreed endpoints as reported in EFSA Report of 2,4-D (EFSA Journal 2014;12(9):3812)

8.3.1.2 Iodosulfuron-methyl-sodium and its metabolites

The aerobic soil degradation of iodosulfuron-methyl-sodium and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2016;14(4): 4453). No further studies are required.

Table 8.3-4: Summary of aerobic degradation rates for iodosulfuron-methyl-sodium - laboratory studies

Iodosulfuron-methyl-sodium, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH ($CaCl_2$)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
SL V	Sandy loam	6.0	20	40	1.7	7.3	1.6	4.4	FOMC: α=3.086 β=6.586	Y, EFSA Journal 2016;14(4): 4453
LS 2.2	Loamy sand	5.6	20	40	1.5	5.1	1.0	5.3	SFO	Y, EFSA Journal 2016;14(4): 4453
S 2.1	Sand	5.6	20	40	3.1	10.2	2.9	7.1	SFO	Y, EFSA Journal 2016;14(4): 4453
SL 2	Silt loam	5.4	20	40	0.8	2.6	0.6	1.1	SFO	Y, EFSA Journal 2016;14(4): 4453
SL S	Silt loam	7.3	20	40	2.9	9.5	2.0	8.6	SFO	Y, EFSA Journal 2016;14(4): 4453
CL L	Clay loam a)	7.1	20	40	3.7	12.2	2.4	8.6	SFO	Y, EFSA Journal 2016;14(4): 4453
LS S	Loamy sand	7.1	20	40	2.7 2.7	12.2 9.1	-- 2.1	5.1 11.3	FOMC: α=2.868 β=9.945 SFO	Y, EFSA Journal 2016;14(4): 4453
SL FF	Loam	7.0	20	40	4.3	26.7	5.8	2.9	FOMC: α=1.488 β=7.215	Y, EFSA Journal 2016;14(4): 4453
CT	Clay	6.8	20	50	2.2	24.4	7.2	3.6	FOMC: α=0.8618 β=1.812	Y, EFSA Journal 2016;14(4): 4453

CL B	Clay loam	7.2	20	50	3.0	11.7	20.8	1.9	DFOP: k1=0.2490 k2=0.02819 g=0.9309	Y, EFSA Journal 2016;14(4): 4453
Honville	Silt loam	6.2	20	40	1.4	8.0	1.9	9.8	FOMC: α=1.804 β=3.086	Y, EFSA Journal 2016;14(4): 4453
Geometric mean (n=11)							**2.7**			
Maximum (n=11)							**20.8**			
pH-dependency:							No			

Table 8.3-5: Summary of aerobic degradation rates for AE F075736 - laboratory studies

AE F075736, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi² (%)**	**Kinetic model**	**Evaluatedon EU level y/n/ Reference**
SL V	Sandy loam	6.0	20	40	28.5	94.8	20.6	2.3	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
LS 2.2	Loamy sand	5.6	20	40	21.5	71.6	14.2	2.5	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
S 2.1	Sand	5.6	20	40	71.6	238.0	66.7	2.4	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL 2	Silt loam	5.4	20	40	69.0	229.2	51.0	1.3	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL S	Silt loam	7.3	20	40	18.7	62.1	12.8	2.7	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
CL L	Clay loam [f)]	7.1	20	40	16.6	55.1	10.6	5.2	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
LS S	Loamy sand	7.1	20	40	69.8	232.1	52.7	1.9	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL FF	Loam	7.0	20	40	33.3	110.6	24.1	3.3	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CT	Clay	6.8	20	50	43.5	144.6	42.4	6.0	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	27.8	92.2	23.4	3.8	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453

Honville	Silt loam	6.2	20	40	19.7	65.5	15.3	9.8	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
Mata-peake, USA [b)]	Silt loam	5.2	20	75% of soil moisture content at 33 kPa	9.0	48	6.4	5	SFO	Y, EFSA Journal 2016; 14(4):4453
Speyer 2.2 Germany [c)]	Loamy sand	6.1	20	50% of 0 bar	26.7	88.8	26.7	6	SFO	Y, EFSA Journal 2016; 14(4):4453
Tama, USA [c)]	Silty clay loam	6.8	20	50% of 0 bar	15.0	82.4	24.2 a)	1	FOMC	Y, EFSA Journal 2016; 14(4):4453
Lleida, Spain [c)]	Clay loam	7.9	20	50% of 0 bar	47.4	175.3	48.8	1	SFO	Y, EFSA Journal 2016; 14(4):4453
Nambsheim, France [c)]	Sandy loam	7.6	20	50% of 0 bar	39.9	132.6	39.9	3	SFO	Y, EFSA Journal 2016; 14(4):4453
Sassafras,USA [c)]	Sandy loam	5.5	20	50% of 0 bar	17.2	57.3	17.2	5	SFO	Y, EFSA Journal 2016; 14(4):4453
Speyer 3A,Germany [d)]	Sandy loam	6.3	20	50% of 0 bar	28.9	-	26.4	11.58	SFO	Y, EFSA Journal 2016; 14(4):4453
Speyer 2.3, Germany (high dose) [e)]	Loamy sand	6.3	20	45%	39.8	132.1	35.6	3.5	SFO	Y, EFSA Journal 2016; 14(4):4453
						Geometric mean (n=19)	**24.9**			
						Maximum (n=19)	**66.7**			
						pH-dependency:	No			

a) DT50 back calculated as DT90/3.32

b) Gorman et al. (1997) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion onthe peer review of the active substance metsulfuron-methyl, EFSA (2015))

c) Allan (2010) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on the peerreview of the active substance metsulfuron-methyl, EFSA (2015))

d) Morlock (2006) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on thepeer review of the active substance metsulfuron-methyl, EFSA (2015))

e) Willems, Slangen & Hoitink (2003) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSAconclusion on the peer review of the active substance metsulfuron-methyl, EFSA (2015))

f) Stated as loamy sand in EFSA conclusion

Table 8.3-6: Summary of aerobic degradation rates for AE F145740 - laboratory studies

AE F145740, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.(°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**

CL L	Clay loam [a)]	7.1	20	40	57.9	192.4	37.2	17.5	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL FF	Loam	7.0	20	40	76.9	255.5	55.8	8.1	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	61.9	205.5	52.2	16.8	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
Honville	Silt loam	6.2	20	40	53.2	176.7	41.2	23.6	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
						Geometric mean (n=4)	**46**			
						Maximum (n=4)	**55.8**			
						pH-dependency:	No			

Table 8.3-7: Summary of aerobic degradation rates for AE F145741 - laboratory studies

AE F145741, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.(°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
SL S	Silt loam	7.3	20	40	10.3	34.1	7.0	16.3	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
CL L	Clay loam [a)]	7.1	20	40	8.0	26.5	5.1	25.2	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
LS S	Loamy sand	7.1	20	40	2.9	9.5	2.2	31.0	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL FF	Loam	7.0	20	40	57.5	191.0	41.7	12.2	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	17.8	59.0	15.0	23.6	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
						Geometric mean (n=5)	**8.7**			
						Maximum (n=5)	**41.7**			
						pH-dependency:	No			

[a)] Stated as loamy sand in EFSA conclusion

Table 8.3-8: Summary of aerobic degradation rates for AE F161778 - laboratory studies

AE F161778, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluatedon EU level y/n/ Refer-ence**
LS 2.2	Loamy sand	5.6	20	40	5.2	17.2	3.4	14.9	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
S 2.1	Sand	5.6	20	40	13.2	43.7	12.3	27.2	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL S	Silt loam	7.3	20	40	22.0	73.0	15.0	8.8	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
LS S	Loamy sand	7.1	20	40	10.5	35.0	7.9	16.7	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL FF	Loam	7.0	20	40	26.9	89.2	19.5	8.7	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CT	Clay	6.8	20	50	15.2	50.6	14.8	17.0	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	18.7	62.1	15.8	19.8	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
Honville	Silt loam	6.2	20	40	2.4	7.8	1.8	16.2	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
Arrow, UK [a)]	Sandy loam	6.4 (H_2O)	20	45	30.4	100.8	30.4	6	SFO	Y, EFSA Journal 2016; 14(4):4453
Gross-Umstadt, Germany [a)]	Loam	7.4 (H_2O)	20	45	28.3	91.4	28.3	6	SFO	Y, EFSA Journal 2016; 14(4):4453
Mattapex, USA [a)]	Silt loam	6.9 (H_2O)	20	45	28.6	95.0	28.6	4	SFO	Y, EFSA Journal 2016; 14(4):4453
LUFA Speyer 2.2 [b)]	Loamy sand	5.7 (H_2O)	20	45	2.44	-	2.44	3.66	SFO	Y, EFSA Journal 2016; 14(4):4453
LUFA Speyer 3A [b)]	Sandy loam	7.3 (H_2O)	20	45	12.8	-	12	7.92	SFO	Y, EFSA Journal 2016; 14(4):4453

LUFA Speyer 6S, Germany [b)]	Clay	7.1 (H_2O)	20	45	29.3	-	20.2	11.2	SFO	Y, EFSA Journal 2016; 14(4):4453
							Geometric mean (n=14)	**11.4**		
							Maximum (n=14)	**30.4**		
							pH-dependency:	No		

Table 8.3-9: Summary of aerobic degradation rates for AE 0000119 - laboratory studies

AE 0000119, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH ($CaCl_2$)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
SL V	Sandy loam	6.0	20	40	124.8	414.6	89.9	10.3	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
LS 2.2	Loamy sand	5.6	20	40	11.9	39.4	7.8	9.7	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
CL L	Clay loam [b)]	7.1	20	40	4.0	13.2	2.5	15.2	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
CT	Clay	6.8	20	50	13.4	44.4	8.0	17.0	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
Mattapex [a)]	Sandy loam	4.35	20	40 of 0Bar	9.8	33	9.0	11	SFO	Y, EFSA Journal 2016; 14(4):4453
Lleida a)	Silty clay	7.50	20	40 of 0Bar	6.6	22	5.6	5	SFO	Y, EFSA Journal 2016; 14(4):4453
Nambsheim [a)]	Sandy loam	7.01	20	40 of 0Bar	3.3	11	3.3	2	SFO	Y, EFSA Journal 2016; 14(4):4453
Goch [a)]	Silt loam	5.13	20	40 of 0 Bar	16.1 M0 = 95.3 K1 = 0.008 K2 = 0.175 g = 0.5	204.1	71.6 (based on slow phase rate constant)	3	DFOP	Y, EFSA Journal 2016; 14(4):4453

Suchozebry [a)]	Sandy loam	5.04	20	40 of 0Bar	24.8 M_0 = 94.2 K_1 = 0.003 K_2 = 0.097 g =0.5	542.8	231 (based on slow phase rate constant)	2	DFOP	Y, EFSA Journal 2016; 14(4):4453
Geometric mean (n=9)							**15**			
Maximum (n=9)							**231**			
pH-dependency:							No			

a) Tunink, A. (2009) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl and thifensulfuron methyl; refer to theEFSA conclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))

b) Stated as loamy sand in EFSA conclusion

Table 8.3-10: Summary of aerobic degradation rates for BCS-CW81253 - laboratory studies

BCS-CW81253, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH ($CaCl_2$)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
LS 2.2	Loamy sand	5.6	20	40	55.6	184.6	36.6	22.2	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL S	Silt loam	7.3	20	40	13.8	46.0	9.5	9.0	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
SL FF	Loam	7.0	20	30	22.3	74.0	16.1	5.2	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CT	Clay	6.8	20	50	54.2	179.9	52.7	9.1	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	11.4	37.8	9.6	18.3	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
Honville	Silt loam	6.2	20	40	149.4	496.4	115.7	14.4	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
Arrow, UK [a)]	Sandy loam	6.4 (H_2O)	20	45	52.5	174.5	52.5	11	SFO	Y, EFSA Journal 2016; 14(4):4453
Gross- Umstadt, Germany	Loam	7.4 (H_2O)	20	45	16.3	54	24.7	5	SFO	Y, EFSA Journal 2016; 14(4):4453

Mattapex, USA [a)]	Silt loam	6.9 (H2O)	20	45	24.7	82.2	16.3	12	SFO	Y, EFSA Journal 2016; 14(4):4453
Geometric mean (n=9)							**26.7**			
Maximum (n=9)							**115.7**			
pH-dependency:							No			

a) Lewis (2000) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on the peerreview of the active substance metsulfuron-methyl, EFSA (2015))

Table 8.3-11: Summary of aerobic degradation rates for AE F059411 - laboratory studies

AE F059411, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.(°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
SL S	Silt loam	7.3	20	40	222.1	737.9	152.0	7.4	SFO-SFO	Y, EFSA Journal 2016; 14(4):4453
CT	Clay	6.8	20	50	143.1	475.3	139.4	13.4	FOMC-SFO	Y, EFSA Journal 2016; 14(4):4453
CL B	Clay loam	7.2	20	50	328.1	1089.9	276.9	4.3	DFOP-SFO	Y, EFSA Journal 2016; 14(4):4453
Honville [b)]	Silt loam	6.7 (H2O)	20	40	260.1 [a)] (K1 = 0.01772 K2 = 0.00266 Tb = 25.9)	864 [a)]	201.6	3.0	HS [a)]	Y, EFSA Journal 2016; 14(4):4453
Keyport [c)]	Silt loam	4.3	25	70% FC	208	691	254	6.2	SFO	Y, EFSA Journal 2016; 14(4):4453
Gartenacker [d)]	Loam	6.9	20	pF2	102.2	34	102.2	3.5	SFO	Y, EFSA Journal 2016; 14(4):4453
18 Acres [d)]	Sandy clay loam	5.0	20	pF2	249.4	828	249.4	3.2	SFO	Y, EFSA Journal 2016; 14(4):4453
Krone [d)]	Silt loam	4.9	20	pF2	190.8	634	190.8	3.7	SFO	Y, EFSA Journal 2016; 14(4):4453
Soil 2.2 [e)]	Loamy sand	5.7 (H2O)	20	45	67.3	224	67.3	5.68	SFO	Y, EFSA Journal 2016; 14(4):4453

Soil 3A [e)]	Sandy loam	7.3 (H_2O)	20	45	188.4	626	175.7	5.64	SFO	Y, EFSA Journal 2016; 14(4):4453
Soil 6S [e)]	Clay loam	7.1 (H_2O)	20	45	333.2	1107	230.1	1.00	SFO	Y, EFSA Journal 2016; 14(4):4453
Arrow [f)]	Sandy loam	5.7	20	50	44.7 (K_1 = 0, fixed lag phase K_2 = 0.03082 Tb = 22.25d)	97	22.5	14	HS (DT_{50} calculated from slow phase)	Y, EFSA Journal 2016; 14(4):4453
Speyer 2.1 [g)]	Sand	5.5	20	pF2	112.5	374	112.5	2.9	SFO	Y, EFSA Journal 2016; 14(4):4453
Soil 115 [g)]	Clay loam	8.6	20	pF2	175.2	582	175.2	3.1	SFO	Y, EFSA Journal 2016; 14(4):4453
Soil 243 [g)]	Sandy loam	5.6	20	pF2	96.4	320.2	96.4	6.2	SFO	Y, EFSA Journal 2016; 14(4):4453
Geometric mean/Median (n=16)							**144**			
Maximum (n=16)							**276.9**			
pH-dependency: y/n							No			

[a)] DT_{50} as well as DT_{90} are calculated from the slow phase rate constant (k2).

[b)] Möndel (2001) (metabolite dosed study, accepted in the RAR for thifensulfuron methyl; refer to the EFSA conclusion on thepeer review of the active substance thifensulfuron methyl, EFSA (2015))

[c)] Rhodes (1987) (metabolite dosed study, accepted in the RAR for thifensulfuron methyl; refer to the EFSA conclusion on thepeer review of the active substance thifensulfuron methyl, EFSA (2015))

[d)] Jungmann, Nicollier (2006) (metabolite dosed study, accepted in the RAR for thifensulfuron methyl; refer to the EFSAconclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))

[e)] Morlock (2006a) (metabolite dosed study, accepted in the RAR for thifensulfuron methyl; refer to the EFSA conclusion on thepeer review of the active substance thifensulfuron methyl, EFSA (2015))

[f)] Scott (2000) (metabolite dosed study, accepted in the RARs for thifensulfuron methyl, metsulfuron methyl, prosulfuron and triasulfuron; refer to the EFSA conclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))

[g)] Wonders and Melkebeke (2002) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl and thifensulfuronmethyl; refer to the EFSA conclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))

Table 8.3-12: Summary of aerobic degradation rates for AE 0002166 - laboratory studies

AE 0002166, Laboratory studies, aerobic conditions										
Soil name	**Soil type (USDA)**	**pH ($CaCl_2$)**	**t.°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi^2 (%)**	**Kinetic model**	**Evaluated on EU level y/n/ Reference**
Laacher Hof Allla	Loam	6.1	20	55	10.1	33.6	10.1	4.1	SFO	Y, EFSA Journal 2016; 14(4):4453

Laacher Hof AXXa	Sandy loam	6.4	20	55	9.5	31.5	9.5	4.5	SFO	Y, EFSA Journal 2016; 14(4):4453
Hoefchen am Hohenseh 4a	Silt loam	6.3	20	55	7.2	24.0	7.2	5.9	SFO	Y, EFSA Journal 2016; 14(4):4453
Dollendorf II	Clay loam	7.1	20	55	4.7	15.7	4.7	6.3	SFO	Y, EFSA Journal 2016; 14(4):4453
Geometric mean (n=4)							**7.5**			
Maximum (n=4)							**10.1**			
pH-dependency:							No			

zRMS comments:

Soil degradation data of iodosulfuron-methyl-sodium are in line with EU agreed endpoints as reported in Journal 2016; 14(4):4453.

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

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

8.3.2.1 2,4-D and its metabolites

The anaerobic soil degradation of 2,4-D has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2014; 12(9):3812). No further studies are required.

Table 8.3-13: Summary of anaerobic degradation rates for 2,4-D - laboratory studies

2,4-D, laboratory studies, anaerobic conditions										
Soil name	**Soil type**	**pH**	**t°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level Y/N Reference**
RefeSol 03-G	Clay loam	6.9	20 ± 2	pF2	32	107	32	0.9861 (5.1 % err.)	SFO	Y, EFSA Journal 2014; 12(9):3812
Kenslow	Loam	5.8	20 ± 2	pF2	23	77	23	0.9778 (5.3 % err.)	SFO	Y, EFSA Journal 2014; 12(9):3812
Chelmorton	Silt loam	6.8	20 ± 2	pF2	38	127	38	0.9824 (3.9 % err.)	SFO	Y, EFSA Journal 2014; 12(9):3812

2,4-D, laboratory studies, anaerobic conditions										
Soil name	**Soil type**	**pH**	**t°C**	**MWHC %**	**DT_{50} (d)**	**DT_{90} (d)**	**DT_{50} (d) 20°C pF2/10kPa**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level Y/N Reference**
Long-woods	Sandy loam	8.1	20 ± 2	pF2	22	74	22	0.9031 (27.7 % err.)	SFO	Y, EFSA Journal 2014; 12(9):3812
Geometric mean/Median (n=4)							NR			
pH-dependency:							No			

8.3.2.2 Iodosulfuron-methyl-sodium and its metabolites

The anaerobic soil degradation of iodosulfuron-methyl-sodium has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2016; 14(4):4453). No further studies are required.

Table 8.3-14: Summary of anaerobic degradation rates for iodosulfuron-methyl-sodium - laboratory studies

Iodosulfuron-methyl-sodium, Laboratory studies, anaerobic conditions										
Soil name	**Soil type (USDA)**	**pH (CaCl2)**	**t.°C**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa**	**St. (r^2)**	**Kinetic model**	**Evaluatedon EU level y/n/ Reference**
LS 2.2	Silt loam	7.0	20	flooded	28.1	93.4	-	0.997	SFO	Y, EFSA Journal 2016; 14(4):4453
SL S	Loamy sand	6.0	20	flooded	14.3	47.5	-	0.990	SFO	Y, EFSA Journal 2016; 14(4):4453
Geometric mean/Median (n=2)							NR			
pH-dependency:							NR			

8.4 Field studies (KCP 9.1.1.2)

Field studies with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substances.

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

8.4.1.1 2,4-D and its metabolites

Not relevant. For 2,4-D no reliable field studies are available. No new studies has been submitted for the renewal for this active substance. According to EFSA Journal 2014; 12(9):3812 a data gap has been identified in this area. Nevertheless, laboratory DT_{50} values are below 10 days in most of tested soils except one. Accumulation of 2,4-D in soil is not expected. For modelling laboratory results were used.

8.4.1.2 Iodosulfuron-methyl-sodium and its metabolites

The soil dissipation of iodosulfuron-methyl-sodium has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2016; 14(4):4453). No further studies are required.

Table 8.4-1: Summary of aerobic degradation rates for iodosulfuron-methyl-sodium - field studies

Iodosulfuron-methyl-sodium, Field studies									
Soil type	**Location**	**pH a)**	**Depth (cm)**	**DT50 (d) actual**	**DT90 (d) actual**	**DT50 (d) Norm b)**	**St. (x^2)**	**Method of calculation**	**Evaluated on EU level y/n/ Reference**
Silt loam (Duerrn)	S Germany	6.9	0-30	-	-	10.3	14.3	SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam (Warpe)	N Germany	6.4	0-30	-	-	0.8	13.6	SFO	Y, EFSA Journal 2016; 14(4) :4453
Silt loam (Rotgla)	Spain	7.8	0-30	-	-	4.8	10.4	SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam (S. Jean de)	S France	7.4	0-30	-	-	2.4	17.1	SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt (Schleithal)	N France	5.8	0-30	-	-	3.7	8.0	SFO	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (n=5)						**3.2**			

a) Medium for measurement of soil pH not stated.
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7.

Table 8.4-2: Summary of aerobic degradation rates for AE F075736 - field studies

AE F075736, Field studies									
Soil type	**Location**	**pH a)**	**Depth (cm)**	**DissT50 (d) actual**	**DT90 (d) actual**	**DT50 (d) Norm b)**	**St. (x^2)**	**Method of calc.**	**Evaluated on EU level y/n/ Reference**
Silt loam (Duerrn)	S Germany	6.9	0-30	-	-	7.9	34.1	SFO-SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam (Warpe)	N Germany	6.4	0-30	-	-	19.0	38.0	SFO-SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam (Rotgla)	Spain	7.8	0-30	-	-	34.9	27.3	SFO-SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam (S. Jean de Blaignac)	S France	7.4	0-30	-	-	11.4	29.5	SFO-SFO	Y, EFSA Journal 2016; 14(4): 4453

Silt (Schleithal)	N France	5.8	0-30	6.9	22.8	6.9	35.6	SFO-SFO	Y, EFSA Journal 2016; 14(4): 4453
Silt loam*	N France	6.1	-	42.7	141.7	11.4	19	SFO best fit	Y, EFSA Journal 2016; 14(4): 4453
Loam*	UK	6.2	-	39.3	378.7	37.1	13	SFO best fit	Y, EFSA Journal 2016; 14(4): 4453
Sandy clay loam *	N Germany	7.0	-	20.3	67.6	10.1	9	SFO best fit	Y, EFSA Journal 2016; 14(4): 4453
Loam *	Italy	6.6	-	11.1	36.8	7.3	7	SFO best fit	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (if not pH dependent)						**13.2**			

* Aitken, Doig & Just (2012) (metabolite dosed study, accepted in the RAR for metsulfuron-methyl; refer to the EFSAconclusion on the peer review of the active substance metsulfuron-methyl, EFSA (2015))

a) Medium for measurement of soil pH not stated

b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7.

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

8.4.2.1 2,4-D and its metabolites

Not relevant. See point 8.4.1.1.

8.4.2.2 Iodosulfuron-methyl-sodium and its metabolites

Not relevant. See point 8.4.1.2.

8.5 Mobility in soil (KCP 9.1.2)

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

8.5.1 Laboratory studies (KCP 9.1.2.1)

8.5.1.1 2,4-D and its metabolites

The soil adsorption/desorption of 2,4-D and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2014; 12(9):3812). No further studies are required.

Table 8.5-1: Summary of soil adsorption/desorption for 2,4-D

2,4-D							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
M800	Clay loam	1.3	7.1	0.55	42	0.83	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M801	Loamy sand	1.1	5.2	0.45	41	0.83	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M802	Loam	2.5	5	0.42	17	0.82	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M803	Silt loam	3.6	5.9	0.83	23	0.87	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M804	Sandy loam	1.4	7.5	0.19	14	0.81	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M816	Silt loam	0.9	5.9	0.21	23	0.78	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
M822	Clay loam	4.4	7.2	0.51	12	0.9	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Soil I	Loamy sand	6.1	6.18	4.5	56.62	0.85	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Soil II	Silt loam[b]	1.7	5.56	2.42	44.85	0.59	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Soil III	Loamy sand[b]	1.4	4.04	4.18	126.79	0.63	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Soil VI	Silt[b]	1.5	5.65	3.21	50.38	0.56	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Soil V	Silt loam	1.6	5.33	1.25	52.6	0.83	Y, EFSA Journal 2014;12(9):3812 &

2,4-D							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
							Addendum to RAR (2014)
Plainfield	Sand	0.46[d]	5.6	0.357	76	0.882	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
California	Sandy loam[b]	0.58[d]	6.7	0.167	70	0.677	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Mississippi	Loam	0.23[d]	7	0.281	117	0.803	Y, Addendum to RAR (2014)
Arizona	Silty clay loam	0.87[d]	7.9	0.517	59	0.816	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Lorraine	Rendzinac	6.8-9.5	7	3.09	30.67	0.78	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Jura I	Humic Cambisols[c]	10.0 - 14.1	6.5 - 7.0	5.03	25.73	0.8	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Jura II	Mollic Cambisols[c]	4.5 - 9.2	6.8 - 7.8	4.99	39.42	0.72	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Ile de France	Calcic Cambisols[c]	0.9 - 1.4	7.0 - 7.5	0.54	26.09	0.78	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Lorraine/Jura	Dystric Cambisols[c]	1.4 - 2.6	4.5 - 5.4	1.19	40	0.73	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Lorraine	Gleyic Cambisols[b,c]	1.3 - 1.5	6.2 - 6.5	1.27	57.14	0.68	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Martinique	Vertisols[b,c]	2.0 - 2.9	5.9 - 6.3	2.44	53.06	0.61	Y, Addendum to RAR (2014)
Brazil	Ferralsols[c]	1.2 - 4.7	4.2 - 5.5	16.81	311.86	0.75	Y, Addendum to RAR (2014)
Martinique	Andosols[c]	9.2 - 10.7	4.3 - 4.4	32.55	267.33	0.8	Y, Addendum to RAR (2014)

2,4-D							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
Louisiana	Clay	2.09[d]	7.3	-[e]	58.1	0.83	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Chromoxerert (0-10cm)	Silty Clay	2.57[d]	7.9	0.82	31.91[g, h]	0.91	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Chromoxerert (10-20cm)	Clay	1.40[d]	7.8	0.37	26.46[g, h]	0.99	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Chromoxerert (35-40cm)	Clay[b]	1.10[d]	7.7	0.16	14.85[g, h]	1.16	Y, Addendum to RAR (2014)
Pelloxerert I (0-20cm)	Clay	0.97[d]	7.6	0.62	68.79[g, h]	0.90	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Pelloxerert I (20-40cm)	Clay	0.60[d]	7.6	0.53	88.61[g, h]	0.87	Y, Addendum to RAR (2014)
Pelloxerert I (120-150cm)	Clay	0.51[d]	7.8	0.18	35.26[g, h]	0.95	Y, Addendum to RAR (2014)
Pelloxerert II (0-10cm)	Clay	0.98[d]	7.7	0.77	78.54[g, h]	0.90	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Pelloxerert II (90-100cm)	Clay	0.84[d]	8.3	0.30	35.65[g, h]	1.02	Y, Addendum to RAR (2014)
Xerofluvent I (0-10 cm)	Clay loam	1.29[d]	7.7	0.77	59.79[g, h]	0.96	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Xerofluvent II (0-10 cm)	Sandy loam	0.71[d]	7.2	0.93	131.42[g, h]	0.90	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Xerofluvent II (10-20 cm)	Sandy loam	0.37[d]	6.9	0.78	382.42[g, h]	0.97	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Xerofluvent III (0-20 cm)	Sandy clay loam	2.73[d]	6.3	3.08	112.97[g, h]	0.88	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Eutrochrepts I (0-25 cm)	Loam	1.86[d]	6.5	1.43	77.03[g, h]	0.90	Y, Addendum to RAR (2014)

2,4-D							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
Eutrochrepts I (50-100 cm)	Loam	0.68[d]	6.8	1.14	167.97[g, h]	0.94	Y, Addendum to RAR (2014)
Haploxeralf (0-10 cm)	Loam	2.41[d]	6.5	1.64	68.11[g, h]	0.93	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Haploxeralf (10-40 cm)	Clay loam	0.47[d]	6.5	0.43	91.51[g, h]	0.96	Y, Addendum to RAR (2014)
Haploxeralf (70-100 cm)	Silty loam	0.28[d]	6.5	0.41	147.25[g, h]	0.82	Y, Addendum to RAR (2014)
Eutrochrepts II (0-25 cm)	Silty loam	2.52[d]	7.8	2.20	87.39[g, h]	0.92	Y, Addendum to RAR (2014)
Eutrochrepts II (50-85 cm)	Clay loam	0.49[d]	7.7	0.68	139.56[g, h]	0.96	Y, Addendum to RAR (2014)
no. 20[f]	soil	-	-	2.23	116.85[h]	0.95	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Illinois	Silt loam	2.23	5.9	-[e]	41	0.896	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
California	Silt loam[b]	0.22	7.5	-[e]	31	0.632	Y, Addendum to RAR (2014)
North Dakota	Loam	3.08	6.8	-[e]	35	0.930	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Mississippi	Clay	1.26	7	-[e]	74	0.795	Y, EFSA Journal 2014;12(9):3812 & Addendum to RAR (2014)
Median (n=35)					58.6	-	**(PECsw/sed modelling, PECgw modelling)**
Geometric mean (n=35)					-	-	
Arithmetic mean (n=35)					-	0.87	**(PECsw/sed modelling, PECgw modelling)**
pH-dependency:					N		

Table 8.5-2: Summary of soil adsorption/desorption for 2,4-DCP

2,4-DCP							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
M800	Clay Loam	1.3	7.1	10	765	0.85	Y, EFSA Journal 2014;12(9):3812
M801	Loamy Sand	1.1	5.2	4	405	0.80	Y, EFSA Journal 2014;12(9):3812
M802	Loam	2.5	5.0	16	655	0.94	Y, EFSA Journal 2014;12(9):3812
M803	Silt Loam	3.6	5.9	25	690	0.94	Y, EFSA Journal 2014;12(9):3812
M804	Sandy Loam	1.4	7.5	3	244	0.88	Y, EFSA Journal 2014;12(9):3812
M816	Silt Loam	0.9	5.9	5	574	0.83	Y, EFSA Journal 2014;12(9):3812
M822	Clay Loam	4.4	7.2	11	250	0.93	Y, EFSA Journal 2014;12(9):3812
Plainfield	Sand	0.46	5.6	-	368	0.906	Y, EFSA Journal 2014;12(9):3812
Arizona	Silty clay loam	0.87	7.9	-	374	0.739	Y, EFSA Journal 2014;12(9):3812
Median (n=9)					405	-	
Geomethric mean (n=9)					**444**	-	
Arithmetic mean (n=9)					-	0.868	
pH-dependency:					N		

Table 8.5-3: Summary of soil adsorption/desorption for 2,4-DCA

2,4-DCA							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
M800	Clay Loam	1.3	7.1	18	1386	0.85	Y, EFSA Journal 2014;12(9):3812
M801	Loamy Sand	1.1	5.2	18	1630	0.93	Y, EFSA Journal 2014;12(9):3812
M802	Loam	2.5	5.0	21	841	0.93	Y, EFSA Journal 2014;12(9):3812
M803	Silt Loam	3.6	5.9	27	746	0.93	Y, EFSA Journal 2014;12(9):3812
M804	Sandy Loam	1.4	7.5	12	836	0.95	Y, EFSA Journal 2014;12(9):3812

2,4-DCA							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level Y/N Reference**
M816	Silt Loam	0.9	5.9	10	1137	0.92	Y, EFSA Journal 2014;12(9):3812
M822	Clay Loam	4.4	7.2	27	622	0.92	Y, EFSA Journal 2014;12(9):3812
Plainfield	Sand	0.46	5.6	-	436	0.955	Y, EFSA Journal 2014;12(9):3812
California	Sandy loam	0.58	6.7	-	667	0.978	Y, EFSA Journal 2014;12(9):3812
Arizona	Silty clay loam	0.87	7.9	-	616	0.809	Y, EFSA Journal 2014;12(9):3812
Median (n=9)					791	-	
Geometric mean (n=9)					**827**	-	
Arithmetic mean (n=9)					-	0.917	
pH-dependency:					N		

zRMS comments:

Soil mobility data for 2,4-D and its metabolites are in line with EU agreed endpoints EFSA 2014;12(9):3812. On this basis higher Kfoc of 58.6 mL/g could be used to calculations (Addendum to the RAR).

8.5.1.2 Iodosulfuron-methyl-sodium and its metabolites

The soil adsorption/desorption of iodosulfuron-methyl-sodium and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2016; 14(4): 4453). No further studies are required.

Table 8.5-4: Summary of soil adsorption for iodosulfuron-methyl-sodium

Iodosulfuron-methyl-sodium							
Soil name	**Soil type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
S 2.1	Sand	1.2	5.6 [a)]	0.12	10	0.70	Y, EFSA Journal 2016; 14(4): 4453
LS 2.2	Loamy sand	2.5	5.7 [a)]	0.54	22	0.93	Y, EFSA Journal 2016; 14(4): 4453
SL V	Sandy loam	1.1	6.0 [a)]	0.13	12	1.03	Y, EFSA Journal 2016; 14(4): 4453
SL 2	Silt loam	0.7	5.4 [a)]	1.05	152	0.87	Y, EFSA Journal 2016; 14(4): 4453

CLM	Clay loam	2.8	7.2 a)	2.47	90	0.80	Y, EFSA Journal 2016; 14(4): 4453
SLJ	Sandy loam	2.5	7.5 a)	2.03	82	0.85	Y, EFSA Journal 2016; 14(4): 4453
FL	Loam	3.0	7.3 a)	0.694	22.8	0.89	Y, EFSA Journal 2016; 14(4): 4453
FB	Clay loam	2.4	7.2 a)	0.368	15.5	0.86	Y, EFSA Journal 2016; 14(4): 4453
Honville	Loamy silt	0.9	5.9 b)	0.451	49.5	0.92	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (n=9)					**33.4**	-	
Arithmetic mean (n=9)					50.6	**0.87**	
pH-dependency y/n					No		

a) Medium for the measurement of soil pH not stated.
b) In $CaCl_2$.

Table 8.5-5: Summary of soil adsorption for AE F075736

AE F075736							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
FL	Loam	3.0	7.3 a)	0.134	4.3	0.94	Y, EFSA Journal 2016; 14(4): 4453
FB	Clay loam	2.4	7.2 a)	0.067	2.9	0.89	Y, EFSA Journal 2016; 14(4): 4453
SL S	Silt loam	2.1	7.0 a)	0.106	5.1	0.86	Y, EFSA Journal 2016; 14(4):4453
LS 2.2	Loamy sand	2.0	6.0 a)	0.145	7.4	0.92	Y, EFSA Journal 2016; 14(4): 4453
SL V	Sandy loam	0.4	6.0 a)	0.065	15.1	0.90	Y, EFSA Journal 2016; 14(4): 4453
LUFA 2.2	Loamy sand	2.2	5.8 a)	0.530	24.2	0.91	Y, EFSA Journal 2016; 14(4): 4453
Honville	Loamy silt	0.9	6.7 a)	0.241	26.5	0.96	Y, EFSA Journal 2016; 14(4): 4453
Flanagan b)	Silt loam	2.3	6.5 a)	1.4	60	0.97	Y, EFSA Journal 2016; 14(4): 4453
Keyport (USA) b)	Silt loam	1.6	6.4 a)	0.84	53	0.85	Y, EFSA Journal 2016; 14(4): 4453
Cecil (USA) b)	Sand	0.2	6.1 a)	0.36	207	1.14	Y, EFSA Journal 2016; 14(4): 4453
Bow Island (Canada) c)	Sandy loam	1.3	7.1 a)	0.05	4	0.97	Y, EFSA Journal 2016; 14(4): 4453
Tangent (Canada) c)	Clay loam	2.6	5.3 a)	0.3	12	0.95	Y, EFSA Journal 2016; 14(4): 4453
Dauphin (Canada) c)	Sandy clay loam	3.4	7.5 a)	0.3	9	0.95	Y, EFSA Journal 2016; 14(4): 4453

Bradwell (Canada) [c]	Loam	2.1	7.6 [a]	0.15	7	1.1	Y, EFSA Journal 2016; 14(4): 4453
Hanley Res. (Canada) [c]	Loam	2.3	5.4 [a]	0.65	29	1.03	Y, EFSA Journal 2016; 14(4): 4453
Foam Lake (Canada) [c]	Sandy loam	3	7.7 [a]	0.35	12	1.06	Y, EFSA Journal 2016; 14(4): 4453
Fisher Branch (Canada) [c]	Clay loam	4.2	7.5 [a]	0.6	14	0.94	Y, EFSA Journal 2016; 14(4): 4453
Drummer (USA) [d]	Silt loam	3.2	6.4 [a]	1.5	47	0.85	Y, EFSA Journal 2016; 14(4): 4453
Lleida (Spain) [d]	Silty clay	1.8	7.9 [a]	0.13	6.9	0.95	Y, EFSA Journal 2016; 14(4): 4453
Gross-Umstadt (Germany) [d]	Loam	1.3	7.2 [a]	0.1	7.8	0.95	Y, EFSA Journal 2016; 14(4): 4453
Sassafras (USA) [d]	Sand	1.4	5.3 [a]	0.48	35	0.9	Y, EFSA Journal 2016; 14(4): 4453
Nambsheim (France) [d]	Sandy loam	1.3	7.1 [a]	0.05	4	0.97	Y, EFSA Journal 2016; 14(4): 4453
				Geometric mean (n=22)	**14.0**	-	
				Arithmetic mean (n=22)	27.0	**1**.0	
				pH-dependency	No		

a) Medium for the measurement of soil pH not stated

b) Friedman (1981) (accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

c) Yang (1987) (accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

d) Allan (2011) (accepted in the RAR for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

Table 8.5-6: Summary of soil adsorption for AE F145740

AE F145740							
Soil Name	**Soil Type**	**OC (%)**	**pH (CaCl2)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Laacher Hof AXXa	Sandy loam	2.0	6.5	0.27	13.5	0.91	Y, EFSA Journal 2016; 14(4): 4453
Dollendorf II	Silty clay loam	4.9	7.4	0.61	12.5	0.91	Y, EFSA Journal 2016; 14(4): 4453
Höfchen am Hohenseh 4a	Silt loam	2.1	6.5	0.39	18.7	0.90	Y, EFSA Journal 2016; 14(4): 4453
Hanscheider Hof	Sandy loam	2.9	5.4	0.95	32.6	0.95	Y, EFSA Journal 2016; 14(4): 4453
				Geometric mean (n=4)	**17.9**	-	
				Arithmetic mean (n=4)	19.3	**0.92**	
				pH-dependency	No		

Table 8.5-7: Summary of soil adsorption for AE F161778

AE F161778							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Hattersheim	Silty loam	1.9	6.4 a)	0.754	39.7	0.96	Y, EFSA Journal 2016; 14(4): 4453
Baumber	Loamy sand	2.2	7.3 a)	0.753	34.2	0.98	Y, EFSA Journal 2016; 14(4): 4453
Empingham	Sandy clayey loam	4.6	7.4 a)	0.940	20.4	0.94	Y, EFSA Journal 2016; 14(4): 4453
Gross-Umstadt (Germany) c)	Silt loam	1.2	7.7 b)	0.4	34	1.08	Y, EFSA Journal 2016; 14(4): 4453
Arrow (UK) c)	Sandy loam	2.3	5.7 b)	0.6	24.2	0.92	Y, EFSA Journal 2016; 14(4):4453
Mattapex (USA) c)	Silt loam	2.6	6.4 b)	0.8	30.4	0.84	Y, EFSA Journal 2016; 14(4):4453
Geometric mean (n=6)					**29.7**	-	
Arithmetic mean (n=6)					30.5	**1.0**	
pH-dependency					No		

a) In $CaCl_2$

b) Medium for the measurement of soil pH not stated

c) Yeomans (1999c) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

Table 8.5-8: Summary of soil adsorption for BCS-CW81253

BCS-CW81253							
Soil Name	**Soil Type**	**OC (%)**	**pH (CaCl2)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Laacher Hof AXXa	Loamy sand	1.6	6.4 a)	0.73	45.4	0.91	Y, EFSA Journal 2016; 14(4): 4453
Dollendorf II	Clay loam	5.0	7.2 a)	0.99	19.9	0.89	Y, EFSA Journal 2016; 14(4): 4453
Höfchen am Hohenseh 4a	Silt loam	1.7	6.3 a)	0.77	45.2	0.90	Y, EFSA Journal 2016; 14(4): 4453
Hanscheider Hof	Sandy loam	2.9	5.4 a)	1.06	36.5	0.89	Y, EFSA Journal 2016; 14(4): 4453
Gross-Umstadt (Germany) c)	Silt loam	1.2	7.7	0.97 (Kd)	81	1.0	Y, EFSA Journal 2016; 14(4): 4453
Arrow (UK) c)	Sandy loam	2.3	5.7	0.9	41	0.86	Y, EFSA Journal 2016; 14(4): 4453
Mattapex (USA) c)	Silt loam	2.6	6.4	1.2	45	0.92	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (n=7)					**41.7**	-	

Arithmetic mean (n=7)	44.9	**0.91**	
pH-dependency y/n	No		

a) In $CaCl_2$

b) Medium for the measurement of soil pH not stated

c) Yeomans (1999c) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

Table 8.5-9: Summary of soil adsorption for AE 0000119

AE 0000119							
Soil Name	**Soil Type**	**OC (%)**	**pH (CaCl2)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Wurmwiese	Loam	1.8	5.3	1.103	61.3	0.93	Y, EFSA Journal 2016; 14(4): 4453
Höfchen am Hohenseh 4a	Silt loam	2.4	6.6	1.702	70.9	0.91	Y, EFSA Journal 2016; 14(4): 4453
Guadalupe	Sandy loam	0.7	6.7	1.772	253.2	0.92	Y, EFSA Journal 2016; 14(4): 4453
Springfield	Silt loam	1.7	6.6	5.985	352.0	0.89	Y, EFSA Journal 2016; 14(4): 4453
Tama, (USA) [a)]	Silty clay loam	3.1	6.3	5.97	194	0.9297	Y, EFSA Journal 2016; 14(4): 4453
Sassafras (USA) [a)]	Sand	1.4	6.3	0.969	69.4	0.9021	Y, EFSA Journal 2016; 14(4): 4453
Lleida (Spain) a)	Silty clay	1.8	7.5	1.51	84.0	0.9364	Y, EFSA Journal 2016; 14(4): 4453
Nambsheim (France) a)	Sandy loam	1.6	7.0	0.908	57.9	0.9290	Y, EFSA Journal 2016; 14(4): 4453
Suchozebry (Poland) a)	Sandy loam	0.76	5.0	1.24	164	0.8686	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (n=9)					**117.2**	-	
Arithmetic mean (n=9)					145.2	**0.91**	
pH-dependency y/n					No		

a) Elliott, T. (2009) (accepted in the RARs for metsulfuron-methyl and thifensulfuron methyl; refer to the EFSA conclusion on thepeer review of the active substance thifensulfuron methyl, EFSA (2015))

Table 8.5-10: Summary of soil adsorption for AE F059411

AE F059411							
Soil Name	**Soil Type**	**OC (%)**	**pH (-)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
SL S	Silt loam	2.1	7.0 [a)]	0.443	21.3	0.87	Y, EFSA Journal 2016; 14(4): 4453
LS 2.2	Loamy sand	2.0	6.0 [a)]	0.298	15.3	0.91	Y, EFSA Journal 2016; 14(4): 4453

SL V	Sandy loam	0.4	6.0 [a)]	0.315	73.3	0.84	Y, EFSA Journal 2016; 14(4): 4453
Honville	Loamy silt	0.9	6.7 [a)]	1.57	172.0	0.84	Y, EFSA Journal 2016; 14(4): 4453
Laacher Hof Wurmwiese	Loam	1.8	5.3 [b)]	1.321	73.4	0.92	Y, EFSA Journal 2016; 14(4): 4453
Hoefchen am Ho-henseh 4a	Silt loam	2.4	6.6 [b)]	0.481	20.0	0.98	Y, EFSA Journal 2016; 14(4): 4453
Les Cayades	Clay loam	0.9	7.6 [b)]	0.561	62.3	0.92	Y, EFSA Journal 2016; 14(4): 4453
Guadalupe	Sandy loam	0.7	6.7 [b)]	0.675	96.5	0.95	Y, EFSA Journal 2016; 14(4): 4453
Springfield	Silt loam	1.7	6.6 [b)]	3.147	185.1	0.90	Y, EFSA Journal 2016; 14(4): 4453
Gross-Umstadt [d)]	Silt loam	1.2	7.7 [a)]	0.2	18.8	1.05	Y, EFSA Journal 2016; 14(4): 4453
Arrow [d)]	Sandy loam	2.3	5.7 [a)]	0.7	29.7	0.94	Y, EFSA Journal 2016; 14(4): 4453
Mattapex [d)]	Silt loam	2.6	6.4 [a)]	0.4	16.7	0.96	Y, EFSA Journal 2016; 14(4): 4453
Matapeake [e)]	Silt loam	1.1	5.3 [a)]	2.36	214.2	0.841	Y, EFSA Journal 2016; 14(4): 4453
Sassafras [e)]	Sand	0.46	6.3 [a)]	0.621	133.8	0.784	Y, EFSA Journal 2016; 14(4): 4453
Drummer [e)]	Silty clay loam	3.02	5.7 [a)]	6.8	225.5	0.841	Y, EFSA Journal 2016; 14(4): 4453
Myaka [e)]	Sand	0.58	6.2 [a)]	0.264	45.52	0.873	Y, EFSA Journal 2016; 14(4): 4453
Agriculutural sand [f)]	Sand	0.35	7.9 [a)]	0.2326	66.5	0.87	Y, EFSA Journal 2016; 14(4): 4453
Sandy loam [f)]	Sandy loam	0.99	7.8 [a)]	0.57	58.2	0.902	Y, EFSA Journal 2016; 14(4): 4453
Silt loam [f)]	Silt loam	1.74	6.5 [a)]	0.9612	55.2	0.847	Y, EFSA Journal 2016; 14(4): 4453
Silty clay loam [f)]	Silty clay loam	0.7	6.9 [a)]	1.201	171.6	0.823	Y, EFSA Journal 2016; 14(4): 4453
2.2 [g)]	Silty sand	1.97	5.4 [a)]	0.3728	18.92	0.64	Y, EFSA Journal 2016; 14(4): 4453
3A [g)]	Sandy loam	2.42	7.3 [a)]	0.435	17.97	0.759	Y, EFSA Journal 2016; 14(4): 4453

6S [g)]	Clay loam	1.84	6.9 [a)]	0.0543	2.95	1.422	Y, EFSA Journal 2016; 14(4): 4453
Speyer 2.1 [h)]	-	0.56	6.0 [c)]	0.2025	36	0.92	Y, EFSA Journal 2016; 14(4): 4453
Standard soil no. 115 [h)]	-	1.7	7.4 [c)]	0.6255	37	0.89	Y, EFSA Journal 2016; 14(4): 4453
Standard soil no. 164 [h)]	-	3	6.5 [c)]	0.645	22	0.92	Y, EFSA Journal 2016; 14(4): 4453
Standard soil no. 243 [h)]	-	1.1	4.3 [c)]	0.337	31	0.91	Y, EFSA Journal 2016; 14(4): 4453
Geometric mean (n=27)					**45.6**	-	
Arithmetic mean (n=27)					71.1	**0.90**	
pH-dependency y/n					No		

a) Medium for the measurement of soil pH not stated.
b) In $CaCl_2$.
c) In Ca/KCl_2
d) Yeomans & Swales (2000) (accepted in the RARs for metsulfuron-methyl, triasulfuron, prosulfuron and thifensulfuron methyl;refer to the EFSA conclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))
e) Li & McFetridge (1996) (accepted in the RARs for chlorsulfuron, metsulfuron-methyl, triasulfuron, prosulfuron and thifensulfuron methyl; refer to the EFSA conclusion on the peer review of the active substance thifensulfuron methyl,EFSA (2015))
f) Kersterson (1990) (accepted in the RARs for metsulfuron-methyl, triasulfuron, prosulfuron and thifensulfuron methyl; refer tothe EFSA conclusion on the peer review of the active substance thifensulfuron methyl, EFSA (2015))
g) Morlock (2006) (accepted in the RARs for metsulfuron-methyl and thifensulfuron methyl; refer to the EFSA conclusion on thepeer review of the active substance thifensulfuron methyl, EFSA (2015))
h) Van Noorloos & Slangen (2001) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peerreview of the active substance thifensulfuron methyl, EFSA (2015))

zRMS comments:

Soil mobility data of iodosulfuron-methyl-sodium and its metabolites are in line with EU agreed endpoints EFSA Journal 2016; 14(4): 4453.

8.5.2 Lysimeter studies (KCP 9.1.2.2)

8.5.2.1 2,4-D and its metabolites

Not relevant. Lysimeter studies were performed for 2,4-D and summarised in EFSA Journal 2014; 12(9):3812. The lysimeter study was performed with 750 g as/ha/year. Product was applied in 15 June to winter rye. 2,4-D as well as its metabolites were not detected in any of the analysed leachate or in the soil layers of the lysimeters at the end of the incubation period (after 2 years). Detailed results are not reported here, since potential leaching of active substances and its metabolites to groundwater after application of JMD-HER 387 OD is low and lysimeter studies are not essential. For details see point 8.8.

8.5.2.2 Iodosulfuron-methyl-sodium and its metabolites

Lysimeter studies for iodosulfuron-methyl-sodium has been evaluated and summarised in the EFSA conclusion (EFSA Journal 2016;14(4):4453). The results of two lysimeter studies were only considered indicative. Even under realistic worst-case conditions for leaching, in one study an atypical leaching event has been established, and at factor 1.5 exaggerated maximum application rate, neither iodosulfuron-methyl-sodium nor its main soil metaboliteAE F075736, or any other metabolite, leached at concentrations that pose a risk to ground water.

8.5.3 Field leaching studies (KCP 9.1.2.3)

8.5.3.1 2,4-D and its metabolites

Not relevant. No studies submitted.

8.5.3.2 Iodosulfuron-methyl-sodium and its metabolites

Not relevant. No studies submitted.

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

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

8.6.1 2,4-D and its metabolites

The water/sediment degradation of 2,4-D and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2014; 12(9):3812). No further studies are required.

Table 8.6-1: Summary of degradation in water/sediment of 2,4-D

2,4-D distribution (max. water 100% after 0 days and max. sediment 24.7% after 7 days)									
Water/sedi-ment system	**pH water/ sed.**	**DegT$_{50}$ whole syst. (d)**	**DegT$_{90}$ whole syst. (d)**	**DissT$_{50}$ water (d)**	**DissT$_{90}$ water (d)**	**DissT$_{50}$ sed. (d)**	**DissT$_{90}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Pond system (loamy sand)	6.5 / 6.4	18	60	12.6	41.9	9.8	32.6	SFO	EFSA Journal 2014;12(9):3812
Pond system (silt loam)	8.3 / 7.8	6.4	21.1	4.7	15.7	-	-	SFO	EFSA Journal 2014;12(9):3812
Pond system (silty clay loam)	6.9 / 7.8	29 DT$_{50norm}$ = 52	96.3	-	-	-	-	SFO	EFSA Journal 2014;12(9):3812
Geometric mean (n=3)		**18.16**	-	7.7	-	9.8	-	-	-

Table 8.6-2: Summary of degradation in water/sediment of 2,4-DCP

2,4-D distribution (max. water 2.6% after 26 days and max. sediment 31.8% after 13 days)									
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**$DissT_{50}$ sed. (d)**	**$DissT_{90}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Pond system (loamy sand)	6.5 / 6.4	1000[a b]	-	-	-	197.2	654.7	SFO	EFSA Journal 2014;12(9):3812
Pond system (silt loam)	8.3 / 7.8	10.8[c]	-	-	-	11	36.6	FOMC	EFSA Journal 2014;12(9):3812
Geometric mean (n=2)		**103.9**	-	7.7	-	46.6	-	-	

a No acceptable fit could be derived.
b Default value
c According to FOCUS (2006) the DT_{50} was back-calculated from DT_{90}/3.32 of the FOMC kinetic model and should be used for modelling.

Table 8.6-3: Summary of observed 2,4-D metabolites

2,4-DCP	Max. in water/sediment 32.1% (calculated in the kinetic evaluation water/sediment study)	Y, EFSA Journal 2014;12(9):3812
2,4-DCA	Max. in water/sediment 5.3% (calculated in the kinetic evaluation water/sediment study)	Y, EFSA Journal 2014;12(9):3812
2-CP	Max. in water/sediment 6.9%	Y, EFSA Journal 2014;12(9):3812
1,2,4-benzenetriol	Max. in water/sediment 31.7 % (photolytic degradation)	Y, EFSA Journal 2014;12(9):3812

8.6.2 Iodosulfuron-methyl-sodium and its metabolites

The water/sediment degradation of iodosulfuron-methyl-sodium and its metabolites has been evaluated, full details are provided in the respective EU reference and related documents and summarised in the EFSA conclusion (EFSA Journal 2016;14(4)). No further studies are required.

Table 8.6-4: Summary of degradation in water/sediment of iodosulfuron-methyl-sodium

Iodosulfuron-methyl-sodium Distribution: mainly distributed to water phase										
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**Kinetic, Fit**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**Kinetic, Fit**	**$DissT_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Nidda	8.3 / -	20.4	68.0	SFO	19.0	63.3	SFO	21.2	SFO	Y/ EFSA Journal 2016;14(4)
Rhine	7.7 / -	11.3	37.6	SFO	10.5	34.8	SFO	2.2	FOMC	Y/ EFSA Journal 2016;14(4)

Pikeville	7.1 / 5.4 [a]	33.9	112.7	SFO	28.4	94.4	SFO	- [b]	SFO	Y/ EFSA Journal 2016;14(4)
Geometric mean (n=3)		**19.8**	66.1		17.8	59.2		6.8		

a) measured in $CaCl_2$

b) no reliable value determinable

Table 8.6-5: Summary of degradation in water/sediment of AE F075736

AE F075736 Distribution; max. 67.8% total system (43 d), 57% water (43 d), 15.9% sediment (14 d)										
Water/sediment system	**pH water/ sed.**	**DegT$_{50}$ whole syst. (d)**	**DegT$_{90}$ whole syst. (d)**	**Kinetic, Fit**	**DissT$_{50}$ water (d)**	**DissT$_{90}$ water (d)**	**Kinetic, Fit**	**DissT$_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Nidda	8.3 / -	68.4	227.4	SFO	169.4	562.9	SFO	134.9	SFO	Y/ EFSA Journal 2016;14(4)
Rhine	7.7 / -	39.2	130.4	SFO	24.0	79.7	SFO	29.4	SFO	Y/ EFSA Journal 2016;14(4)
Pikeville	7.1 / 5.4 [a]	97.8	324.9	SFO	- [b]		SFO	- [b]	SFO	Y/ EFSA Journal 2016;14(4)
Birkenbach [e]	8 / 7.2	272.5	905.1	SFO	231.3	857.5	DFOP	>1000	FOMC	Y/ EFSA Journal 2016;14(4)
Unter- Wid-dersheim [e]	7.6 / 7.6	50.2	166	SFO	45.3	150.4 [c]	SFO	41.1	SFO	Y/ EFSA Journal 2016;14(4)
Pond [f]	7.7 / 7.3	305.5 [c]	1014 [c]	SFO	180.4 [c]	599.1 [c]	SFO	>1000 [c]	SFO	Y/ EFSA Journal 2016;14(4)
Creek [g]	8.3 / -	605.5 [c]	1973 [c),d)]	SFO/DFOP	413.4 [c]	1373 [c]	SFO	>1000 [c]	SFO	Y/ EFSA Journal 2016;14(4)
Geometric mean (n=7)		**131.0**	433.9		113.4	410.1		- [h]		

a) measured in $CaCl_2$

b) no reliable value determinable

c) Extrapolated beyond the study period

d) Calculated form slow phase of DFOP model (ln(2)/k2)

e) Knoch, E., Dust M. (1999) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peer review ofthe active substance metsulfuron-methyl, EFSA (2015))

f) Morlock (2006n) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

g) Morlock (2006m) (accepted in the RARs for metsulfuron-methyl; refer to the EFSA conclusion on the peer review of the activesubstance metsulfuron-methyl, EFSA (2015))

h) no geomean determinable with relative values of > 1000

Table 8.6-6: Summary of degradation in water/sediment of AE F145740

AE F145740 Distribution: max. 12.6% total system (60-79 d), 9.2% water (79 d), 3.5% sediment (60-79 d)

Water/sediment system	pH water/ sed.	$DegT_{50}$ whole syst. (d)	$DegT_{90}$ whole syst. (d)	Kinetic, Fit	$DissT_{50}$ water (d)	$DissT_{90}$ water (d)	Kinetic, Fit	$DissT_{50}$ sed. (d)	Kinetic, Fit	Evaluated on EU level y/n/ Reference
Pikeville	7.1 / 5.4 [a)]	45.4	150.9	SFO	- [b)]	- [b)]	- [b)]	- [b)]	- [b)]	Y/ EFSA Journal 2016;14(4)
Endpoint		**45.4**								

a) measured in CaCl2

[b)] no reliable value determinable

Table 8.6-7: Summary of degradation in water/sediment of AE F145741

AE F145741 Distribution: max. 8.7% total system (46 d), 7.0% water (46 d), 1.9% sediment (79-100 d)										
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**Kinetic, Fit**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**Kinetic, Fit**	**$DissT_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Pikeville	7.1 / 5.4 [a)]	73.4	243.7	SFO	- [b)]	- [b)]	- [b)]	- [b)]	- [b)]	Y/ EFSA Journal 2016;14(4)
Endpoint		**73.4**								

a) measured in $CaCl_2$

[b)] no reliable value determinable

Table 8.6-8: Summary of degradation in water/sediment of AE 0000119

AE 0000119 Distribution: max. 24.9% total system (120 d), 17.7% water (91 d), 15.0% sediment (182 d)										
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**Kinetic, Fit**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**Kinetic, Fit**	**$DissT_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Nidda	8.3 / -	27.1	90.2	SFO	- [a)]	- [a)]	- [a)]	- [a)]	- [a)]	Y/ EFSA Journal 2016;14(4)
Rhine	7.7 / -	29.8	98.9	SFO	84.6	281.0	SFO	- [a)]	- [a)]	Y/ EFSA Journal 2016;14(4)
Geometric mean (n=2)		**28.4**								

[a)] no reliable value determinable

Table 8.6-9: Summary of degradation in water/sediment of AE F059411

AE F059411 Distribution: max. 27.5% total system (182 d), 19.3% water (182 d), 8.3% sediment (182 d)

Water/sediment system	pH water/ sed.	$DegT_{50}$ whole syst. (d)	$DegT_{90}$ whole syst. (d)	Kinetic, Fit	$DissT_{50}$ water (d)	$DissT_{90}$ water (d)	Kinetic, Fit	$DissT_{50}$ sed. (d)	Kinetic, Fit	Evaluated on EU level y/n/ Reference
Nidda	8.3 / -	9.9	32.8	SFO	- a)	- a)	- a)	- a)	- a)	Y/ EFSA Journal 2016;14(4)
Endpoint		**9.9**								

a) no reliable value determinable

Table 8.6-10: Summary of degradation in water/sediment of AE 0014966

AE 0014966 Distribution: max. 15.5% total system (91 d), 11.8 water (100 d), 5.9% sediment (43 d)										
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**Kinetic, Fit**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**Kinetic, Fit**	**$DissT_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Pikeville	7.1 / 5.4 a)	43.8	145.7	SFO	- b)	- b)	- b)	- b)	- b)	Y/ EFSA Journal 2016;14(4)
Endpoint		**43.8**								

a) measured in $CaCl_2$
b) no reliable value determinable

Table 8.6-11: Summary of degradation in water/sediment of AE 0034855, AE F150737 and AE 1234964

AE 0034855 Distribution: max. 24.2% total system (182 d), 16.7 water (182 d), 10.7% sediment (150 d) AE F150737 Distribution: max. 7.8% total system (100 d = study end), 6.1 water (100 d), 1.6% sediment (100d) AE 1234964 Distribution: max. 7.4% total system (100 d = study end), 6.8 water (100 d), 0.6% sediment (100d)										
Water/sediment system	**pH water/ sed.**	**$DegT_{50}$ whole syst. (d)**	**$DegT_{90}$ whole syst. (d)**	**Kinetic, Fit**	**$DissT_{50}$ water (d)**	**$DissT_{90}$ water (d)**	**Kinetic, Fit**	**$DissT_{50}$ sed. (d)**	**Kinetic, Fit**	**Evaluated on EU level y/n/ Reference**
Nidda	8.3 / -	- b)	- b)	- b)	- b)	- b)	- b)	- b)	- b)	Y/ EFSA Journal 2016;14(4)
Rhine	7.7 / -	- b)	- b)	- b)	- b)	- b)	- b)	- b)	- b)	Y/ EFSA Journal 2016;14(4)
Pikeville	7.1 / 5.4 a)	- b)	- b)	- b)	- b)	- b)	- b)	- b)	- b)	Y/ EFSA Journal 2016;14(4)
Endpoint		- b)								

a) measured in $CaCl_2$
b) no reliable value determinable

Table 8.6-12: Summary of observed metabolites

AE F075736 Water/sediment system	Max. in water/sediment: 67.8% after 43 d (Rhine, triazinyl-label) Max. in water: 57.0% after 43 d (Rhine, triazinyl-label) Max. in sediment: 15.9% after 14 d (Rhine, triazinyl-label)	Y/ EFSA Journal 2016;14(4)
AE F145740 Water/sediment system	Max. in water/sediment: 12.6% after 60 and 79 d (Pikeville, phenyl-label) Max. in water: 9.2% after 79 d (Pikeville, phenyl-label)Max. in sediment: 3.5% after 60 and 79 d (Pikeville, phenyl-label)	Y/ EFSA Journal 2016;14(4)
AE F145741 Water/sediment system	Max. in water/sediment: 8.7% after 46 d (Pikeville, phenyl-label) Max. in water: 7.0% after 46 d (Pikeville, phenyl-label) Max. in sediment: 1.9% after 79 and 100 d (Pikeville, phenyl-label)	Y/ EFSA Journal 2016;14(4)
AE 0000119 Water/sediment system	Max. in water/sediment: 24.9% after 120 d (Rhine, triazinyl-label) Max. in water: 17.7% after 91 d (Rhine, triazinyl-label) Max. in sediment: 15.0% after 182 d (Nidda, triazinyl-label)	Y/ EFSA Journal 2016;14(4)
AE F059411 Water/sediment system	Max. in water/sediment: 27.5% after 182 d (Rhine, triazinyl-label) Max. in water: 19.3% after 182 d (Rhine, triazinyl-label) Max. in sediment: 8.3% after 182d (Rhine, triazinyl-label)	Y/ EFSA Journal 2016;14(4)
AE 0014966 Water/sediment system	Max. in water/sediment: 15.5% after 91 d (Rhine, triazinyl-label) Max. in water: 11.8% after 100 d (Pikeville, phenyl-label) Max. in sediment: 5.9% after 43 d (Rhine, triazinyl-label)	Y/ EFSA Journal 2016;14(4)
AE 0034855 Water/sediment system	Max. in water/sediment: 24.2% after 182 d (Rhine, triazinyl-label) Max. in water: 16.7% after 182 d (Rhine, triazinyl-label) Max. in sediment: 10.7% after 150 d (Rhine, triazinyl-label)	Y/ EFSA Journal 2016;14(4)
AE F150737 Water/sediment system	Max. in water/sediment: 7.8% after 100 d (Pikeville, phenyl-label) Max. in water: 6.1% after 100 d (Pikeville, phenyl-label) Max. in sediment: 1.6% after 100 d (Pikeville, phenyl-label)	Y/ EFSA Journal 2016;14(4)
AE 1234964 Water/sediment system	Max. in water/sediment: 7.4% after 100 d (Pikeville, phenyl-label) Max. in water: 6.8% after 100 d (Pikeville, phenyl-label) Max. in sediment: 0.6% after 100 d (Pikeville, phenyl-label)	Y/ EFSA Journal 2016;14(4)

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

8.7.1 Justification for new endpoints

Not relevant. No new endpoints were submitted.

8.7.2 Active substances and relevant metabolites

PECs modeling was performed with simple equations included in FOCUS soil persistence document. Input parameters related to application and active substances/metabolites data for PECs calculation are summarized below.

According to EFSA Journal 2014; 12(9):3812 data gap was identified for 4-CP in case of anaerobic conditions. It is highly unlikely that anaerobic conditions would occur even during early summer application of 2,4-D to cereals, hence PECs modeling for 4-CP was not performed.

Table 8.7-1: Input parameters related to application for PEC_s calculations

Use No.	1, 2, 3
Crop	winter cereals, spring cereals

Application rate (g as/ha)	2,4-D: 250 iodosulfuron-methyl-sodium: 10
Number of applications / intervals	1 / NR
Crop interception (%)	20%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm

Table 8.7-2: Input parameter for active substances and relevant metabolites for PEC_s calculation

Compound	Molecular weight (g/mol)	Max. occurrence (%)	DT_{50} (days)	Value in accordance to EU endpoint Y/N Reference
2,4-D	221	-	94.6 d (SFO, max. lab. study)	Y, EFSA Journal 2014; 12(9):3812
2,4-DCP	163	8.7	14 d (DFOP, max. lab. study)	Y, EFSA Journal 2014; 12(9):3812
2,4-DCA	177	15	15.4 d (DFOP, max. lab. study)	Y, EFSA Journal 2014; 12(9):3812
iodosulfuron-methyl-sodium	529.3	-	20.8 d (DFOP, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE F075736	381.4	88.5	66.7 d (SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE F145741	493.2	6.9	41.7 d (FOMC-SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE F145740	493.2	8.7	55.8 d (FOMC-SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE 0002166	397.4	20.0	10.1 d (SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE F161778	367.3	14.5	30.4 d (SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
BCS-CW81253	343.3	35.1	115.7 d (FOMC-SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE 0000119	183.2	19.9	231 d (DFPO, max. lab. study)	Y/ EFSA Journal 2016;14(4)
AE F059411	140.1	40.9	276.9 d (DFPO-SFO, max. lab. study)	Y/ EFSA Journal 2016;14(4)

8.7.2.1 2,4-D and its metabolites

Table 8.7-3: PEC_s for 2,4-D applied on winter and spring cereals

PECs (mg/kg)	spring cereals, winter cereals			
	single application		multiple application	
	Actual	TWA	Actual	TWA
Initial	0.267	-	-	-

Short term	24h	0.265	0.266	-	-
	2d	0.263	0.265	-	-
	4d	0.259	0.263	-	-
Long term	7d	0.253	0.260	-	-
	14d	0.241	0.253	-	-
	21d	0.229	0.247	-	-
	28d	0.217	0.241	-	-
	50d	0.185	0.223	-	-
	100d	0.128	0.189	-	-
Plateau		0.286		-	
Background concentration (5 cm) after 10 years		0.020		-	

PEC$_s$ of metabolites

Table 8.7-4: PEC$_s$ for 2,4-DCP on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.017	-	-	-
Short term	24h	0.016	0.017	-	-
	2d	0.015	0.016	-	-
	4d	0.014	0.016	-	-
Long term	7d	0.012	0.014	-	-
	14d	0.009	0.012	-	-
	21d	0.006	0.011	-	-
	28d	0.004	0.009	-	-
	50d	0.001	0.006	-	-
	100d	0.000	0.003	-	-
Plateau		0.017		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-5: PEC$_s$ for 2,4-DCA on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.032	-	-	-
Short term	24h	0.031	0.031	-	-
	2d	0.029	0.031	-	-
	4d	0.027	0.029	-	-

Long term	7d	0.023	0.027	-	-
	14d	0.017	0.024	-	-
	21d	0.012	0.021	-	-
	28d	0.009	0.018	-	-
	50d	0.003	0.013	-	-
	100d	0.000	0.007	-	-
Plateau		0.032		-	
Background concentration (5 cm) after 10 years		0.000		-	

8.7.2.2 Iodosulfuron-methyl-sodium and its metabolites

Table 8.7-6: PEC$_s$ for iodosulfuron-methyl-sodium applied on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.011	-	-	-
Short term	24h	0.010	0.010	-	-
	2d	0.010	0.010	-	-
	4d	0.009	0.010	-	-
Long term	7d	0.008	0.010	-	-
	14d	0.007	0.009	-	-
	21d	0.005	0.008	-	-
	28d	0.004	0.007	-	-
	50d	0.002	0.005	-	-
	100d	0.000	0.003	-	-
Plateau		0.011		-	
Background concentration (5 cm) after 10 years		0.000		-	

PECs of metabolites

Table 8.7-7: PECs for AE F075736 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.007	-	-	-
Short term	24h	0.007	0.007	-	-
	2d	0.007	0.007	-	-
	4d	0.007	0.007	-	-

Long term	7d	0.006	0.007	-	-
	14d	0.006	0.006	-	-
	21d	0.005	0.006	-	-
	28d	0.005	0.006	-	-
	50d	0.004	0.005	-	-
	100d	0.002	0.004	-	-
Plateau		0.007		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-8: PEC$_s$ for AE F145741 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.001	-	-	-
Short term	24h	0.001	0.001	-	-
	2d	0.001	0.001	-	-
	4d	0.001	0.001	-	-
Long term	7d	0.001	0.001	-	-
	14d	0.001	0.001	-	-
	21d	0.000	0.001	-	-
	28d	0.000	0.001	-	-
	50d	0.000	0.000	-	-
	100d	0.000	0.000	-	-
Plateau		0.001		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-9: PEC$_s$ for AE F145740 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.001	-	-	-
Short term	24h	0.001	0.001	-	-
	2d	0.001	0.001	-	-
	4d	0.001	0.001	-	-
Long term	7d	0.001	0.001	-	-
	14d	0.001	0.001	-	-
	21d	0.001	0.001	-	-
	28d	0.001	0.001	-	-

	50d	0.000	0.001	-	-
	100d	0.000	0.000	-	-
Plateau		0.001		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-10: PEC$_s$ for AE 0002166 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.002	-	-	-
Short term	24h	0.002	0.002	-	-
	2d	0.002	0.002	-	-
	4d	0.002	0.002	-	-
Long term	7d	0.001	0.002	-	-
	14d	0.001	0.001	-	-
	21d	0.000	0.001	-	-
	28d	0.000	0.001	-	-
	50d	0.000	0.001	-	-
	100d	0.000	0.000	-	-
Plateau		0.002		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-11: PEC$_s$ for AE F161778 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.001		-	-
Short term	24h	0.001	0.001	-	-
	2d	0.001	0.001	-	-
	4d	0.001	0.001	-	-
Long term	7d	0.001	0.001	-	-
	14d	0.001	0.001	-	-
	21d	0.001	0.001	-	-
	28d	0.001	0.001	-	-
	50d	0.000	0.001	-	-
	100d	0.000	0.000	-	-
Plateau		0.001		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-12: PEC$_s$ for BCS-CW81253 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.002		-	-
Short term	24h	0.002	0.002	-	-
	2d	0.002	0.002	-	-
	4d	0.002	0.002	-	-
Long term	7d	0.002	0.002	-	-
	14d	0.002	0.002	-	-
	21d	0.002	0.002	-	-
	28d	0.002	0.002	-	-
	50d	0.002	0.002	-	-
	100d	0.001	0.002	-	-
Plateau		0.003		-	
Background concentration (5 cm) after 10 years		0.000		-	

Table 8.7-13: PEC$_s$ for AE 0000119 on winter and spring cereals

PECs (mg/kg)		spring cereals, winter cereals			
		single application		multiple application	
		Actual	TWA	Actual	TWA
Initial		0.009		-	-
Short term	24h	0.009	0.009	-	-
	2d	0.009	0.009	-	-
	4d	0.009	0.009	-	-
Long term	7d	0.009	0.009	-	-
	14d	0.009	0.009	-	-
	21d	0.009	0.009	-	-
	28d	0.009	0.009	-	-
	50d	0.008	0.009	-	-
	100d	0.007	0.008	-	-
Plateau		0.014		-	
Background concentration (5 cm) after 10 years		0.005		-	

Table 8.7-14: PEC$_s$ for AE F059411 on winter and spring cereals

PECs (mg/kg)	spring cereals, winter cereals			
	single application		multiple application	
	Actual	TWA	Actual	TWA

Initial		0.015		-	-
Short term	24h	0.015	0.015	-	-
	2d	0.015	0.015	-	-
	4d	0.015	0.015	-	-
Long term	7d	0.014	0.015	-	-
	14d	0.014	0.014	-	-
	21d	0.014	0.014	-	-
	28d	0.014	0.014	-	-
	50d	0.013	0.014	-	-
	100d	0.011	0.013	-	-
Plateau		0.025		-	
Background concentration (5 cm) after 10 years		0.010		-	

8.7.2.3 PEC$_s$ of formulation

PECs for formulation was obtained from PECs for iodosulfuron-methyl-sodium (worst case) taking into account content of active substance and density of the formulation JMD-HER 387 OD. TWA PECs, PECs background and Plateauare not relevant for formulation.

Table 8.7-15: PEC$_s$ for JMD-HER 387 OD on spring cereals and winter cereals

Active substance/ preparation	Application rate (g/ha)	PECs,$_{act}$ (mg/kg)	PECs,$_{twa}$21 d (mg/kg)	Tillage depth (cm)	PECs,$_{background}$ (mg/kg)	Plateau (mg/kg)
2,4-D	250	0.267	0.247	5cm	0.020	0.287
iodosulfuron-methyl-sodium	10	0.011	0.008	5cm	0.000	0.011
JMD-HER 387 OD	1044*	1.148	NR	NR	NR	NR

* application rate calculated on the basis of density 1.044 g/ml (see dRR Part B 0,1-4) and PECs for iodosulfuron-methyl-sodium (worst case)

zRMS comments:

2,4-D
The PECs calculations have been accepted.
The input parameters used in calculation was established in the EU review of 2,4-D (EFSA Journal 2014;12(9):3812).
Interception has been appropriate to the proposed BBCH of crops (EFSA guidance was published, (2014;12(5):3662).
The calculations of PECs cover proposed uses in GAP.
The results of PECs calculation are presented below in Table 8.7.3 – 8.7.5

Iodosulfuron-methyl-sodium
PECs for the active substance iodosulfuron-methyl-sodium and its metabolites AE F075736, AE F145740, AE F145741, AE 0000119, AE F059411, AE F161778, BCS-CW81253 and AE 0002166 cover proposed uses in GAP.
The degradation endpoints used corresponds to the worst case lab-DT$_{50}$, normalised to 20 °C and pF 2 in accordance with the LoEP (EFSA Journal 2016;14(10):4584). Maximum occurrence of the metabolites and molecular weight are

in accordance with LoEP (EFSA Journal, 2016; 14(4):4453)
All intended uses are covered by the risk in the presented PECsoil calculations, application rates, application timing and crop interception (20 %) are appropriate to reflect a worst-case scenario for the intended uses.
The PECsoil-values for iodosulfuron-methyl-sodium are presented from Table 8.7-6 to Table 8.7-15.

The results initial PEC soil of the active substances and their metabolites and formulation in soil are appropriate to be used for the subsequent risk assessment.

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

8.8.1 Justification for new endpoints

Not relevant. No new endpoints were submitted.

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

PECgw for active substances and their metabolites after application to cereals were calculated with PELMO 6.6.4, PEARL 5.5.5 and MACRO 5.5.4. Application timing for each crop/scenario was settled with AppDate 3.06. Input parameters related to application and active substances/metabolites data for PECgw calculation are summarized below.

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

Use No.	1, 3	2
Crop	winter cereals	spring cereals
Application rate (g as/ha)	2,4-D: 250 (=377 2,4-D 2EH) iodosulfuron-methyl-sodium: 10 AE 0002166: 1.5	2,4-D: 250 (=377 2,4-D 2EH) iodosulfuron-methyl-sodium: 10 AE 0002166: 1.5
Number of applications/interval (d)	1 / NA	1 / NA
Relative application date	NR, see Table 8.8-2	14 days after emergence
Crop interception (%)	20%	20%
Frequency of application	annual	annual
Models used for calculation	FOCUS PEARL 5.5.5, FOCUS PELMO 6.6.4, MACRO 5.5.4	

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

Crop	Scenario	Application dates (absolute) AppDate 3.06
FOCUS PEARL 5.5.5 & FOCUS PELMO 6.6.4		
Winter cereals BBCH 23-31	Châteaudun	08.04.2001
	Hamburg	27.04.2001
	Jokioinen	07.05.2001

Crop	Scenario	Application dates (absolute) AppDate 3.06
FOCUS PEARL 5.5.5 & FOCUS PELMO 6.6.4		
	Kremsmünster	17.04.2001
	Okehampton	14.04.2001
	Piacenza	12.03.2001
	Porto	09.01.2001
	Sevilla	24.12.2001
	Thiva	01.01.2001
MACRO 5.5.4		
Winter cereals BBCH 23-31	Châteaudun	08.04.2001 98
Spring cereals BBCH 21-32	Châteaudun	31.03.2001 90

8.8.2.1 2,4-D and its metabolites

Table 8.8-3: Input parameters related to 2,4-D and its metabolites for PEC_{gw} calculations

Compound	2,4-D	2,4-DCP	2,4-DCA	4-CP	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	221	163	177	128.6	EFSA Journal 2014;12(9):3812
Water solubility at 20°C (mg/l)	24300	4870	96.3	27100 (literature data*)	EFSA Journal 2014;12(9):3812
Saturated vapour pressure at 20°C (Pa):	$9.9 \cdot 10^{-6}$	0 (worst case, default)	0 (worst case, default)	0 (worst case, default)	EFSA Journal 2014;12(9):3812
DT_{50} in soil (d)	4.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =5)	7.0 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =3)	10.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =3)	4.4 (4-CP is well known of rapid soil degradation so value for active substance was used)	EFSA Journal 2014;12(9):3812
K_{foc} (mL/g)/K_{fom}	58.6 / 33.99 (median, n=42)	512 / 296.98 (arithmetic mean, n=7)	1028 / 596.29 (arithmetic mean, n=7)	70 / 40.60 (worst case of literature data**)	EFSA Journal 2014;12(9):3812
1/n	0.87 (arithmetic mean, n=42)	0.88 (arithmetic mean, n=7) EFSA 214	0.92 (arithmetic mean, n=7) EFSA 214	0.9 (default)	EFSA Journal 2014;12(9):3812
Plant uptake	0	0	0	0	EFSA Journal

Compound	2,4-D	2,4-DCP	2,4-DCA	4-CP	Value in accordance with EU endpoint y/n/ Reference*
factor (PUF/TSCF)					2014;12(9):3812
Formation fraction	-	1 from 2,4-D	1 from 2,4-DCP	1 from 2,4-D	EFSA Journal 2014;12(9):3812

* https://en.wikipedia.org/wiki/4-Chlorophenol
** https://pubchem.ncbi.nlm.nih.gov/compound/4-Chlorophenol & https://sitem.herts.ac.uk/aeru/footprint/es/Reports/2690.htm

Two degradation pathways were applied for 2,4-D due to the formation fraction values.

Pathway no 1 Pathway no 2

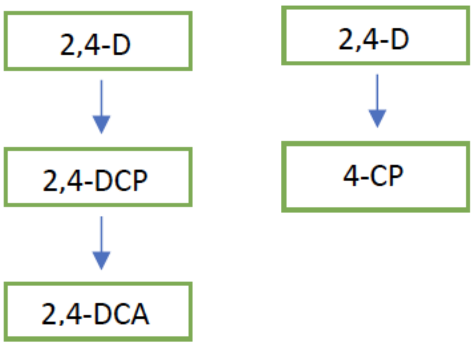


Table 8.8-4: **PEC_{gw} for 2,4-D and metabolites on winter cereals and spring cereals (FOCUS PEARL 5.5.5/PELMO 6.6.4)**

Crop	Scenario	80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)			
		2,4-D	2,4-DCP	2,4-DCA	4-CP
PELMO 6.6.4					
Winter cereals, application rate: 250 g as/ha	Châteaudun	0.000	0.000	0.000	0.000
	Hamburg	0.000	0.000	0.000	0.000
	Jokioinen	0.000	0.000	0.000	0.000
	Kremsmünster	0.000	0.000	0.000	0.000
	Okehampton	0.000	0.000	0.000	0.000
	Piacenza	0.000	0.000	0.000	0.000
	Porto	0.000	0.000	0.000	0.000
	Sevilla	0.000	0.000	0.000	0.000
	Thiva	0.000	0.000	0.000	0.000
Spring cere-	Châteaudun	0.000	0.000	0.000	0.000
	Hamburg	0.000	0.000	0.000	0.000

als, application rate: 250 g as/ha	Jokioinen	0.000	0.000	0.000	0.000
	Kremsmünster	0.000	0.000	0.000	0.000
	Okehampton	0.000	0.000	0.000	0.000
	Porto	0.000	0.000	0.000	0.000
Maize*, application rate: 250 g as/ha	Piacenza	0.000	0.000	0.000	0.000
	Sevilla	0.000	0.000	0.000	0.000
	Thiva	0.000	0.000	0.000	0.000
PEARL 5.5.5					
Winter cereals, application rate: 250 g as/ha	Châteaudun	0.000	0.000	0.000	0.000
	Hamburg	0.000	0.000	0.000	0.000
	Jokioinen	0.000	0.000	0.000	0.000
	Kremsmünster	0.000	0.000	0.000	0.000
	Okehampton	0.000	0.000	0.000	0.000
	Piacenza	0.000	0.000	0.000	0.000
	Porto	0.000	0.000	0.000	0.000
	Sevilla	0.000	0.000	0.000	0.000
	Thiva	0.000	0.000	0.000	0.000
Spring cereals, application rate: 250 g as/ha	Châteaudun	0.000	0.000	0.000	0.000
	Hamburg	0.000	0.000	0.000	0.000
	Jokioinen	0.000	0.000	0.000	0.000
	Kremsmünster	0.000	0.000	0.000	0.000
	Okehampton	0.000	0.000	0.000	0.000
	Porto	0.000	0.000	0.000	0.000
Maize*, application rate: 250 g as/ha	Piacenza	0.000	0.000	0.000	0.000
	Sevilla	0.000	0.000	0.000	0.000
	Thiva	0.000	0.000	0.000	0.000

* as a surrogate for spring cereals

The PEC_{gw} for 2,4-D and its metabolites 2,4-DCP, 2,4-DCA and 4-CP were below the trigger value of 0.1 µg/L for all scenarios.

8.8.2.2 Iodosulfuron-methyl-sodium and its metabolites

Table 8.8-5: Input parameters related to iodosulfuron-methyl-sodium and its metabolites for PEC_{gw} calculations

Compound	iodosulfuron-methyl sodium	AE F075736	AE F145740	AE F145741	AE F059411	AE F161778	BCS-CW81253	AE 0000119	AE 0002166	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	529.3	381.4	493.2	493.2	140.1	367.3	343.3	183.2	397.4	Y, EFSA Journal 2015; 13(1):3984
Water solubility at 20° (mg/L):	25000	2790	1000 (default)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	200	1000 (default)	Y, EFSA Journal 2015; 13(1):3984
Saturated vapour pressure at 20° (Pa):	$2.6 \cdot 10^{-9}$	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	$1 \cdot 10^{-10}$ Pa (default)	Y, EFSA Journal 2015; 13(1):3984
DT_{50} in soil (d)	Tier I 2.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =11) Tier II 3.2 (geomean field, normalisation to 10 kPa or pF2, 20	Tier I 24.9 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =19) Tier II 12.6* (geomean field, normalisation to 10 kPa or pF2, 20	46 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =4)	8.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =5)	144 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =16)	11.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =14)	26.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =9)	15 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q10 of 2.58, n =9)	7.5 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =4)	Y, EFSA Journal 2015; 13(1):3984

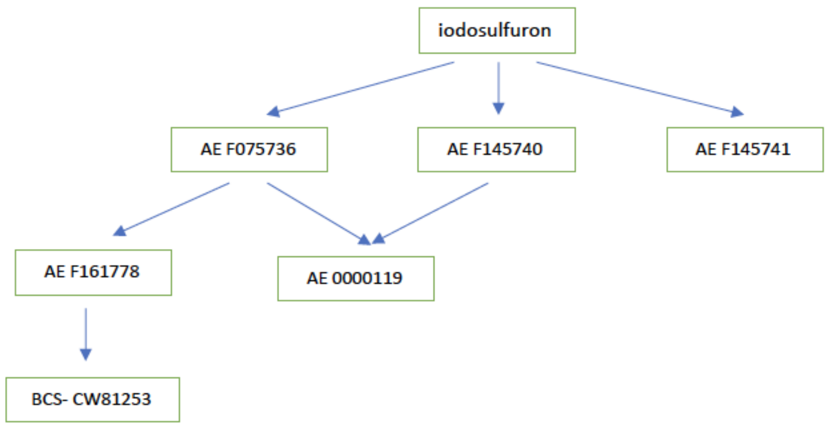
Compound	**iodosulfuron-methyl sodium**	**AE F075736**	**AE F145740**	**AE F145741**	**AE F059411**	**AE F161778**	**BCS-CW81253**	**AE 0000119**	**AE 0002166**	**Value in accordance with EU endpoint y/n/ Reference***
	°C with Q_{10} of 2.58, n =5)	°C with Q_{10} of 2.58, n =9)								
K_{foc} / K_{fom} (mL/g)	33.4 / 19.37 (geomean, n = 9)	14.0 / 8.12 (geomean, n = 22)	17.9 / 10.4 (geomean, n = 4)	0 / 0 (worst case default)	45.6 / 26.45 (geomean, n = 27)	29.7 / 17.2 (geomean, n = 6)	41.7 / 24.2 (geomean, n = 7)	117.2 / 67.98 (geomean, n = 9)	0 / 0 (worst case default)	Y, EFSA Journal 2015; 13(1):3984
1/n	0.87 (arithmetic mean, n=9)	1.0 (arithmetic mean, n=22)	0.92 (arithmetic mean, n=4)	1.0 (worst case default)	0.9 (arithmetic mean, n=27)	1.0 (arithmetic mean, n=6)	0.91 (arithmetic mean, n=7)	0.91 (arithmetic mean, n=9)	1.0 (worst case default)	Y, EFSA Journal 2015; 13(1):3984
Plant uptake factor (PUF/TSCF)	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	0 / 0.5	Y, EFSA Journal 2015; 13(1):3984
Formation fraction	NR	TierI 0.86 (from parent) Tier II 0.55 (from parent)	0.04 (from parent)	0.05 (from parent)	0.42 (from AE F075736)	0.55 (from AE F075736)	0.72 (from AE F161778)	0.33 (from AE F075736) 1 (rom AE F145740)	0.2 (from parent)	Y, EFSA Journal 2015; 13(1):3984

*evan though geometric mean is 13.2 d, RMS proposed 12.6 d to be used in modelling (EFSA Journal 2015; 13(1):3984)

The modelling was performed with PUF=0 as the worst case and PUF=0.5 in accordance with approach applied in EFSA Journal 2016;14(4):4453. In both cases Tier I and Tier II was calculated for active, AE F075736 and AE F059411. In MACRO 5.5.4 parametrisation, effective application rate was applied.

Two degradation pathways were applied for iodosulfuron-methyl-sodium because of complexity of degradation and number of metabolites. Additionally, metabolite AE 0002166 as the parent was applied as a third path. The application rate of AE 0002166 was calculated assuming 20% formation from the parent and a molecular mass ratio 397.4/529.3.

Pathway no 1 – modelling in Tier I



Pathway no 2 – modelling in Tier I and Tier II

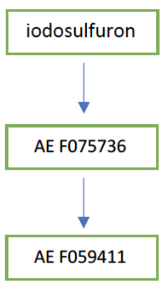


Table 8.8-6: PEC$_{gw}$ for iodosulfuron-methyl-sodium and metabolites on winter cereals and spring cereals PUF=0 (FOCUS PEARL 5.5.5/PELMO 6.6.4)

Crop	Scenario	80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)										
		iodosulfu-ron- me-thyl so-dium Tier I	AE F161778 Tier I	AE F145740 Tier I	BCS-CW81253 Tier I	AE F075736		AE F145741 Tier I	AE 0000119 Tier I	AE F059411		AE 0002166 Tier I
						Tier I	Tier II			Tier I	Tier II	
PELMO 6.6.4												
Winter cereals, applica-tion rate: 10 g as/ha	Châteaudun	0.000	0.001	0.000	0.001	0.004	0.000	0.000	0.000	0.010	0.003	0.000
	Hamburg	0.000	0.005	0.000	0.005	0.016	0.000	0.000	0.000	0.019	0.007	0.000
	Jokioinen	0.000	0.005	0.000	0.003	0.019	0.000	0.000	0.000	0.008	0.002	0.000
	Kremsmünster	0.000	0.009	0.001	0.012	0.025	0.001	0.000	0.000	0.031	0.012	0.000
	Okehampton	0.000	0.010	0.001	0.011	0.032	0.001	0.000	0.000	0.030	0.013	0.000
	Piacenza	0.000	0.009	0.001	0.013	0.029	0.001	0.000	0.000	0.038	0.018	0.000
	Porto	0.000	0.021	0.001	0.013	**0.149**	0.035	0.002	0.000	0.029	0.015	0.017
	Sevilla	0.000	0.001	0.000	0.001	0.007	0.001	0.000	0.000	0.010	0.003	0.004
	Thiva	0.000	0.002	0.000	0.002	0.010	0.001	0.000	0.000	0.021	0.007	0.001
Spring cereals, applica-tion rate: 10 g as/ha	Châteaudun	0.000	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.007	0.003	0.000
	Hamburg	0.000	0.003	0.000	0.004	0.010	0.000	0.000	0.000	0.017	0.007	0.000
	Jokioinen	0.000	0.006	0.000	0.003	0.023	0.001	0.000	0.000	0.010	0.003	0.001
	Kremsmünster	0.000	0.008	0.001	0.012	0.024	0.001	0.000	0.000	0.030	0.012	0.000
	Okehampton	0.000	0.008	0.001	0.009	0.006	0.001	0.000	0.000	0.028	0.012	0.000

	Porto	0.000	0.002	0.000	0.003	0.057	0.000	0.000	0.000	0.019	0.009	0.000
Maize*, applica-tion rate: 10 g as/ha	Piacenza	0.000	0.029	0.003	0.040	0.088	0.010	0.000	0.001	0.073	0.030	0.001
	Sevilla	0.000	0.003	0.000	0.002	0.011	0.000	0.000	0.000	0.026	0.004	0.000
	Thiva	0.000	0.014	0.002	0.021	0.039	0.001	0.000	0.000	**0.105**	0.029	0.000
PEARL 5.5.5												
Winter cereals, applica-tion rate: 10 g as/ha	Châteaudun	0.000	0.018	0.005	0.022	0.059	0.003	0.000	0.001	0.072	0.034	0.000
	Hamburg	0.000	0.057	0.014	0.047	**0.226**	0.027	0.004	0.006	0.095	0.052	0.006
	Jokioinen	0.000	0.046	0.010	0.034	**0.198**	0.018	0.005	0.003	0.078	0.039	0.007
	Kremsmünster	0.000	0.043	0.010	0.048	**0.143**	0.015	0.002	0.004	0.078	0.041	0.004
	Okehampton	0.000	0.048	0.011	0.048	**0.158**	0.021	0.002	0.004	0.073	0.044	0.004
	Piacenza	0.000	0.026	0.006	0.035	0.080	0.009	0.001	0.004	0.077	0.038	0.002
	Porto	0.000	0.032	0.009	0.035	**0.132**	0.031	0.009	0.003	0.059	0.032	0.024
	Sevilla	0.000	0.001	0.000	0.000	0.003	0.000	0.000	0.000	0.007	0.003	0.000
	Thiva	0.000	0.012	0.005	0.020	0.038	0.000	0.000	0.001	**0.105**	0.006	0.001
Spring cereals, applica-tion rate: 10 g as/ha	Châteaudun	0.000	0.015	0.004	0.015	0.047	0.002	0.000	0.001	0.060	0.029	0.000
	Hamburg	0.000	0.068	0.016	0.056	**0.259**	0.030	0.004	0.007	**0.112**	0.063	0.005
	Jokioinen	0.000	0.047	0.011	0.033	**0.206**	0.021	0.006	0.002	0.072	0.040	0.009
	Kremsmünster	0.000	0.045	0.011	0.052	**0.147**	0.016	0.002	0.004	0.087	0.045	0.003
	Okehampton	0.000	0.042	0.011	0.044	**0.145**	0.015	0.001	0.003	0.074	0.045	0.002
	Porto	0.000	0.010	0.004	0.011	0.036	0.002	0.000	0.000	0.040	0.022	0.000
Maize*, applica-tion rate: 10 g as/ha	Piacenza	0.000	0.021	0.008	0.027	0.062	0.004	0.000	0.003	0.079	0.038	0.000
	Sevilla	0.000	0.002	0.002	0.002	0.008	0.000	0.000	0.000	0.029	0.013	0.000
	Thiva	0.000	0.019	0.007	0.029	0.054	0.002	0.000	0.001	**0.105**	0.049	0.000

* as a surrogate for spring cereals

Table 8.8-7: PEC$_{gw}$ for iodosulfuron-methyl-sodium and metabolites on winter cereals and spring cereals PUF=0 (FOCUS MACRO 5.5.4)

Crop	Scenario	80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)									
		iodosulfuron-methyl sodium Tier I	AE F161778 Tier I	AE F145740 Tier I	BCS-CW81253 Tier I	AE F075736 Tier I	AE F145741 Tier I	AE 0000119 Tier I	AE F059411		AE 0002166 Tier I
									Tier I	~~Tier II~~	
MACRO 5.5.4											
Winter cereals, effective application rate: ~~10~~ 8 g as/ha	Châteaudun	0.000	0.000	0.005	0.000	0.060	0.000	0.000	~~0.201~~ 0.034	~~0.123~~	0.000
Spring cereals, effective application rate: ~~10~~ 8 g as/ha	Châteaudun	0.000	0.000	0.005	0.000	0.000	0.000	0.000	~~0.170~~ 0.028	~~0.103~~	0.000

~~Table 8.8-8: PEC_{gw} for iodosulfuron-methyl-sodium and metabolites on winter cereals and spring cereals PUF=0.5 (FOCUS PEARL 5.5.5/PELMO 6.6.4)~~

~~Crop~~	~~Scenario~~	~~80th Percentile PEC_{gw} at 1 m Soil Depth (µg/L)~~										
		~~iodosulfuron-methyl-sodium Tier I~~	~~AE F161778 Tier I~~	~~AE F145740 Tier I~~	~~BCS-CW81252 Tier I~~	~~AE F075736~~		~~AE F145741 Tier I~~	~~AE 0000119 Tier I~~	~~AE F059411~~		~~AE 0002166 Tier I~~
						~~Tier I~~	~~Tier II~~			~~Tier I~~	~~Tier II~~	
~~PELMO 6.6.4~~												
~~Winter cereals, application rate: 10 g as/ha~~	~~Châteaudun~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.001~~	~~0.002~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.006~~	~~0.002~~	~~0.000~~
	~~Hamburg~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.003~~	~~0.008~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.010~~	~~0.004~~	~~0.000~~
	~~Jokioinen~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.002~~	~~0.012~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.005~~	~~0.002~~	~~0.000~~
	~~Kremsmünster~~	~~0.000~~	~~0.000~~	~~0.001~~	~~0.007~~	~~0.014~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.018~~	~~0.008~~	~~0.000~~
	~~Okehampton~~	~~0.000~~	~~0.001~~	~~0.001~~	~~0.006~~	~~0.019~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.018~~	~~0.009~~	~~0.000~~
	~~Piacenza~~	~~0.000~~	~~0.001~~	~~0.001~~	~~0.008~~	~~0.017~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.025~~	~~0.012~~	~~0.000~~
	~~Porto~~	~~0.000~~	~~0.001~~	~~0.001~~	~~0.011~~	~~0.139~~	~~0.033~~	~~0.002~~	~~0.000~~	~~0.023~~	~~0.013~~	~~0.016~~
	~~Sevilla~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.002~~	~~0.007~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.009~~	~~0.003~~	~~0.004~~
	~~Thiva~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.002~~	~~0.008~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.014~~	~~0.005~~	~~0.001~~
~~Spring cereals, application rate: 10 g as/ha~~	~~Châteaudun~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.004~~	~~0.002~~	~~0.000~~
	~~Hamburg~~	~~0.000~~	~~0.002~~	~~0.000~~	~~0.002~~	~~0.004~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.009~~	~~0.005~~	~~0.000~~
	~~Jokioinen~~	~~0.000~~	~~0.004~~	~~0.000~~	~~0.002~~	~~0.016~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.007~~	~~0.003~~	~~0.000~~
	~~Kremsmünster~~	~~0.000~~	~~0.004~~	~~0.000~~	~~0.006~~	~~0.013~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.017~~	~~0.009~~	~~0.000~~
	~~Okehampton~~	~~0.000~~	~~0.004~~	~~0.000~~	~~0.005~~	~~0.013~~	~~0.001~~	~~0.000~~	~~0.000~~	~~0.016~~	~~0.010~~	~~0.000~~

	Porto	0.000	0.001	0.000	0.003	0.004	0.000	0.000	0.000	0.013	0.008	0.000
Maize*, application rate: 10 g as/ha	Piacenza	0.000	0.014	0.002	0.015	0.044	0.010	0.000	0.000	0.026	0.022	0.000
	Sevilla	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.002	0.000
	Thiva	0.000	0.003	0.000	0.004	0.000	0.001	0.000	0.000	0.019	0.016	0.000
PEARL 5.5.5												
Winter cereals, application rate: 10 g as/ha	Châteaudun	0.000	0.013	0.004	0.015	0.044	0.002	0.000	0.001	0.046	0.023	0.000
	Hamburg	0.000	0.042	0.010	0.030	**0.169**	0.021	0.002	0.004	0.060	0.036	0.003
	Jokioinen	0.000	0.034	0.008	0.023	**0.128**	0.015	0.002	0.002	0.050	0.027	0.003
	Kremsmünster	0.000	0.033	0.008	0.036	**0.110**	0.012	0.001	0.003	0.056	0.031	0.003
	Okehampton	0.000	0.034	0.009	0.034	**0.114**	0.015	0.001	0.003	0.050	0.032	0.002
	Piacenza	0.000	0.019	0.005	0.023	0.058	0.007	0.001	0.003	0.048	0.025	0.001
	Porto	0.000	0.023	0.007	0.024	**0.107**	0.028	0.008	0.002	0.037	0.024	0.022
	Sevilla	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.003	0.001	0.000
	Thiva	0.000	0.006	0.003	0.010	0.020	0.001	0.000	0.000	0.046	0.023	0.001
Spring cereals, application rate: 10 g as/ha	Châteaudun	0.000	0.010	0.003	0.009	0.032	0.001	0.000	0.001	0.038	0.019	0.000
	Hamburg	0.000	0.042	0.011	0.031	**0.164**	0.020	0.002	0.004	0.061	0.036	0.002
	Jokioinen	0.000	0.034	0.008	0.025	**0.159**	0.016	0.003	0.002	0.051	0.029	0.004
	Kremsmünster	0.000	0.032	0.008	0.036	**0.102**	0.011	0.001	0.003	0.060	0.031	0.002
	Okehampton	0.000	0.027	0.008	0.028	0.089	0.009	0.001	0.002	0.047	0.030	0.001
	Porto	0.000	0.005	0.003	0.006	0.019	0.001	0.000	0.000	0.024	0.015	0.000
Maize*,	Piacenza	0.000	0.012	0.005	0.017	0.035	0.002	0.000	0.001	0.039	0.022	0.000
	Sevilla	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.005	0.003	0.000

application rate: 10 g as/ha	Thiva	0.000	0.008	0.004	0.011	0.022	0.001	0.000	0.001	0.040	0.020	0.000

Table 8.8-9: PEC$_{gw}$ for iodosulfuron-methyl-sodium and metabolites on winter cereals and spring cereals PUF=0.5 (FOCUS MACRO 5.5.4)

Crop	Scenario	80[th] Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)									
		iodosulfuron-methyl sodium Tier I	AE-F161778 Tier I	AE-F145740 Tier I	BCS-CW81253 Tier I	AE-F075736 Tier I	AE-F145741 Tier I	AE-0000119 Tier I	AE-F059411 Tier I	AE-F059411 Tier II	AE 0002166 Tier I
MACRO 5.5.4											
Winter cereals: application rate: 10 g as/ha	Châteaudun	0.000	0.000	0.004	0.000	0.041	0.000	0.000	0.138	0.083	0.000
Spring cereals: application rate: 10 g as/ha	Châteaudun	0.000	0.000	0.003	0.000	0.038	0.000	0.000	0.126	0.077	0.000

At Tier I PEC_{gw} values for iodosulfuron-methyl-sodium and its metabolites AE F161778, AE F145740, BCS-CW81253, AE F145741, AE 0000119 and AE 0002166 were below the trigger value of 0.1 µg/L for all scenarios.

PEC_{gw} for the metabolites AE F075736 and AE F059411 for few scenarios were above 0.1 µg/L. However, in further modelling at Tier II conducted with additional field data for active substance and metabolite AE F075736, PECgw values for AE F075736 and AE F059411 were below 0.1 µg/L.

~~Hence trigger value for PECgw calculated with PEARL and PELMO was exceeded, additional modelling with MACRO was performed. PECgw obtained with MACRO for active substance and all metabolites when PUF=0.5 applied. In case of MACRO modelling with PUF=0 PECgw were below the trigger of 0.1 µg/L for active substance and all metabolites except AE F059411 for which PECgw was slightly above 0.1 µg/L but still below the trigger of 0.75 µg/L for non-relevant metabolites~~.

zRMS comments:

2,4-D
Generally, the evaluator agrees with the groundwater modeling carried out by Applicant.
The input parameters used in calculation was established in the EU review of 2,4-D (EFSA Journal 2014;12(9):3812).
Interception has been appropriate to the proposed BBCH of crops (EFSA guidance was published, (2014;12(5):3662).
In simulations PUF value of 0 was assumed for all compounds, in line with recommendations of the most recent version of the FOCUS Groundwater Guidance. The geomean of the DT_{50} a values were used in modelling.
The results of the leaching show that when used according to the intended use in cereals 2,4-D and its metabolites leach in acceptable amounts to groundwater in every European scenario, since all PECgw were found to be under the limit of 0.1 µg/L.

Iodosulfuron-methyl-sodium
PECgw for the active substance iodosulfuron-methyl-sodium and its metabolites AE F075736, AE F145740, AE F145741, AE 0000119, AE F059411, AE F161778, BCS-CW81253 and AE 0002166 were calculated FOCUS models with ~~PEARL 4.4.4. and PELMO 5.5.3.~~ FOCUS PEARL 5.5.5, FOCUS PELMO 6.6.4, MACRO 5.5.4 for FOCUS all scenarios groundwater. Application timing for each crop/scenario was settled with AppDate 3.06.
The degradation endpoint used corresponds to the LoEP (EFSA Journal 2016;14(10):4584). Maximum occurrence of the metabolites and molecular weight are in accordance with LoEP (EFSA Journal, 2016; 14(4):4453).
All intended uses are covered by the in the presented PECgw calculations application rates in the term application timing and crop interception (20 %) are appropriate to reflect a worst-case scenario for the intended uses.
zRMS accepted new information and data regarding PECgw. The calculations using PUF - 0.5 were not accepted. and they have been crossed out. Calculation by MACRO were performed for effective application rate 8 g/ha. Therefore they have been recognized as additional information and were not used for risk assessment purposes.

Nevertheless, additional simulations may be required by the sMS that do not accept calculations performed using FOCUS models.

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

8.9.1 Justification for new endpoints

Not relevant. No new endpoints were submitted.

8.9.2 Active substances, relevant metabolites and the formulation (KCP 9.2.5)

PECsw for active substances and their metabolites after application to cereals were calculated with FOCUS STEPS 1-2 v3.2, FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v.5.0.1. Application timing for each crop/scenario was settled with AppDate 3.06. Input parameters related to application and active substances/metabolites data for PECsw calculation are summarized below.

In order to evaluate PECsw of active substance 2,4-D and its metabolites, input values recommended in EFSA Journal 2014;12(9):3812 report and RAR Addendum 2014 were taken into account. In the EFSA Journal 2014;12(9):3812 data gap concerning 4-CP (from soil, anaerobic conditions) and 1,2,4-benzenetriol (photolysis metabolite). It is highly unlikely that anaerobic conditions would occur even during early summer application of 2,4-D to cereals. However, ecotoxicological endpoints in Part B9 are available and allows risk assessment, PECsw values for 4-CP and 1,2,4-benenetriol, were calculated with default input values.

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

Use No.	1	2
Crop	winter cereals	spring cereals
Application rate (g as/ha)	2,4-D: 250 iodosulfuron-methyl-sodium: 10	2,4-D: 250 iodosulfuron-methyl-sodium: 10
Number of applications/interval (d)	1 / NA	1 / NA
Application window	March-May	March-May
Application method	ground spray	ground spray
CAM (Chemical application method)	CAM2 (application foliar linear)	CAM2 (application foliar linear)
Soil depth (cm)	4	4
Models used for calculation	FOCUS STEPS 1-2 v3.2, FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v.5.0.1	

Table 8.9-2: FOCUS Step 3&4 scenario related input parameters for $PEC_{sw/sed}$ calculations for the application of JMD-HER 387 OD

Crop	Scenario	Application window used in modelling AppDate 3.06
Spring cereals, BBCH 21-32	D1	18.05.2001 (Julian day 138) – 28.06.2001 (Julian day 179)
	D3	16.04.2001 (Julian day 106) – 30.05.2001 (Julian day 150)
	D4	09.05.2001 (Julian day 129) – 19.06.2001 (Julian day 170)
	D5	29.03.2001 (Julian day 88) – 11.05.2001 (Julian day 131)
	R4	29.03.2001 (Julian day 88) – 11.05.2001 (Julian day 131)
Winter cereals, BBCH 23-31	D1	18.03.2002 (Julian day 77) – 27.04.2002 (Julian day 117)
	D2	28.03.2002 (Julian day 87) – 07.05.2002 (Julian day 127)
	D3	09.04.2002 (Julian day 99) – 19.05.2002 (Julian day 139)
	D4	11.03.2002 (Julian day 70) – 20.04.2002 (Julian day 110)
	D5	08.03.2002 (Julian day 67) – 16.04.2002 (Julian day 106)
	D6	03.08.2002 (Julian day 3) – 19.03.2002 (Julian day 78)

Crop	Scenario	Application window used in modelling AppDate 3.06
	R1	17.04.2002 (Julian day 107) – 26.05.2002 (Julian day 146)
	R3	12.03.2002 (Julian day 71) – 20.04.2002 (Julian day 110)
	R4	29.12.2001 (Julian day 363) – 27.02.2002 (Julian day 58)
Maize (surrogate for spring cereals) BBCH 19*-32	D6	08.05.2001 (Julian day 128) – 12.06.2001 (Julian day 163)
	R1	02.06.2001 (Julian day 153) – 11.07.2001 (Julian day 192)
	R2	03.06.2001 (Julian day 154) – 13.07.2001 (Julian day 194)
	R3	27.05.2001 (Julian day 147) – 05.07.2001 (Julian day 186)

*BBCH 21 is not avilable

8.9.2.1 2,4-D and its metabolites

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

Compound	2,4-D	2,4-DCP	2,4-DCA	4-CP	1,2,4-benzenetriol	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	221	163	177	128.6	126.1	Y, EFSA Journal 2014; 12(9):3812
Saturated vapour pressure at 20°C (Pa)	not required for Step 1+2/ $9.9 \cdot 10^{-6}$	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812
Water solubility at 20°C (mg/L)	24300	4870	96.3	27100 (literature data*)	NR	Y, EFSA Journal 2014; 12(9):3812
Diffusion coefficient in water (m²/d)	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812
Diffusion coefficient in air (m²/d)	not required for Step 1+2/ 0.43	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812
K_{foc} / K_{fom}(mL/g)	58.6 / 33.99 (median, n=42)	512 (arithmetic mean, n=7)	1028 (arithmetic mean, n=7)	70 (worst case of literature data**)	NR	Y, EFSA Journal 2014; 12(9):3812
Freundlich Exponent 1/n	not required for Step 1+2/ 0.87 (arithmetic mean, n=42)	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812
Plant Uptake	not required for Step 1+2/ 0	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/	not required for Step 1+2	not required for Step 1+2	not required for Step 1	NR	Y, EFSA Journal 2014; 12(9):3812

Compound	2,4-D	2,4-DCP	2,4-DCA	4-CP	1,2,4-benzenetriol	Value in accordance to EU endpoint y/n/ Reference
	0.05 (MACRO) 0.50 (PRZM)					
$DT_{50,soil}$ (d)	4.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =5)	7.0 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =3)	10.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =3)	4.4 (4-CP is well known of rapid soil degradation so value for active substance was used)	NR	Y, EFSA Journal 2014; 12(9):3812
$DT_{50,water}$ (d)	18.16 (geomean in total system, n =3) used in: Step 2	103.9 (geomean in total system, n =2)	1000 (worst case default)	1000 (worst case default)	NR	Y, EFSA Journal 2014; 12(9):3812
$DT_{50,sed}$ (d)	18.16 (geomean in total system, n =3) used in: Step 2 1000 (worst case default) used in: Step 3	103.9 (geomean in total system, n =2)	1000 (worst case default)	1000 (worst case default)	NR	Y, EFSA Journal 2014; 12(9):3812
$DT_{50,whole\ system}$ (d)	18.16 (geomean in total system, n =3)	103.9 (geomean in total system, n =2)	1000 (worst case default)	1000 (worst case default)	NR	Y, EFSA Journal 2014; 12(9):3812
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 8.7% Water/sediment: 32.1%	Soil: 15% Water/sediment: 5.3%	Soil: 33% Water/sediment: 6.9%	Soil: NR Water/sediment: 31.7%	Y, EFSA Journal 2014; 12(9):3812

* https://en.wikipedia.org/wiki/4-Chlorophenol
** https://pubchem.ncbi.nlm.nih.gov/compound/4-Chlorophenol & https://sitem.herts.ac.uk/aeru/footprint/es/Reports/2690.htm

PEC$_{sw/sed}$

Table 8.9-4: FOCUS Step 1, 2 and 3 and 3 PEC$_{sw}$ and PEC$_{sed}$ for 2,4-D following single application of JMD-HER 387 OD

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	21d- PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Winter cereals, application rate: 1 L/ha					
Step 1	---	79.5933	---	54.6402	45.2943
Step 2 NEU	---	10.1080	---	6.9238	5.6759
Step 2 SEU	---	18.3402	---	12.5872	10.3809
Step 3	---	---	---	---	---
D1	ditch	12.77	drainage	8.830	9.090
D1	stream	8.000	drainage	4.949	5.124
D2	ditch	21.46	drainage	7.244	7.211
D2	stream	13.77	drainage	3.867	4.087
D3	ditch	1.583	drainage	0.07132	0.3038
D4	pond	0.05466	drainage	0.04446	0.06708
D4	stream	1.171	drainage	0.002119	0.02883
D5	pond	0.05467	drainage	0.04366	0.06129
D5	stream	1.256	drainage	0.002144	0.02961
D6	ditch	1.615	drainage	0.6746	0.9292
R1	pond	0.06061	runoff/erosion	0.04727	0.08204
R1	stream	1.388	runoff/erosion	0.05700	0.2266
R3	stream	1.466	runoff/erosion	0.04800	0.2797
R4	stream	1.034	runoff/erosion	0.007094	0.07666
Spring cereals, application rate: 1 L/ha					
Step 1	---	79.5933	---	54.6402	45.2943
Step 2 NEU	---	10.1080	---	6.9238	5.6759
Step 2 SEU	---	18.3402	---	12.5872	10.3809
Step 3	---	---	---	---	---
D1	ditch	1.620	drainage	1.160	1.205
D1	stream	1.403	drainage	0.06756	0.3100
D3	ditch	1.584	drainage	0.07913	0.3192
D4	pond	0.05470	drainage	0.04061	0.05063
D4	stream	1.296	drainage	0.005596	0.06630
D5	pond	0.05467	drainage	0.04372	0.06072
D5	stream	1.259	drainage	0.002177	0.02991

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d- $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
R4	stream	5.564	runoff/erosion	0.2932	1.055
Maize (surrogate for spring cereals), application rate: 1 L/ha					
D6	ditch	1.304	drainage	0.04299	0.2149
R1	pond	0.1682	drainage	0.1202	0.1488
R1	stream	1.204	runoff/erosion	0.05645	0.3024
R2	stream	1.219	runoff/erosion	0.05467	0.3106
R3	stream	1.282	runoff/erosion	0.6133	0.1635

Table 8.9-5: Global maximum Step 4 PEC_{sw} values for 2,4-D following single application of JMD-HER 387 OD

PEC_{sw} (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
Winter cereals, application rate: 1 L/ha								
None	D1 ditch	12.77	12.77	12.77	-	12.77	12.77	12.77
50 %		12.77	12.77	-	-	-	-	-
75 %		12.77	-	-	-	-	-	-
90 %		12.77	-	-	-	-	-	-
None	D1 stream	8.000	8.000	8.000	-	8.000	8.000	8.000
50 %		8.000	8.000	-	-	-	-	-
75 %		8.000	-	-	-	-	-	-
90 %		8.000	-	-	-	-	-	-
None	D2 ditch	21.46	21.46	21.46	-	21.46	21.46	21.46
50 %		21.46	21.46	-	-	-	-	-
75 %		21.46	-	-	-	-	-	-
90 %		21.46	-	-	-	-	-	-
None	D2 stream	13.77	13.77	13.77	-	13.77	13.77	13.77
50 %		13.77	13.77	-	-	-	-	
75 %		13.77	-	-	-	-	-	-
90 %		13.77	-	-	-	-	-	-
None	D3 ditch	1.583	0.4291	0.2276	-	0.4291	0.2276	0.2276
50 %		0.9630	0.2145	-	-	-	-	-
75 %		0.4817	-	-	-	-	-	-
90 %		0.1926	-	-	-	-	-	-

PEC$_{sw}$ (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
None	D4 pond	0.05466	0.04729	0.03400	-	0.04729	0.03400	0.03400
50 %		0.04413	0.02364	-	-	-	-	-
75 %		0.02206	-	-	-	-	-	-
90 %		0.008825	-	-	-	-	-	-
None	D4 stream	1.171	0.4277	0.2269	-	0.4277	0.2269	0.2269
50 %		0.9603	0.2139	-	-	-	-	-
75 %		0.4801	-	-	-	-	-	-
90 %		0.1920	-	-	-	-	-	-
None	D5 pond	0.05467	0.04730	0.03401	-	0.04730	0.03401	0.03401
50 %		0.04414	0.02365	-	-	-	-	-
75 %		0.02207	-	-	-	-	-	-
90 %		0.008828	-	-	-	-	-	-
None	D5 stream	1.256	0.4589	0.2434	-	0.4589	0.2434	0.2434
50 %		1.030	0.2295	-	-	-	-	-
75 %		0.5151	-	-	-	-	-	-
90 %		0.2060	-	-	-	-	-	-
None	D6 ditch	1.615	1.615	1.615	-	1.615	1.615	1.615
50 %		1.615	1.615	-	-	-	-	-
75 %		1.615	-	-	-	-	-	-
90 %		1.615	-	-	-	-	-	-
None	R1 pond	0.06061	0.05665	0.04952	-	0.04730	0.03401	0.03401
50 %		0.05495	0.04396	-	-	-	-	-
75 %		0.04311	-	-	-	-	-	-
90 %		0.03603	-	-	-	-	-	-
None	R1 stream	1.388	1.388	1.388	-	0.3812	0.2022	0.5712
50 %		1.388	1.388	-	-	-	-	-
75 %		1.388	-	-	-	-	-	-
90 %		1.388	-	-	-	-	-	-
None	R3 stream	1.466	1.044	1.044	-	0.5355	0.3443	0.4765
50 %		1.202	1.044	-	-	-	-	-
75 %		1.044	-	-	-	-	-	-
90 %		1.044	-	-	-	-	-	-
None	R4 stream	1.034	0.3776	0.2003	-	0.3776	0.2003	0.2003
50 %		0.8477	0.1888	-	-	-	-	-

PEC$_{sw}$ (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
75 %		0.4238	-	-	-	-	-	-
90 %		0.1695	-	-	-	-	-	-
Spring cereals, application rate: 1 L/ha								
None	D1 ditch	1.620	0.4516	0.2475	-	0.4516	0.2475	0.2475
50 %		0.9925	0.2343	-	-	-	-	-
75 %		0.5049	-	-	-	-	-	-
90 %		0.2121	-	-	-	-	-	-
None	D1 stream	1.403	0.5123	0.2718	-	0.5123	0.2718	0.2718
50 %		1.150	0.2563	-	-	-	-	-
75 %		0.5751	-	-	-	-	-	-
90 %		0.2300	-	-	-	-	-	-
None	D3 ditch	1.584	0.4295	0.2278	-	0.4295	0.2278	0.2278
50 %		0.9638	0.2147	-	-	-	-	-
75 %		0.4821	-	-	-	-	-	-
90 %		0.1928		-	-	-	-	-
None	D4 pond	0.05470	0.04733	0.03403	-	0.04733	0.03403	0.03403
50 %		0.04416	0.02366	-	-	-	-	-
75 %		0.02208	-	-	-	-	-	-
90 %		0.008837	-	-	-	-	-	-
None	D4 stream	1.296	0.4735	0.2512	-	0.4735	0.2512	0.2512
50 %		1.063	0.2368	-	-	-	-	-
75 %		0.5315	-	-	-	-	-	-
90 %		0.2126	-	-	-	-	-	-
None	D5 pond	0.05467	0.04730	0.03401	-	0.04730	0.03401	0.03401
50 %		0.04414	0.02365	-	-	-	-	-
75 %		0.02207	-	-	-	-	-	-
90 %		0.008827	-	-	-	-	-	-
None	D5 stream	1.259	0.4598	0.2439	-	0.4598	0.2439	0.2439
50 %		1.032	0.2300	-	-	-	-	-
75 %		0.5161	-	-	-	-	-	-
90 %		0.2064	-	-	-	-	-	-
None	R4 stream	5.564	5.564	5.564	-	0.3829	0.2031	2.511
50 %		5.564	5.564	-	-	-	-	-
75 %		5.564	-	-	-	-	-	-

PEC$_{sw}$ (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
90 %		5.564	-	-	-	-	-	-
Maize, application rate: 1 L/ha								
None	D6 ditch	1.304	0.4273	0.2266	-	0.4273	0.2266	0.2266
50 %		0.9589	0.2136	-	-	-	-	-
75 %		0.4796	-	-	-	-	-	-
90 %		0.1918	-	-	-	-	-	-
None	R1 pond	0.1682	0.1649	0.1573	-	0.05525	0.03401	0.07531
50 %		0.1631	0.1514	-	-	0.06240	-	-
75 %		0.1505	-	-	-	-	-	-
90 %		0.1430	-	-	-	-	-	-
None	R1 stream	1.204	1.204	1.204	-	0.3829	0.2031	0.5482
50 %		1.204	1.204	-	-	0.3985	-	-
75 %		1.204	-	-	-	-	-	-
90 %		1.204	-	-	-	-	-	-
None	R2 stream	1.219	1.058	1.058	-	0.5133	0.2723	0.4802
50 %		1.152	1.058	-	-	0.3871	-	-
75 %		1.058	-	-	-	-	-	-
90 %		1.058	-	-	-	-	-	-
None	R3 stream	1.282	0.6134	0.6134	-	0.5398	0.2863	0.2863
50 %		1.212	0.6134	-	-	0.4071	-	-
75 %		0.6134	-	-	-	-	-	-
90 %		0.6134	-	-	-	-	-	-

Metabolites of 2,4-D

Table 8.9-6: FOCUS Step 1 PEC_{sw} and PEC_{sed} for 2,4-DCP following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 0.6 L/ha					
Step 1	---	15.4474	---	14.2134	76.3038
Step 2	NEU	1.7055	---	1.5466	8.4232
	SEU	3.0467	---	2.7981	15.2445
Winter cereals, application rate: 0.6 L/ha					
Step 1	---	15.4474	---	14.2134	76.3038
Step 2	NEU	1.7055	---	1.5466	8.4232
	SEU	3.0467	---	2.7981	15.2445

Table 8.9-7: FOCUS Step 1 PEC_{sw} and PEC_{sed} for 2,4-DCA following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d- $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 0.6 L/ha					
Step 1	---	5.8127	---	5.7159	58.7514
Step 2	NEU	0.6956	---	0.6810	7.0446
	SEU	1.3403	---	1.3210	13.6674
Winter cereals, application rate: 0.6 L/ha					
Step 1	---	5.8127	---	5.7159	58.7514
Step 2	NEU	0.6956	---	0.6810	7.0446
	SEU	1.3403	---	1.3210	13.6674

Table 8.9-8: FOCUS Step 1 PEC_{sw} and PEC_{sed} for 4-CP following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d- $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 0.6 L/ha					
Step 1	---	17.7888	---	17.6524	12.3876
Step 2	NEU	1.5945	---	1.5805	1.1136
	SEU	3.1023	---	3.0774	2.1684
Winter cereals, application rate: 0.6 L/ha					
Step 1	---	17.7888	---	17.6524	12.3876
Step 2	NEU	1.5945	---	1.5805	1.1136
	SEU	3.1023	---	3.0774	2.1684

Table 8.9-9: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for 1,2,4-benzenetriol following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d- $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Winter cereals, application rate: 1 L/ha					
Step 1	---	14.3966	---	9.8831	8.1927
Step 2 NEU	---	1.8283	---	1.2524	1.0266
Step 2 SEU	---	3.3173	---	2.2767	1.8777
Step 3	---	---	---	---	---
D1	ditch	2.3098	drainage	1.5971	1.6442
D1	stream	1.4470	drainage	0.8952	0.9268
D2	ditch	3.8816	drainage	1.3103	1.3043
D2	stream	2.4907	drainage	0.6994	0.7392
D3	ditch	0.2863	drainage	0.0129	0.0550
D4	pond	0.0099	drainage	0.0080	0.0121
D4	stream	0.2118	drainage	0.0004	0.0052
D5	pond	0.0099	drainage	0.0079	0.0111
D5	stream	0.2272	drainage	0.0004	0.0054
D6	ditch	0.2921	drainage	0.1220	0.1681
R1	pond	0.0110	runoff/erosion	0.0086	0.0148
R1	stream	0.2511	runoff/erosion	0.0103	0.0410
R3	stream	0.2652	runoff/erosion	0.0087	0.0506
R4	stream	0.1870	runoff/erosion	0.0013	0.0139

Scenario FOCUS	**Waterbody**	**Max PEC_{sw} (µg/L)**	**Dominant entry route**	**21d- $PEC_{sw,twa}$ (µg/L)**	**Max PEC_{sed} (µg/kg)**
Spring cereals, application rate: 1 L/ha					
Step 1	---	14.3966	---	9.8831	8.1927
Step 2 NEU	---	1.8283	---	1.2524	1.0266
Step 2 SEU	---	3.3173	---	2.2767	1.8777
Step 3	---	---	---	---	---
D1	ditch	0.2930	drainage	0.2098	0.2180
D1	stream	0.2538	drainage	0.0122	0.0561
D3	ditch	0.2865	drainage	0.0143	0.0577
D4	pond	0.0099	drainage	0.0073	0.0092
D4	stream	0.2344	drainage	0.0010	0.0120
D5	pond	0.0099	drainage	0.0079	0.0110
D5	stream	0.2277	drainage	0.0004	0.0054
R4	stream	1.0064	runoff/erosion	0.0530	0.1908
Maize (surrogate for spring cereals), application rate: 1 L/ha					
D6	ditch	0.2359	drainage	0.0078	0.0389
R1	pond	0.0304	drainage	0.0217	0.0269
R1	stream	0.2178	runoff/erosion	0.0102	0.0547
R2	stream	0.2205	runoff/erosion	0.0099	0.0562
R3	stream	0.2319	runoff/erosion	0.1109	0.0296

* PEC_{SW} / PEC_{sed} for the metabolite 1,2,4-benzenetriol were calculated based on the maximum PEC_{SW} / PEC_{sed} of the parent, molar mass ratio and the maximum occurrence of the metabolite in surface water.

Table 8.9-10: Global maximum Step 4 PEC_{sw} values for 1,2,4-benzenetriol following single application of JMD-HER 387 OD

PEC_{sw}* (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
Winter cereals, application rate: 1 L/ha								
None	D1 ditch	2.3098	2.3098	2.3098	-	2.3098	2.3098	2.3098
50 %		2.3098	2.3098	-	-	-	-	-
75 %		2.3098	-	-	-	-	-	-
90 %		2.3098	-	-	-	-	-	-
None		1.4470	1.4470	1.4470	-	1.4470	1.4470	1.4470

PEC$_{sw}$* (µg/L)	Scenario	Step 4						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
50 %	D1 stream	1.4470	1.4470	-	-	-	-	-
75 %		1.4470	-	-	-	-	-	-
90 %		1.4470	-	-	-	-	-	-
None	D2 ditch	3.8816	3.8816	3.8816	-	3.8816	3.8816	3.8816
50 %		3.8816	3.8816	-	-	-	-	-
75 %		3.8816	-	-	-	-	-	-
90 %		3.8816	-	-	-	-	-	-
None	D2 stream	2.4907	2.4907	2.4907	-	2.4907	2.4907	2.4907
50 %		2.4907	2.4907	-	-	-	-	-
75 %		2.4907	-	-	-	-	-	-
90 %		2.4907	-	-	-	-	-	-
None	D3 ditch	0.2863	0.0776	0.0412	-	0.0776	0.0412	0.0412
50 %		0.1742	0.0388	-	-	-	-	-
75 %		0.0871	-	-	-	-	-	-
90 %		0.0348	-	-	-	-	-	-
None	D4 pond	0.0099	0.0086	0.0061	-	0.0086	0.0061	0.0061
50 %		0.0080	0.0043	-	-	-	-	-
75 %		0.0040	-	-	-	-	-	-
90 %		0.0016	-	-	-	-	-	-
None	D4 stream	0.2118	0.0774	0.0410	-	0.0774	0.0410	0.0410
50 %		0.1737	0.0387	-	-	-	-	-
75 %		0.0868	-	-	-	-	-	-
90 %		0.0347	-	-	-	-	-	-
None	D5 pond	0.0099	0.0086	0.0062	-	0.0086	0.0062	0.0062
50 %		0.0080	0.0043	-	-	-	-	-
75 %		0.0040	-	-	-	-	-	-
90 %		0.0016	-	-	-	-	-	-
None	D5 stream	0.2272	0.0830	0.0440	-	0.0830	0.0440	0.0440
50 %		0.1863	0.0415	-	-	-	-	-
75 %		0.0932	-	-	-	-	-	-
90 %		0.0373	-	-	-	-	-	-
None	D6 ditch	0.2921	0.2921	0.2921	-	0.2921	0.2921	0.2921
50 %		0.2921	0.2921	-	-	-	-	-
75 %		0.2921	-	-	-	-	-	-

PEC$_{sw}$* (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
90 %		0.2921	-	-	-	-	-	-
None	R1 pond	0.0110	0.0102	0.0090	-	0.0086	0.0062	0.0062
50 %		0.0099	0.0080	-	-	-	-	-
75 %		0.0078	-	-	-	-	-	-
90 %		0.0065	-	-	-	-	-	-
None	R1 stream	0.2511	0.2511	0.2511	-	0.0690	0.0366	0.1033
50 %		0.2511	0.2511	-	-	-	-	-
75 %		0.2511	-	-	-	-	-	-
90 %		0.2511	-	-	-	-	-	-
None	R3 stream	0.2652	0.1888	0.1888	-	0.0969	0.0623	0.0862
50 %		0.2174	0.1888	-	-	-	-	-
75 %		0.1888	-	-	-	-	-	-
90 %		0.1888	-	-	-	-	-	-
None	R4 stream	0.1870	0.0683	0.0362	-	0.0683	0.0362	0.0362
50 %		0.1533	0.0341	-	-	-	-	-
75 %		0.0767	-	-	-	-	-	-
90 %		0.0307	-	-	-	-	-	-
Spring cereals, application rate: 1 L/ha								
None	D1 ditch	0.2930	0.0817	0.0448	-	0.0817	0.0448	0.0448
50 %		0.1795	0.0424	-	-	-	-	-
75 %		0.0913	-	-	-	-	-	-
90 %		0.0384	-	-	-	-	-	-
None	D1 stream	1.403	0.5123	0.2718	-	0.5123	0.2718	0.2718
50 %		1.150	0.2563	-	-	-	-	-
75 %		0.5751	-	-	-	-	-	-
90 %		0.2300	-	-	-	-	-	-
None	D3 ditch	0.2865	0.0777	0.0412	-	0.0777	0.0412	0.0412
50 %		0.1743	0.0388	-	-	-	-	-
75 %		0.0872	-	-	-	-	-	-
90 %		0.0349	-	-	-	-	-	-
None	D4 pond	0.0099	0.0086	0.0062	-	0.0086	0.0062	0.0062
50 %		0.0080	0.0043	-	-	-	-	-
75 %		0.0040	-	-	-	-	-	-
90 %		0.0016	-	-	-	-	-	-

PEC_{sw}* (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
None	D4 stream	0.2344	0.0856	0.0454	-	0.0856	0.0454	0.0454
50 %		0.1923	0.0428	-	-	-	-	-
75 %		0.0961	-	-	-	-	-	-
90 %		0.0385	-	-	-	-	-	-
None	D5 pond	0.0099	0.0086	0.0062	-	0.0086	0.0062	0.0062
50 %		0.0080	0.0043	-	-	-	-	-
75 %		0.0040	-	-	-	-	-	-
90 %		0.0016	-	-	-	-	-	-
None	D5 stream	0.2277	0.0832	0.0441	-	0.0832	0.0441	0.0441
50 %		0.1867	0.0416	-	-	-	-	-
75 %		0.0934	-	-	-	-	-	-
90 %		0.0373	-	-	-	-	-	-
None	R4 stream	1.0064	1.0064	1.0064	-	0.0693	0.0367	0.4542
50 %		1.0064	1.0064	-	-	-	-	-
75 %		1.0064	-	-	-	-	-	-
90 %		1.0064	-	-	-	-	-	-
Maize, application rate: 1 L/ha								
None	D6 ditch	0.2359	0.0773	0.0410	-	0.0773	0.0410	0.0410
50 %		0.1734	0.0386	-	-	-	-	-
75 %		0.0867	-	-	-	-	-	-
90 %		0.0347	-	-	-	-	-	-
None	R1 pond	0.0304	0.0298	0.0285	-	0.0100	0.0062	0.0136
50 %		0.0295	0.0274	-	-	-	-	-
75 %		0.0272	-	-	-	-	-	-
90 %		0.0259	-	-	-	-	-	-
None	R1 stream	0.2178	0.2178	0.2178	-	0.0693	0.0367	0.0992
50 %		0.2178	0.2178	-	-	-	-	-
75 %		0.2178	-	-	-	-	-	-
90 %		0.2178	-	-	-	-	-	-
None	R2 stream	0.2205	0.1914	0.1914	-	0.0928	0.0493	0.0869
50 %		0.2084	0.1914	-	-	-	-	-
75 %		0.1914	-	-	-	-	-	-
90 %		0.1914	-	-	-	-	-	-
None		0.2319	0.1109	0.1109	-	0.0976	0.0518	0.0518

PEC$_{sw}$* (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
50 %	R3 stream	0.2192	0.1109	-	-	-	-	-
75 %		0.1109	-	-	-	-	-	-
90 %		0.1109	-	-	-	-	-	-

* PEC$_{SW}$ / PEC$_{sed}$ for the metabolite 1,2,4-benzenetriol were calculated based on the maximum PEC$_{SW}$ / PEC$_{sed}$ of the parent, molar mass ratio and the maximum occurrence of the metabolite in surface water.

8.9.2.2 Iodosulfuron-methyl-sodium and its metabolites

Table 8.9-11: Input parameters related to iodosulfuron-methyl-sodium and metabolites for $PEC_{sw/sed}$ calculations STEP 1, 2 and 3 (part 1)

Compound	iodosulfuron-methyl-sodium	AE F075736	AE F145740	AE F145741	AE 0000119	AE F161778	BCS-CW81253	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	529.3	381.4	493.2	493.2	183.2	367.3	343.3	EFSA Journal 2016;14(4):4453
Saturated vapour pressure (Pa)	not required for Step 1+2/ $2.6 \cdot 10^{-9}$ (20°C)	not required for Step 1+2/ $1 \cdot 10^{-10}$ (20°C) (default)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
Water solubility (mg/L)	25000 (20°C)	2790 (20°C)	1000 (20°C) (default)	1000 (20°C) (default)	200 (20°C)	1000 (20°C) (default)	1000 (20°C) (default)	EFSA Journal 2016;14(4):4453
Diffusion coeffi-cient in water (m²/d)	not required for Step 1+2/ 4.3×10^{-5}	not required for Step 1+2/ 4.3×10^{-5}	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
Diffusion coeffi-cient in air (m²/d)	not required for Step 1+2 /0.43	not required for Step 1+2 /0.43	not required for Step 1	not required for Step 1+2	not required for Step 1	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
K_{foc} / K_{fom} (mL/g)	33.4 / 19.37 (geomean, n = 9)	14.0 / 8.12 (geomean, n = 22)	17.9 / 10.4 (geomean, n = 4)	0 / 0 (worst case de-fault)	117.2 / 67.98 (geomean, n = 9)	29.7 / 17.2 (geomean, n = 6)	41.7/ 21.2 (geomean, n = 7)	EFSA Journal 2016;14(4):4453
Freundlich Expo-nent 1/n	not required for Step 1+2/ 0.87 (arithmetic mean, n = 9)	not required for Step 1+2/ 1.0 (arithmetic mean, n = 22)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
Plant Uptake	not required for Step 1+2	not required for Step 1+2/	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453

Compound	**iodosulfuron-methyl-sodium**	**AE F075736**	**AE F145740**	**AE F145741**	**AE 0000119**	**AE F161778**	**BCS-CW81253**	**Value in accordance to EU endpoint y/n/ Reference**
	/0	0 Tier I						
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
$DT_{50,soil}$ (d)	2.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =11)	24.9 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =19)	46 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q10 of 2.58, n =4)	8.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =5)	15.0 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q10 of 2.58, n =9)	11.4 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =14)	26.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n =9)	EFSA Journal 2016;14(4):4453
$DT_{50,water}$ (d)	19.8 (geomean, n=3)	131 (geomean, n = 3)	45.4 (one value available)	73.4 (one value available)	28.4 (geomean, n = 2)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
$DT_{50,sed}$ (d)	19.8 Step 1+2 (geomean, n=3) 1000 Step 3 (default)	131 Step 1+2 (geomean, n=3) 1000 Step 3 (default)	45.4 (one value available)	73.4 (one value available)	28.4 (geomean, n = 2)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
$DT_{50,whole\ system}$ (d)	19.8 (geomean, n=3)	131 (geomean, n = 3)	45.4 (one value available)	73.4 (one value available)	28.4 (geomean, n=2)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 88.5% Total system: 67.8%	Soil: 8.7% Total system: 12.6%	Soil: 6.9% Total system: 8.7%	Soil: 19.9% Total system: 24.9%	Soil: 14.5% Total system: 2.6%	Soil: 35.1% Total system: 0.0001%	EFSA Journal 2016;14(4):4453
Formation fraction in soil:	-	Parent → AE F075736 standard calculation: 0.86	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	

Table 8.9-12: Input parameters related to iodosulfuron-methyl-sodium and metabolites for $PEC_{sw/sed}$ calculations STEP 1, 2 and 3 (part 2)

Compound	AE F059411	AE 0014966	AE 0034855	AE F159737	AE 1234964	AE F154781	AE 0002166	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	140.1	367.3	169.1	183.2	201.2	126.1	397.4	EFSA Journal 2016;14(4):4453
Saturated vapour pressure (Pa)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
Water solubility (mg/L)	1000 (20°C) (default)	1000 (20°C) (default)	1000 (20°C) (default)	1000 (20°C) (default)	1000 (20°C) (default)	1000 (20°C) (default)	1000 (20°C) (default)	EFSA Journal 2016;14(4):4453
Diffusion coefficient in water (m^2/d)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
Diffusion coefficient in air (m^2/d)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453
K_{foc} / K_{foc} (mL/g)	45.6 / 26.5 (geomean, n = 27)	0 (worst case default)	0 (worst case default)	0 (worst case default)	0 (worst case default)	0 (worst case default)	0 (worst case default)	EFSA Journal 2016;14(4):4453
Freundlich Exponent 1/n	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	EFSA Journal 2016;14(4):4453
Plant Uptake	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	EFSA Journal 2016;14(4):4453
Wash-Off factor from Crop (1/mm)	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	not required for Step 1	EFSA Journal 2016;14(4):4453
$DT_{50,soil}$ (d)	144 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of	0.0001	0.0001	0.0001	0.0001	0.0001	7.5 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of	EFSA Journal 2016;14(4):4453

Compound	**AE F059411**	**AE 0014966**	**AE 0034855**	**AE F159737**	**AE 1234964**	**AE F154781**	**AE 0002166**	**Value in accordance to EU endpoint y/n/ Reference**
	2.58, n =16)						2.58, n =4)	
$DT_{50,water}$ (d)	9.9 (one value available)	43.8 (one value available)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
$DT_{50,sed}$ (d)	9.9 (one value available)	43.8 (one value available)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
$DT_{50,whole\ system}$ (d)	9.9 (one value available)	43.8 (one value available)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	1000 (worst case default)	EFSA Journal 2016;14(4):4453
Maximum occurrence observed (% molar basis with respect to the parent)	Soil: 40.9% Total system: 27.5%	Soil: 0.0001% Total system: 15.5%	Soil: 0.0001% Total system: 24.2%	Soil: 0.0001% Total system: 7.8%	Soil: 0.0001% Total system: 7.4%	Soil: 0.0001% Total system: 8.7%	Soil: 20% Total system: 25.1%	EFSA Journal 2016;14(4):4453
Formation fraction in soil:	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	EFSA Journal 2016;14(4):4453

PEC$_{sw/sed}$

Table 8.9-13: FOCUS Step 1, 2 and 3 PEC$_{sw}$ and PEC$_{sed}$ for iodosulfuron-methyl-sodium following single application of JMD-HER 387 OD

Scenario FOCUS	Waterbody	Max PEC$_{sw}$ (µg/L)	Dominant entry route	21 d- PEC$_{sw,twa}$ (µg/L)	Max PEC$_{sed}$ (µg/kg)
Winter cereals, application rate: 1.0 L/ha					
Step 1	---	3.2832	---	2.3222	1.0659
Step 2 NEU	March-May	0.2605	---	0.1837	0.0837
Step 2 SEU	March-May	0.4434	---	0.3132	0.1426
Step 3	---	---	---	---	---
D1	ditch	0.5076	drainage	0.3455	0.3860
D1	stream	0.3177	drainage	0.1939	0.1977
D2	ditch	0.7067	drainage	0.2277	0.2257
D2	stream	0.4504	drainage	0.1206	0.1269
D3	ditch	0.06331	drainage	0.002858	0.01147
D4	pond	0.002186	drainage	0.001797	0.002972
D4	stream	0.04684	drainage	0.000085	0.001141
D5	pond	0.002187	drainage	0.001772	0.002845
D5	stream	0.05025	drainage	0.000086	0.001171
D6	ditch	0.06394	drainage	0.02503	0.03290
R1	pond	0.002187	runoff/erosion	0.001785	0.003508
R1	stream	0.04889	runoff/erosion	0.001831	0.007703
R3	stream	0.05864	runoff/erosion	0.001306	0.007721
R4	stream	0.04135	runoff/erosion	0.000284	0.002942
Spring cereals, application rate: 1 L/ha					
Step 1	---	3.2832	---	2.3222	1.0659
Step 2 NEU	March-May	0.2605	---	0.1837	0.0837
Step 2 SEU	March-May	0.4434	---	0.3132	0.1426
Step 3	---	---	---	---	---
D1	ditch	0.06455	drainage	0.04601	0.05352
D1	stream	0.05610	drainage	0.002575	0.01195
D3	ditch	0.06337	drainage	0.003171	0.01206
D4	pond	0.002188	drainage	0.001661	0.002421

D4	stream	0.05185	drainage	0.000224	0.002557
D5	pond	0.002187	drainage	0.001775	0.002754
D5	stream	0.05035	drainage	0.000087	0.001183
R4	stream	0.2027	runoff/erosion	0.01060	0.03660
Maize, application rate: 1 L/ha					
Step 3	---	---	---	---	---
D6	ditch	0.05215	drainage	0.001724	0.008161
R1	pond	0.004681	runoff/erosion	0.003435	0.005227
R1	stream	0.03639	runoff/erosion	0.001538	0.007686
R2	stream	0.04877	runoff/erosion	0.001306	0.006977
R3	stream	0.05129	runoff/erosion	0.001191	0.006217

Table 8.9-14: Global maximum PEC_{sw} values for iodosulfuron-methyl-sodium, following single application of JMD-HER 387 OD

PEC_{sw} (µg/L)	**Scenario**	**Step 4**						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
Winter cereals, application rate: 1 L/ha								
None	D1 ditch	0.5076	0.5076	0.5076	-	0.5076	0.5076	0.5076
50 %		0.5076	0.5076	-	-	0.5076	-	-
75 %		0.5076	-	-	-	-	-	-
90 %		0.5076	-	-	-	-	-	-
None	D1 stream	0.3177	0.3177	0.3177	-	0.3177	0.3177	0.3177
50 %		0.3177	0.3177	-	-	0.3177	-	-
75 %		0.3177	-	-	-	-	-	-
90 %		0.3177	-	-	-	-	-	-
None	D2 ditch	0.7067	0.7067	0.7067	-	0.7067	0.7067	0.7067
50 %		0.7067	0.7067	-	-	0.7067	-	-
75 %		0.7067	-	-	-	-	-	-
90 %		0.7067	-	-	-	-	-	-
None	D2 stream	0.4504	0.4504	0.4504	-	0.4504	0.4504	0.4504
50 %		0.4504	0.4504	-	-	0.4504	-	-
75 %		0.4504	-	-	-	-	-	-
90 %		0.4504	-	-	-	-	-	-
None	D3 ditch	0.06331	0.01716	0.009104	-	0.01716	0.009104	0.009104
50 %		0.03854	0.008582	-	-	0.008582	-	-
75 %		0.01926	-	-	-	-	-	-

90 %		0.007704	-	-	-	-	-	-
None	D4 pond	0.002186	0.001892	0.001360	-	0.001892	0.001360	0.001360
50 %		0.001765	0.000946	-	-	0.000946	-	-
75 %		0.04019	-	-	-	-	-	-
90 %		0.000353	-	-	-	-	-	-
None	D4 stream	0.04684	0.01711	0.009076	-	0.01711	0.009076	0.009076
50 %		0.03840	0.008557	-	-	0.008557	-	-
75 %		0.01920	-	-	-	-	-	-
90 %		0.007681	-	-	-	-	-	-
None	D5 pond	0.002187	0.001892	0.001360	-	0.001892	0.001360	0.001360
50 %		0.001766	0.000946	-	-	0.000946	-	-
75 %		0.000883	-	-	-	-	-	-
90 %		0.000353	-	-	-	-	-	-
None	D5 stream	0.05025	0.01836	0.009737	-	0.01836	0.009737	0.009737
50 %		0.04120	0.009181	-	-	0.009181	-	-
75 %		0.02060	-	-	-	-	-	-
90 %		0.008241	-	-	-	-	-	-
None	D6 ditch	0.06394	0.02852	0.02852	-	0.02852	0.02852	0.02852
50 %		0.03892	0.02852	-	-	0.02852	-	-
75 %		0.02852	-	-	-	-	-	-
90 %		0.02852	-	-	-	-	-	-
None	R1 pond	0.002187	0.001955	0.001360	-	0.001892	0.001360	0.001360
50 %		0.001884	0.001424	-	-	0.000946	-	-
75 %		0.001389	-	-	-	-	-	-
90 %		0.001092	-	-	-	-	-	-
None	R1 stream	0.04889	0.04889	0.008089	-	0.01525	0.008089	0.02013
50 %		0.04889	0.04889	-	-	0.007627	-	-
75 %		0.04889	-	-	-	-	-	-
90 %		0.04889	-	-	-	-	-	-
None	R3 stream	0.05864	0.02839	0.01136	-	0.02142	0.01136	0.01296
50 %		0.04808	0.02839	-	-	0.01405	-	-
75 %		0.02839	-	-	-	-	-	-
90 %		0.02839	-	-	-	-	-	-
None	R4 stream	0.04135	0.01510	0.008012	-	0.01510	0.008012	0.008012
50 %		0.03390	0.007554	-	-	0.007554	-	-
75 %		0.01695	-	-	-	-	-	-
90 %		0.006780	-	-	-	-	-	-
Spring cereals, application rate: 1 L/ha								
None	D1 ditch	0.06455	0.01780	0.009632	-	0.01780	0.009632	0.009632
50 %		0.03945	0.009103	-	-	0.009103	-	-
75 %		0.01992	-	-	-	-	-	-

90 %		0.008214	-	-	-	-	-	-
None	D1 stream	0.05610	0.02050	0.01087	-	0.02050	0.01087	0.01087
50 %		0.04600	0.01025	-	-	0.01025	-	-
75 %		0.02300	-	-	-	-	-	-
90 %		0.009201	-	-	-	-	-	-
None	D3 ditch	0.06337	0.01718	0.009112	-	0.01718	0.009112	0.009112
50 %		0.03857	0.008589	-	-	0.008589	-	-
75 %		0.02300	-	-	-	-	-	-
90 %		0.009201	-	-	-	-	-	-
None	D4 pond	0.002188	0.001893	0.001361	-	0.001893	0.001361	0.001361
50 %		0.001766	0.000946	-	-	0.000946	-	-
75 %		0.000883	-	-	-	-	-	-
90 %		0.000353	-	-	-	-	-	-
None	D4 stream	0.05185	0.01894	0.01005	-	0.01894	0.01005	0.01005
50 %		0.04251	0.009472	-	-	0.009472	-	-
75 %		0.02126	-	-	-	-	-	-
90 %		0.008503	-	-	-	-	-	-
None	D5 pond	0.002187	0.001892	0.001360	-	0.001892	0.001360	0.001360
50 %		0.001766	0.000946	-	-	0.000946	-	-
75 %		0.000883	-	-	-	-	-	-
90 %		0.000353	-	-	-	-	-	-
None	D5 stream	0.05035	0.01840	0.009756	-	0.01840	0.009756	0.009756
50 %		0.04129	0.009199	-	-	0.009199	-	-
75 %		0.02064	-	-	-	-	-	-
90 %		0.008257	-	-	-	-	-	-
None	R4 stream	0.2027	0.2027	0.2027	-	0.01532	0.008124	0.09149
50 %		0.2027	0.2027	-	-	0.008335	-	-
75 %		0.2027	-	-	-	-	-	-
90 %		0.2027	-	-	-	-	-	-
Maize, application rate: 1 L/ha								
None	D6 ditch	0.05215	0.01709	0.009066	-	0.01709	0.009066	0.009066
50 %		0.03838	0.008546	-	-	0.008546	-	-
75 %		0.01918	-	-	-	-	-	-
90 %		0.007672	-	-	-	-	-	-
None	R1 pond	0.004681	0.004547	0.004230	-	0.001893	0.001361	0.002200
50 %		0.004471	0.003983	-	-	0.001308	-	-
75 %		0.003945	-	-	-	-	-	-
90 %		0.003630	-	-	-	-	-	-
None	R1 stream	0.03639	0.02983	0.02983	-	0.01532	0.008126	0.01358
50 %		0.03438	0.02983	-	-	0.007661	-	-
75 %		0.02983	-	-	-	-	-	-

90 %		0.02983	-	-	-	-	-	-
None	R2 stream	0.04877	0.02310	0.02310	-	0.02053	0.01089	0.01089
50 %		0.04609	0.02310	-	-	0.01027	-	-
75 %		0.02310	-	-	-	-	-	-
90 %		0.02310	-	-	-	-	-	-
None	R3 stream	0.05129	0.02159	0.01665	-	0.02159	0.01145	0.01145
50 %		0.04846	0.01665	-	-	0.01080	-	-
75 %		0.02423	-	-	-	-	-	-
90 %		0.01665	-	-	-	-	-	-

Metabolites of iodosulfuron-methyl-sodium

Table 8.9-15: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for AE F075736 following single application of JMD-HER 387 OD

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21 d- $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Winter cereals, application rate: 1 L/ha					
Step 1	---	3.7303	---	3.5298	0.5160
Step 2 NEU	March-May	0.4337	---	0.4103	0.0604
Step 2 SEU	March-May	0.8240	---	0.7797	0.1147
Step 3	---	---	---	---	---
D1	ditch	0.3600	drainage	0.2993	0.1987
D1	stream	0.2417	drainage	0.1223	0.09267
D2	ditch	0.5219	drainage	0.2558	0.1536
D2	stream	0.3973	drainage	0.1430	0.08793
D3	ditch	0.01942	drainage	0.01940	0.02187
D4	pond	0.04019	drainage	0.03984	0.03924
D4	stream	0.02139	drainage	0.01878	0.001141
D5	pond	0.007938	drainage	0.007764	0.007874
D5	stream	0.004277	drainage	0.003636	0.002665
D6	ditch	0.1688	drainage	0.06473	0.03423
R1	pond	0.000386	runoff/erosion	0.000355	0.000220
R1	stream	0.02187	runoff/erosion	0.000774	0.001496
R3	stream	0.03323	runoff/erosion	0.001520	0.003486
R4	stream	0.000113	runoff/erosion	0.000004	0.000010
Spring cereals, application rate: 1 L/ha					
Step 1	---	3.7303	---	3.5298	0.5160

Step 2 NEU	March-May	0.4337	---	0.4103	0.0604
Step 2 SEU	March-May	0.8240	---	0.7797	0.1147
Step 3	---	---	---	---	---
D1	ditch	0.05407	drainage	0.05224	0.03720
D1	stream	0.03806	drainage	0.02844	0.02094
D3	ditch	0.02329	drainage	0.02328	0.02812
D4	pond	0.04483	drainage	0.04437	0.04443
D4	stream	0.02312	drainage	0.02026	0.01815
D5	pond	0.008192	drainage	0.007980	0.007898
D5	stream	0.004291	drainage	0.003425	0.002518
R4	stream	0.05845	runoff/erosion	0.002462	0.005017
Maize, application rate: 1 L/ha					
Step 3	---	---	---	---	---
D6	ditch	0.004222	drainage	0.002614	0.002283
R1	pond	0.003329	runoff/erosion	0.002970	0.001699
R1	stream	0.02873	runoff/erosion	0.001146	0.002837
R2	stream	0.06243	runoff/erosion	0.002854	0.007096
R3	stream	0.06214	runoff/erosion	0.002807	0.005968

Table 8.9-16: Global maximum PEC_{sw} values for AE F075736 , following single application of JMD-HER 387 OD

PEC_{sw} (µg/L)	Scenario	Step 4						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	5 VFSmod	10 VFSmod	10-12
	No spray buffer (m)	1/3	5	10	20	5	10	10
Winter cereals, application rate: 1 L/ha								
None	D1 ditch	0.3600	0.3600	0.3600	-	0.3600	0.3600	0.3600
50 %		0.3600	0.3600	-	-	0.3600	-	-
75 %		0.3600	-	-	-	-	-	-
90 %		0.3600	-	-	-	-	-	-
None	D1 stream	0.2417	0.2417	0.2417	-	0.2417	0.2417	0.2417
50 %		0.2417	0.2417	-	-	0.2417	-	-
75 %		0.2417	-	-	-	-	-	-
90 %		0.2417	-	-	-	-	-	-
None		0.5219	0.5219	0.5219	-	0.5219	0.5219	0.5219

50 %	D2 ditch	0.5219	0.5219	-	-	0.5219	-	-
75 %		0.5219	-	-	-	-	-	-
90 %		0.5219	-		-	-	-	-
None	D2 stream	0.3973	0.3973	0.3973	-	0.3973	0.3973	0.3973
50 %		0.3973	0.3973		-	0.3973	-	-
75 %		0.3973	-		-	-	-	-
90 %		0.3973	-		-	-	-	-
None	D3 ditch	0.01942	0.01942	0.01942	-	0.01942	0.01942	0.01942
50 %		0.01942	0.01942	-	-	0.01942	-	-
75 %		0.01942	-	-	-	-	-	-
90 %		0.01942	-	-	-	-	-	-
None	D4 pond	0.04019	0.04019	0.04019	-	0.04019	0.04019	0.04019
50 %		0.04019	0.04019	-	-	0.04019	-	-
75 %		0.04019	-	-	-	-	-	-
90 %		0.04019	-	-	-	-	-	-
None	D4 stream	0.02139	0.02139	0.02139	-	0.02139	0.02139	0.02139
50 %		0.02139	0.02139	-	-	0.02139	-	-
75 %		0.02139	-	-	-	-	-	-
90 %		0.02139	-	-	-	-	-	-
None	D5 pond	0.007938	0.007938	0.007938	-	0.007938	0.007938	0.007938
50 %		0.007938	0.007938	-	-	0.007938	-	-
75 %		0.007938	-	-	-	-	-	-
90 %		0.007938	-	-	-	-	-	-
None	D5 stream	0.004277	0.004277	0.004277	-	0.004277	0.004277	0.004277
50 %		0.004277	0.004277	-	-	0.004277	-	-
75 %		0.004277	-	-	-	-	-	-
90 %		0.004277	-	-	-	-	-	-
None	D6 ditch	0.1688	0.1688	0.1688	-	0.1688	0.1688	0.1688
50 %		0.1688	0.1688	-	-	0.1688	-	-
75 %		0.1688	-	-	-	-	-	-
90 %		0.1688	-	-	-	-	-	-
None	R1 pond	0.000386	0.000386	0.000008	-	0.000039	0.000008	0.000155
50 %		0.000386	0.000386	-	-	0.000039	-	-
75 %		0.000386	-	-	-	-	-	-
90 %		0.000386	-	-	-	-	-	-
None	R1 stream	0.02187	0.02187	0.000205	-	0.000904	0.000205	0.009006
50 %		0.02187	0.02187	-	-	0.000904	-	-
75 %		0.02187	-	-	-	-	-	-
90 %		0.02187	-	-	-	-	-	-
None	R3 stream	0.03323	0.03323	0.01232	-	0.01721	0.01232	0.01517
50 %		0.03323	0.03323	-	-	0.01721	-	-

75 %		0.03323	-	-	-	-	-	-
90 %		0.03323	-	-	-	-	-	-
None	R4 stream	0.000113	0.000113	0.000001	-	0.000001	0.008012	0.000051
50 %		0.000113	0.000113	-	-	0.000001	-	-
75 %		0.000113	-	-	-	-	-	-
90 %		0.000113	-	-	-	-	-	-
Spring cereals, application rate: 1 L/ha								
None	D1 ditch	0.05407	0.05407	0.05407	-	0.05407	0.05407	0.05407
50 %		0.05407	0.05407		-	0.05407	-	-
75 %		0.05407	-		-	-	-	-
90 %		0.05407	-		-	-	-	-
None	D1 stream	0.03806	0.03806	0.03806	-	0.03806	0.03806	0.03806
50 %		0.03806	0.03806		-	0.03806	-	-
75 %		0.03806	-		-	-	-	-
90 %		0.03806	-		-	-	-	-
None	D3 ditch	0.02329	0.02329	0.02329	-	0.02329	0.02329	0.02329
50 %		0.02329	0.02329		-	0.02329	-	-
75 %		0.02329	-		-	-	-	-
90 %		0.02329	-		-	-	-	-
None	D4 pond	0.04483	0.04483	0.04483	-	0.04483	0.04483	0.04483
50 %		0.04483	0.04483		-	0.04483	-	-
75 %		0.04483	-		-	-	-	-
90 %		0.04483	-		-	-	-	-
None	D4 stream	0.02312	0.02312	0.02312	-	0.02312	0.02312	0.02312
50 %		0.02312	0.02312	-	-	0.02312	-	-
75 %		0.02312	-	-	-	-	-	-
90 %		0.02312	-	-	-	-	-	-
None	D5 pond	0.008192	0.008192	0.008192	-	0.008192	0.008192	0.008192
50 %		0.008192	0.008192	-	-	0.008192	-	-
75 %		0.008192	-	-	-	-	-	-
90 %		0.008192	-	-	-	-	-	-
None	D5 stream	0.004291	0.004291	0.004291	-	0.004291	0.004291	0.004291
50 %		0.004291	0.004291	-	-	0.004291	-	-
75 %		0.004291	-	-	-	-	-	-
90 %		0.004291	-	-	-	-	-	-
None	R4 stream	0.05845	0.05845	0.05845	-	0.000571	0.000309	0.02639
50 %		0.05845	0.05845	-	-	0.000571	-	-
75 %		0.05845	-	-	-	-	-	-
90 %		0.05845	-	-	-	-	-	-
Maize, application rate: 1 L/ha								

None	D6 ditch	0.004222	0.004222	0.004222	-	0.004222	0.004222	0.004222
50 %		0.004222	0.004222	-	-	0.004222	-	-
75 %		0.004222	-	-	-	-	-	-
90 %		0.004222	-	-	-	-	-	-
None	R1 pond	0.003329	0.003329	0.003329	-	0.000792	0.000307	0.001344
50 %		0.003329	0.003329	-	-	0.000792	-	-
75 %		0.003329	-	-	-	-	-	-
90 %		0.003329	-	-	-	-	-	-
None	R1 stream	0.02873	0.02873	0.02873	-	0.007453	0.003085	0.01309
50 %		0.02873	0.02873	-	-	0.007453	-	-
75 %		0.02873	-	-	-	-	-	-
90 %		0.02873	-	-	-	-	-	-
None	R2 stream	0.06243	0.06243	0.06243	-	0.000002	0.000001	0.02833
50 %		0.06243	0.06243	-	-	0.000002	-	-
75 %		0.06243	-	-	-	-	-	-
90 %		0.06243	-	-	-	-	-	-
None	R3 stream	0.06214	0.06214	0.06214	-	0.01731	0.000001	0.02834
50 %		0.06214	0.06214	-	-	0.01731	-	-
75 %		0.06214	-	-	-	-	-	-
90 %		0.06214	-	-	-	-	-	-

Table 8.9-17: FOCUS Step 1 PEC_{sw} and PEC_{sed} for AE F145740 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.6570	runoff/drainage	0.5618	0.1157
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.6570	runoff/drainage	0.5618	0.1157

Table 8.9-18: FOCUS Step 1 PEC_{sw} and PEC_{sed} for AE F145741 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.4920	runoff/drainage	0.4463	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.4920	runoff/drainage	0.4463	0.0000

Table 8.9-19: FOCUS Step 1 PEC_{sw} and PEC_{sed} for AE 0000119 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.4549	runoff/drainage	0.3551	0.5239
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.4549	runoff/drainage	0.3551	0.5239

Table 8.9-20: FOCUS Step 1 PECsw and PECsed for AE F161778 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.3821	runoff/drainage	0.3793	0.1130
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.3821	runoff/drainage	0.3793	0.1130

Table 8.9-21: FOCUS Step 1 PECsw and PECsed for BCS-CW81253 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.7189	runoff/drainage	0.7137	0.2998
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.7189	runoff/drainage	0.7137	0.2998

Table 8.9-22: FOCUS Step 1 PECsw and PECsed for AE 0014966 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.3684	runoff/drainage	0.3136	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.3684	runoff/drainage	0.3136	0.0000

Table 8.9-23: FOCUS Step 1 PECsw and PECsed for AE 0034855 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.2648	runoff/drainage	0.2629	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.2648	runoff/drainage	0.2629	0.0000

Table 8.9-24: FOCUS Step 1 PECsw and PECsed for AE F159737 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.0925	runoff/drainage	0.0918	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.0925	runoff/drainage	0.0918	0.0000

Table 8.9-25: FOCUS Step 1 PECsw and PECsed for AE 1234964 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.0964	runoff/drainage	0.0957	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.0925	runoff/drainage	0.0918	0.0000

Table 8.9-26: FOCUS Step 1 PECsw and PECsed for AE F154781 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	0.0710	runoff/drainage	0.0705	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	0.0710	runoff/drainage	0.0705	0.0000

Table 8.9-27: FOCUS Step 1 PECsw and PECsed for AE 0002166 following single application

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)	Dominant entry route	21d - $PEC_{sw,twa}$ (µg/L)	Max PEC_{sed} (µg/kg)
Spring cereals, application rate: 1 L/ha					
Step 1	---	1.1460	runoff/drainage	1.1377	0.0000
Winter cereals, application rate: 1 L/ha					
Step 1	---	1.1460	runoff/drainage	1.1377	0.0000

8.9.2.3 $PEC_{sw/sed}$ of formulation

JMD-HER 387 OD is formulation that contains two active substance that quite quickly dissipate is soil and water hence PECsw for formulation was calculated using Drift Calculator (embedded in SWASH v5.3). Results of modelling are included in table below. Drift Calculator outputs are included in Appendix 3 (KCP 9.2.5).

Table 8.9-28: PEC_{sw} for JMD-HER 387 OD on spring cereals and winter cereals

Waterbody	Application rate (g/ha)	Buffer zone (m)	PEC_{sw} (µg/L)
Spring cereals, application rate: 1 L/ha			
ditch	1044*	0.75	8.1608
		5	1.8181
		10	0.9642
		20	0.5010
pond	1044*	0.75	0.3693
		5	0.1979
		10	0.1423
		20	0.0950
stream	1044*	0.75	8.1608
		5	1.8181
		10	0.9642
		20	0.5010
Winter cereals, application rate: 1 L/ha			
ditch	1044*	0.75	8.1608
		5	1.8181
		10	0.9642
		20	0.5010
pond	1044*	0.75	0.3693
		5	0.1979

		10	0.1423
		20	0.0950
stream	1044*	0.75	8.1608
		5	1.8181
		10	0.9642
		20	0.5010

* application rate calculated on the basis of density 1.044 g/ml (see dRR Part B 0,1-4)

zRMS comments:

Evaluator agrees with modelling carried out by Applicant.
Due the fact that scenarios only D3, D4, D5, R1, R3, R4.are relevant for the Central Zone calculations the remaining scenarios have not been evaluated.

2,4-D
Predicted concentrations of 2,4-D and its metabolites in surface water were calculated by the Applicant at Steps 1/2 to 3 and Step 4 on the basis input parameters for 2,4-D presented in EFSA Journal 2014;12(9):3812. At Step 3, refined exposure was calculated in European that integrate a realistic combination of worst-case soil and climate characteristics for drainage and runoff, respectively.
At Step 4, the European scenarios used at Step 3, are refined by implementing mitigation measures such as planted buffer zones and nozzle reduction to calculate exposure in water and sediment. At Step 4, the software tool SWAN was used to calculation. Drift mitigation was specified by selecting buffer zones of different, runoff mitigation was defined by manual input of reduction factors for runoff volume, erosion mass and runoff/erosion flux on the respective SWAN.

Iodosulfuron-methyl-sodium
PECsw has been calculated according to the GAP using the models FOCUS STEPS 1-2, 3 and 4 .
The PECsw/sed for active substances were carried out at Step 4 according to FOCUS L&M Guidance and Working document of the central zone in the authorisation of plant protection products, environmental fate and behaviour.
Predicted concentrations of iodosulfuron-methyl-sodium and its metabolites in surface water were calculated by the applicant at Steps 1/2,3 and 4 on the basis input parameters presented in EFSA Journal 2016;14(4):4453. At Step 3, refined exposure was calculated realistic combination of worst-case soil and climate characteristics for drainage and runoff, respectively.
Nevertheless, additional simulations may be required by the cMS that do not accept calculations performed using FOCUS models. The acceptable predicted environmental concentrations for active substance and their matabolites are appropriate to be used for the subsequent risk assessment.

Other approaches for simulating run-off mitigation reductions (e.g. VSFMod) are not recommended for the Core Assessment. such approaches should only be presented in National Assessment

Nevertheless, additional simulations may be required by the cMS that do not accept calculations performed using FOCUS models.

The acceptable predicted environmental concentrations for active substance and their metabolites are appropriate to be used for the subsequent risk assessment.

PL: The calculations were performed for all relevant scenarios for Polish: D3, D4, R1.

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

8.10.1.1 2,4-D and its metabolites

Table 8.10-1 Summary of atmospheric degradation and behaviour

Compound	2,4-D
Direct photolysis in air	NR
Quantum yield of direct phototransformation	NR
Photochemical oxidative degradation in air	DT_{50} : 1.6 days (assuming $1.5 \cdot 10^{6}$ OH radicles cm^{3})
Volatilisation	Vapour pressure (Pa): $9.9 \cdot 10^{-6}$ (20°C) Henry's Law Constant (Pa·m^3/mol): $4.0 \cdot 10^{-6}$ (20°C) From plant surfaces (BBA guideline): no data From soil surfaces (BBA guideline): negligible after 15 days
Metabolites	NR

The vapour pressure at 20 °C of the 2,4-D is < 10^{-5} Pa. Hence the 2,4-D is regarded as non-volatile. Therefore, exposure of adjacent surface waters and terrestrial ecosystems by the 2,4-D due to volatilization with subsequent deposition is not expected to occur. Additionally, DT_{50} value in the atmosphere is below 2 days indicating that it would not be persistent in air.

8.10.1.2 Iodosulfuron-methyl-sodium and its metabolites

Table 8.10-2 Summary of atmospheric degradation and behaviour

Compound	iodosulfuron-methyl-sodium
Direct photolysis in air	No data required.
Quantum yield of direct phototransformation	No data required.
Photochemical oxidative degradation in air	No data required.
Volatilisation	Vapour pressure (Pa): 2.6×10^{-9} (20°C) Henry's Law Constant (): $2.29 \cdot 10^{-11}$ Pa·m^3/mol (20°C) Volatilisation from plant/soil surfaces: no data required
Metabolites	No data required.

The vapour pressure at 25 °C of the iodosulfuron-methyl-sodium is < 10^{-5} Pa. Hence the iodosulfuron-methyl-sodium is regarded as non-volatile. Therefore, exposure of adjacent surface waters and terrestrial ecosystems by the iodosulfuron-methyl-sodium due to volatilization with subsequent deposition is not expected to occur.

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Owner
KCP 9.2.4.1/01	Tabor E.	2022	JMD-HER 387 OD Calculation of predicted environmental concentrations of 2,4-D and iodosulfuron-methyl-sodium in groundwater using the FOCUS groundwater scenarios (PEARL, PELMO, MACRO) Company Report No: EST/17/2022 Source: ESTICON Sp. z o.o., Poland GLP: no Published: no	N	Pestila*
KCP 9.2.5/01	Tabor E.	2022	JMD-HER 387 OD Calculation of Predicted Environmental Concentrations of 2,4-D and iodosulfuron-methyl-sodium in surface water using the FOCUS scenarios (Steps 1, 2, 3 and 4) Company Report No: EST/18/2022 Source: ESTICON Sp. z o.o., Poland GLP: no Published: no	N	Pestila*

* Pestila Spółka z ograniczoną odpowiedzialnością

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

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

List of data submitted by the applicant and not relied on

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

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

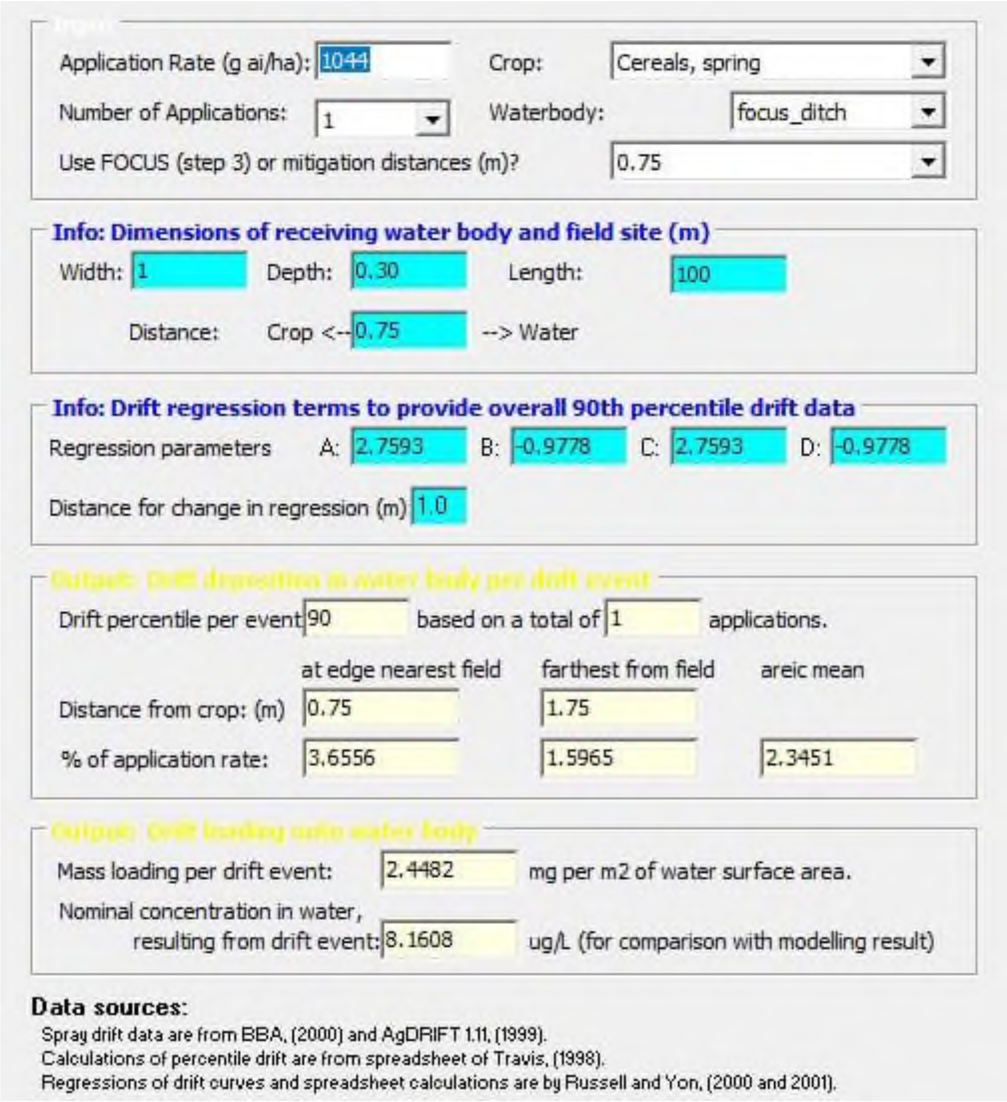
Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Owner
-	-	-	-	-	-

Appendix 2 Detailed evaluation of the new Annex II studies

Not relevant.

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

Spring cereals



Input

Application Rate (g ai/ha): 1044 Crop: Cereals, spring
Number of Applications: 1 Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 0.75

Info: Dimensions of receiving water body and field site (m)
Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 0.75 --> Water

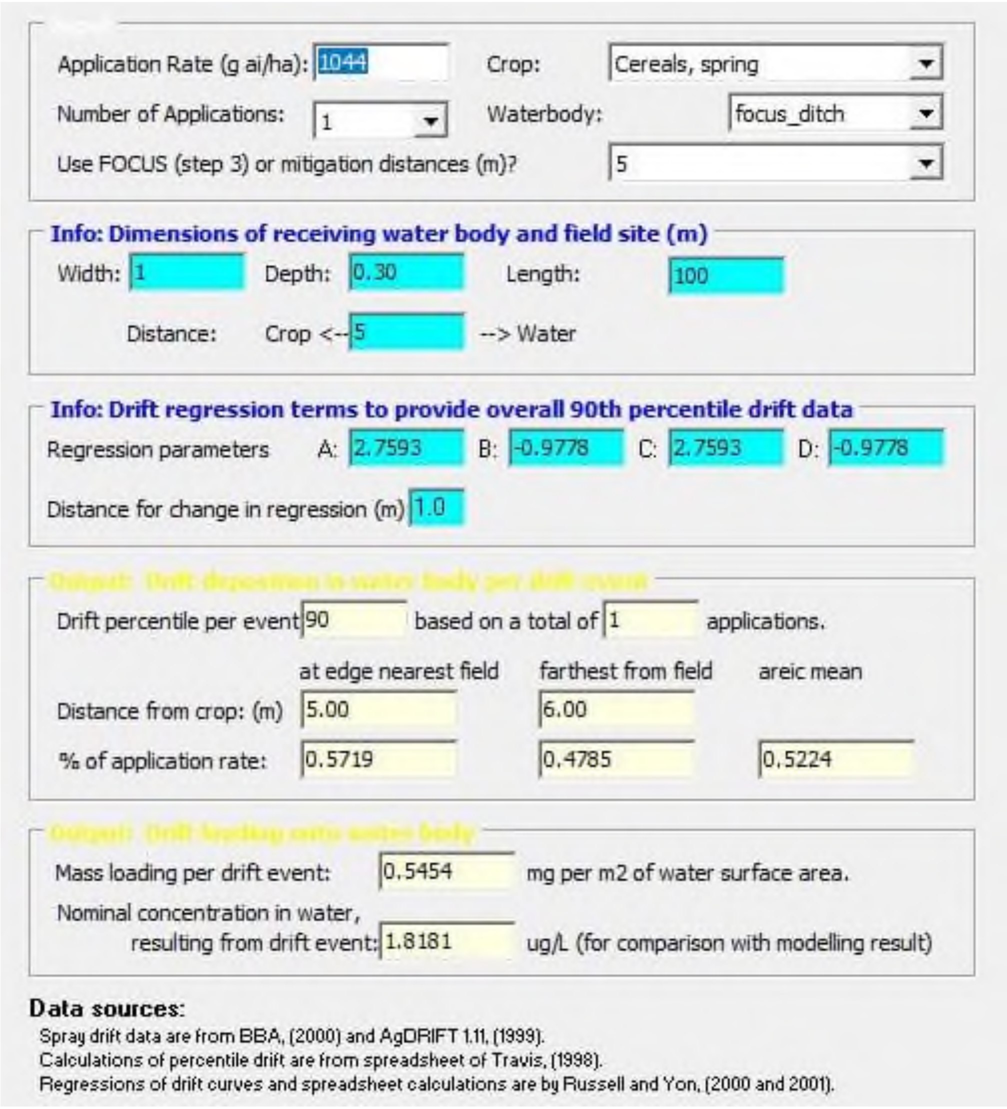
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	0.75	1.75	
% of application rate:	3.6556	1.5965	2.3451

Output: Drift loading onto water body
Mass loading per drift event: 2.4482 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 8.1608 ug/L (for comparison with modelling result)

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



Application Rate (g ai/ha): 1044 Crop: Cereals, spring
Number of Applications: 1 Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 5

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

Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 5 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

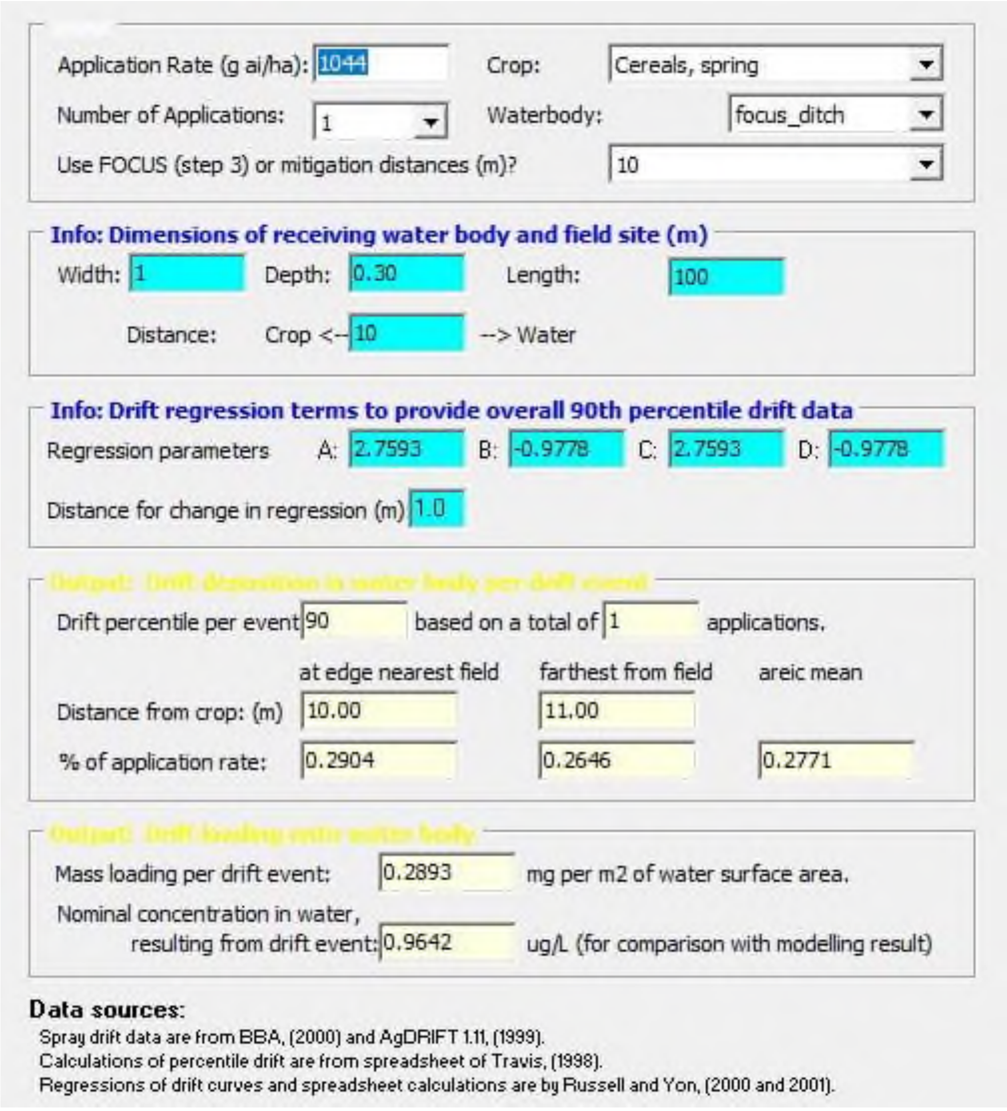
Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	5.00	6.00	
% of application rate:	0.5719	0.4785	0.5224

Output: Drift loading onto water body

Mass loading per drift event: 0.5454 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 1.8181 ug/L (for comparison with modelling result)

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



Application Rate (g ai/ha): 1044 Crop: Cereals, spring
Number of Applications: 1 Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 10

Info: Dimensions of receiving water body and field site (m)
Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 10 --> Water

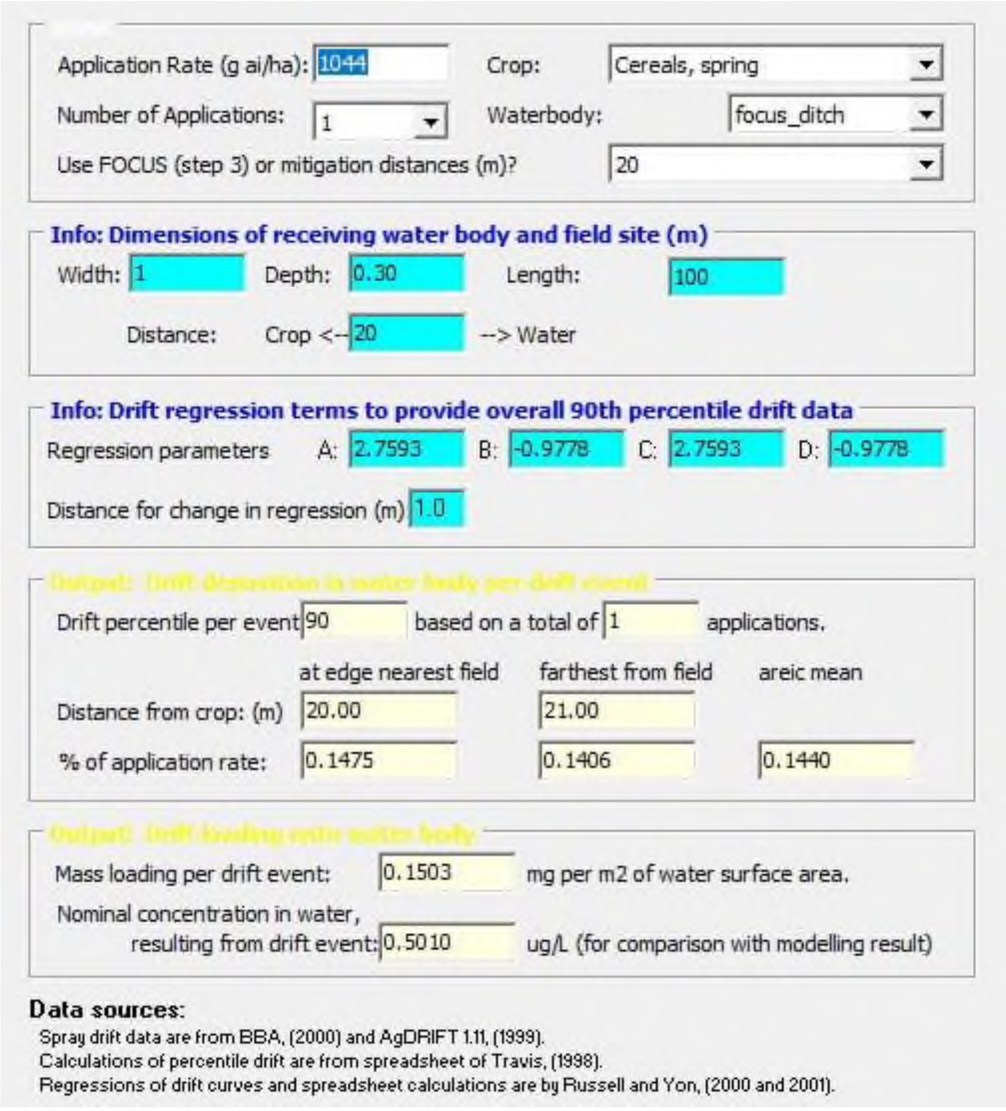
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	11.00	
% of application rate:	0.2904	0.2646	0.2771

Output: Drift loading onto water body
Mass loading per drift event: 0.2893 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.9642 ug/L (for comparison with modelling result)

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


Application Rate (g ai/ha): 1044
Crop: Cereals, spring
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 21.00
% of application rate: 0.1475 0.1406 0.1440
Output: Drift loading onto water body
Mass loading per drift event: 0.1503 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.5010 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

Application Rate (g ai/ha): 1044 Crop: Cereals, spring
Number of Applications: 1 Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 0.75

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

Width: 30 Depth: 1.00 Length: 30

Distance: Crop <-- 0.75 --> Water

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

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

Distance for change in regression (m) 1.0

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

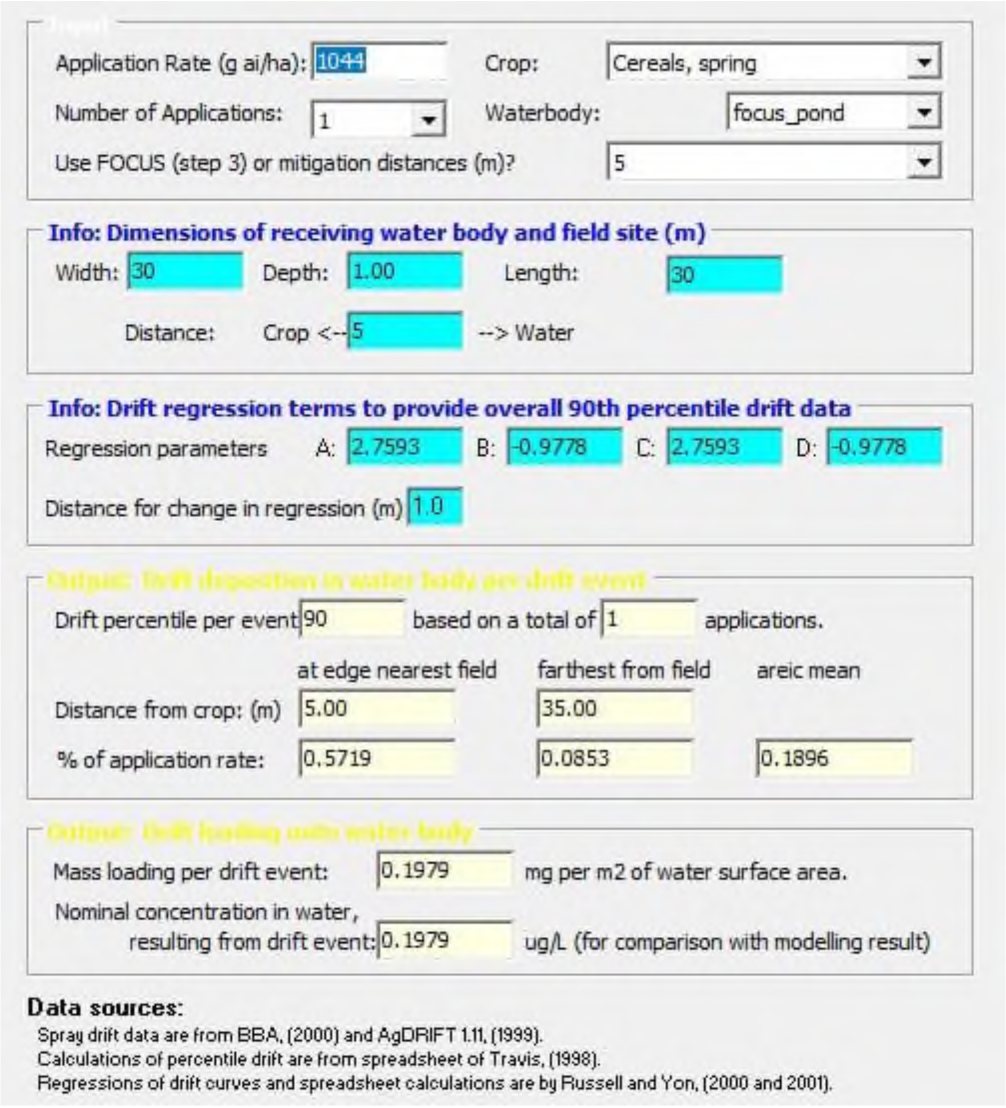
	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	0.75	30.75	
% of application rate:	3.6556	0.0968	0.3538

Mass loading per drift event: 0.3693 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 0.3693 ug/L (for comparison with modelling result)

Data sources:

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



Input

Application Rate (g ai/ha): 1044
Crop: Cereals, spring
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 5

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

Width: 30 Depth: 1.00 Length: 30
Distance: Crop <-- 5 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

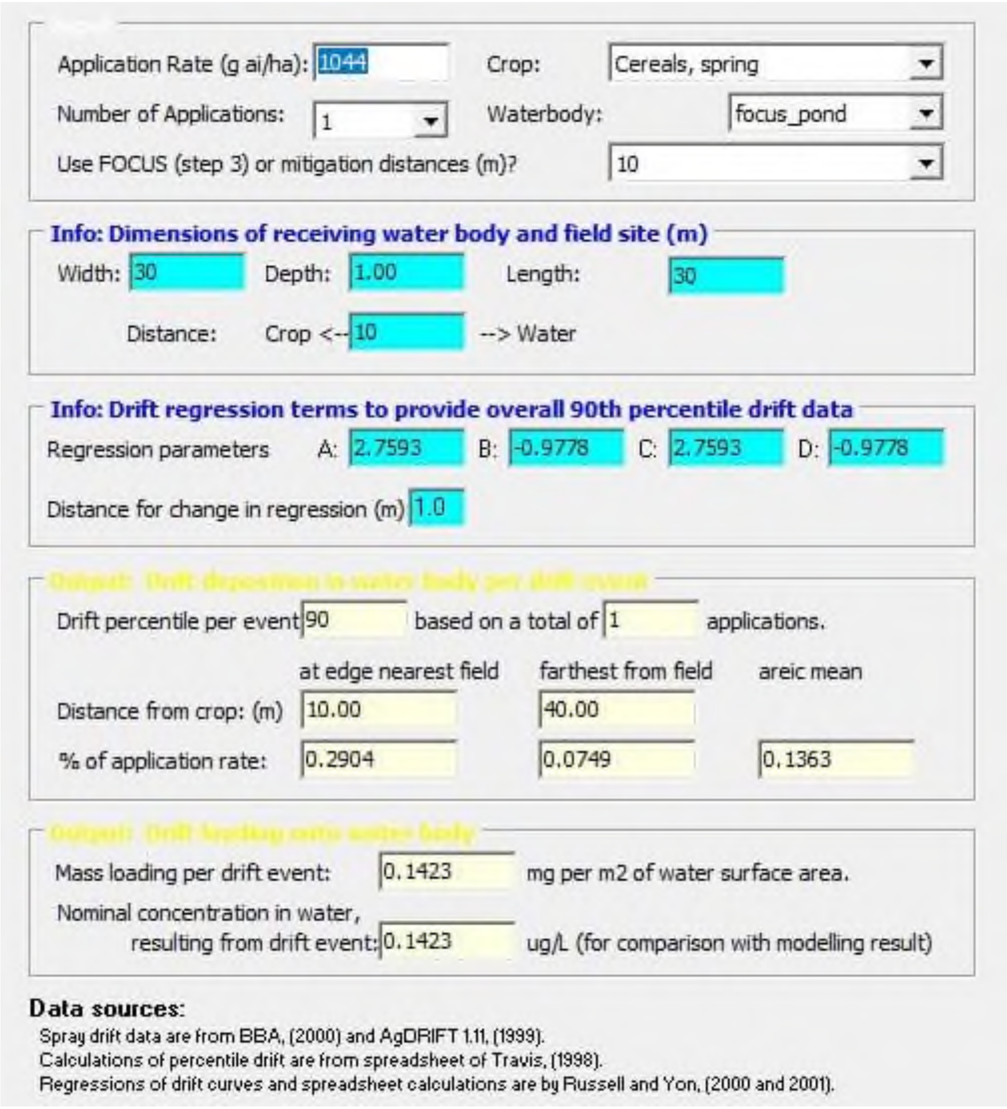
Drift percentile per event 90 based on a total of 1 applications.

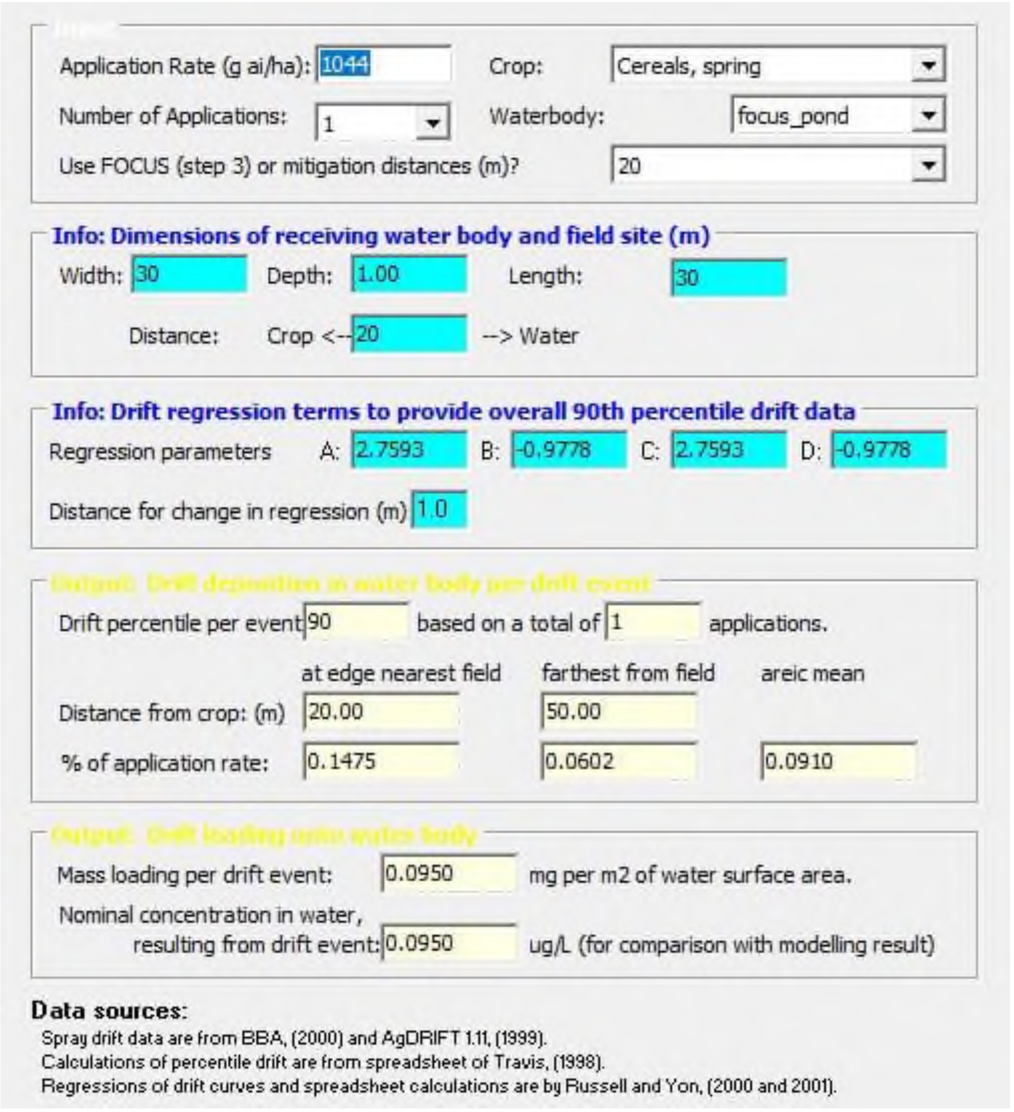
	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	5.00	35.00	
% of application rate:	0.5719	0.0853	0.1896

Output: Drift loading onto water body

Mass loading per drift event: 0.1979 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.1979 ug/L (for comparison with modelling result)

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


Application Rate (g ai/ha): 1044
Crop: Cereals, spring
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 10
Info: Dimensions of receiving water body and field site (m)
Width: 30 Depth: 1.00 Length: 30
Distance: Crop <-- 10 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 40.00
% of application rate: 0.2904 0.0749 0.1363
Output: Drift loading onto water body
Mass loading per drift event: 0.1423 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.1423 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).



Input

Application Rate (g ai/ha): 1044 Crop: Cereals, spring
Number of Applications: 1 Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 20

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

Width: 30 Depth: 1.00 Length: 30
Distance: Crop <-- 20 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

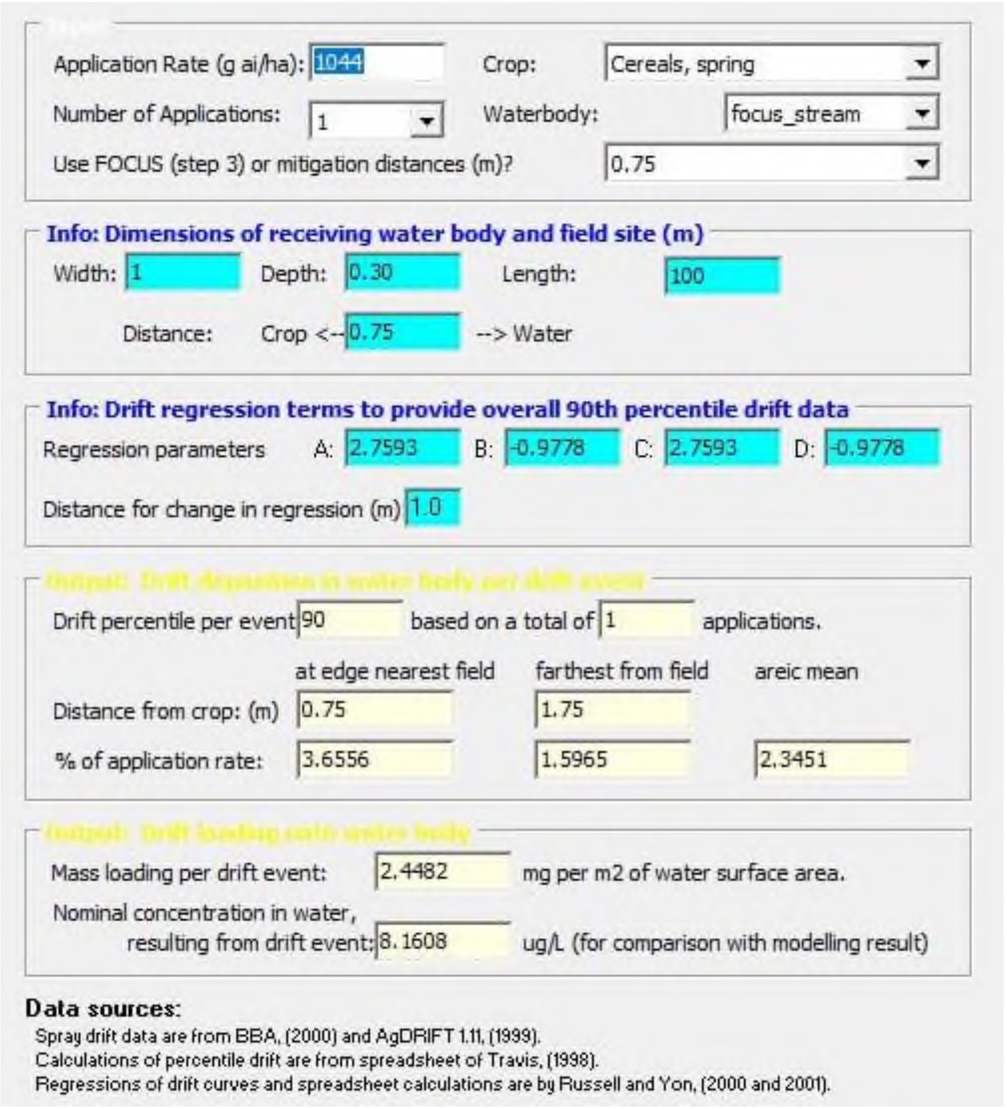
Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	20.00	50.00	
% of application rate:	0.1475	0.0602	0.0910

Output: Drift loading onto water body

Mass loading per drift event: 0.0950 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0950 ug/L (for comparison with modelling result)

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



Application Rate (g ai/ha): 1044
Crop: Cereals, spring
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 0.75

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

Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 0.75 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

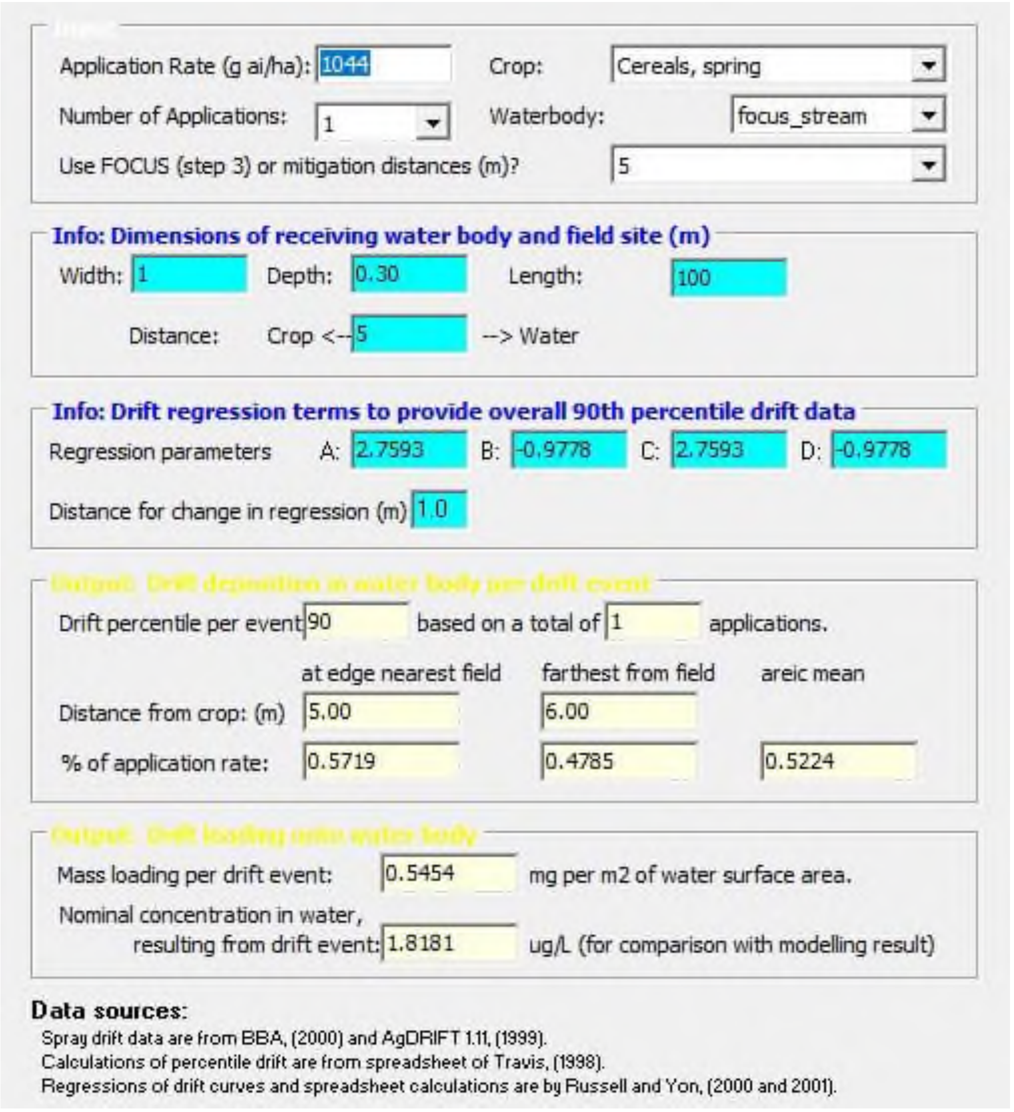
Drift percentile per event 90 based on a total of 1 applications.

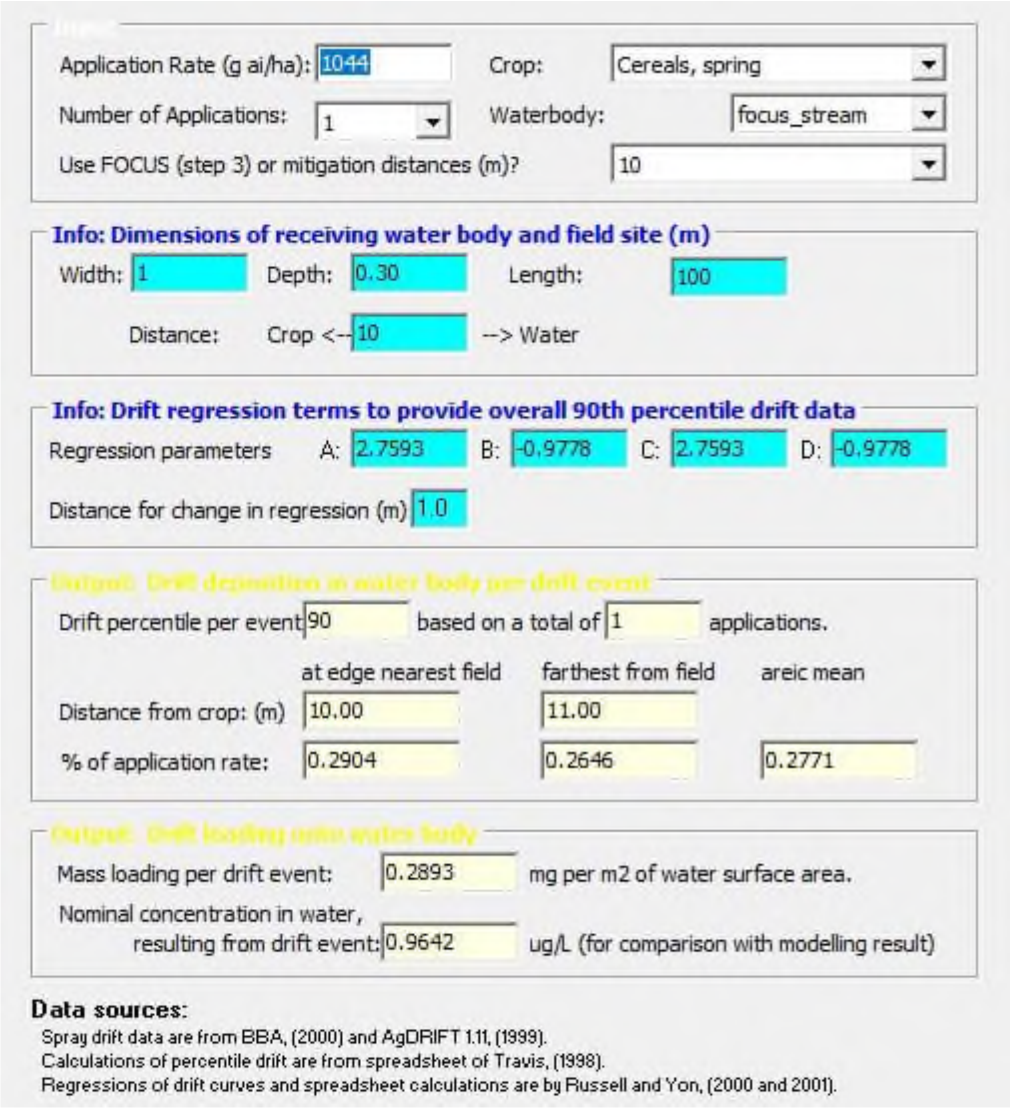
	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	0.75	1.75	
% of application rate:	3.6556	1.5965	2.3451

Output: Drift loading onto water body

Mass loading per drift event: 2.4482 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 8.1608 ug/L (for comparison with modelling result)

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


Application Rate (g ai/ha): 1044
Crop: Cereals, spring
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 0.5719 0.4785 0.5224
Output: Drift loading onto water body
Mass loading per drift event: 0.5454 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 1.8181 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).



Input

Application Rate (g ai/ha): 1044 | Crop: Cereals, spring
Number of Applications: 1 | Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 10

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

Width: 1 | Depth: 0.30 | Length: 100
Distance: Crop <-- 10 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

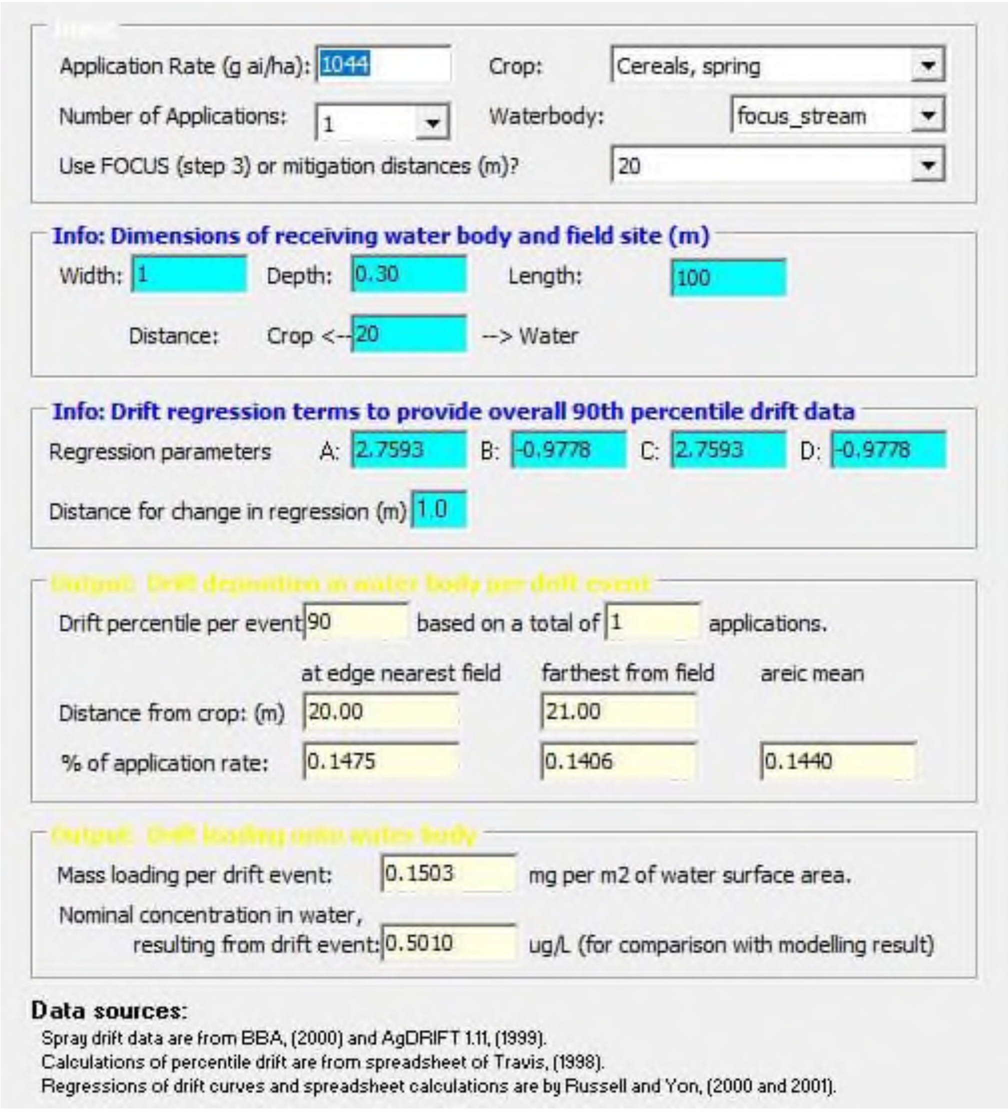
Drift percentile per event 90 based on a total of 1 applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	11.00	
% of application rate:	0.2904	0.2646	0.2771

Output: Drift loading onto water body

Mass loading per drift event: 0.2893 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.9642 ug/L (for comparison with modelling result)

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



Input

Application Rate (g ai/ha): 1044 | Crop: Cereals, spring

Number of Applications: 1 | Waterbody: focus_stream

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

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

Width: 1 | Depth: 0.30 | Length: 100

Distance: Crop <-- 20 --> Water

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

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

Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	20.00	21.00	
% of application rate:	0.1475	0.1406	0.1440

Output: Drift loading onto water body

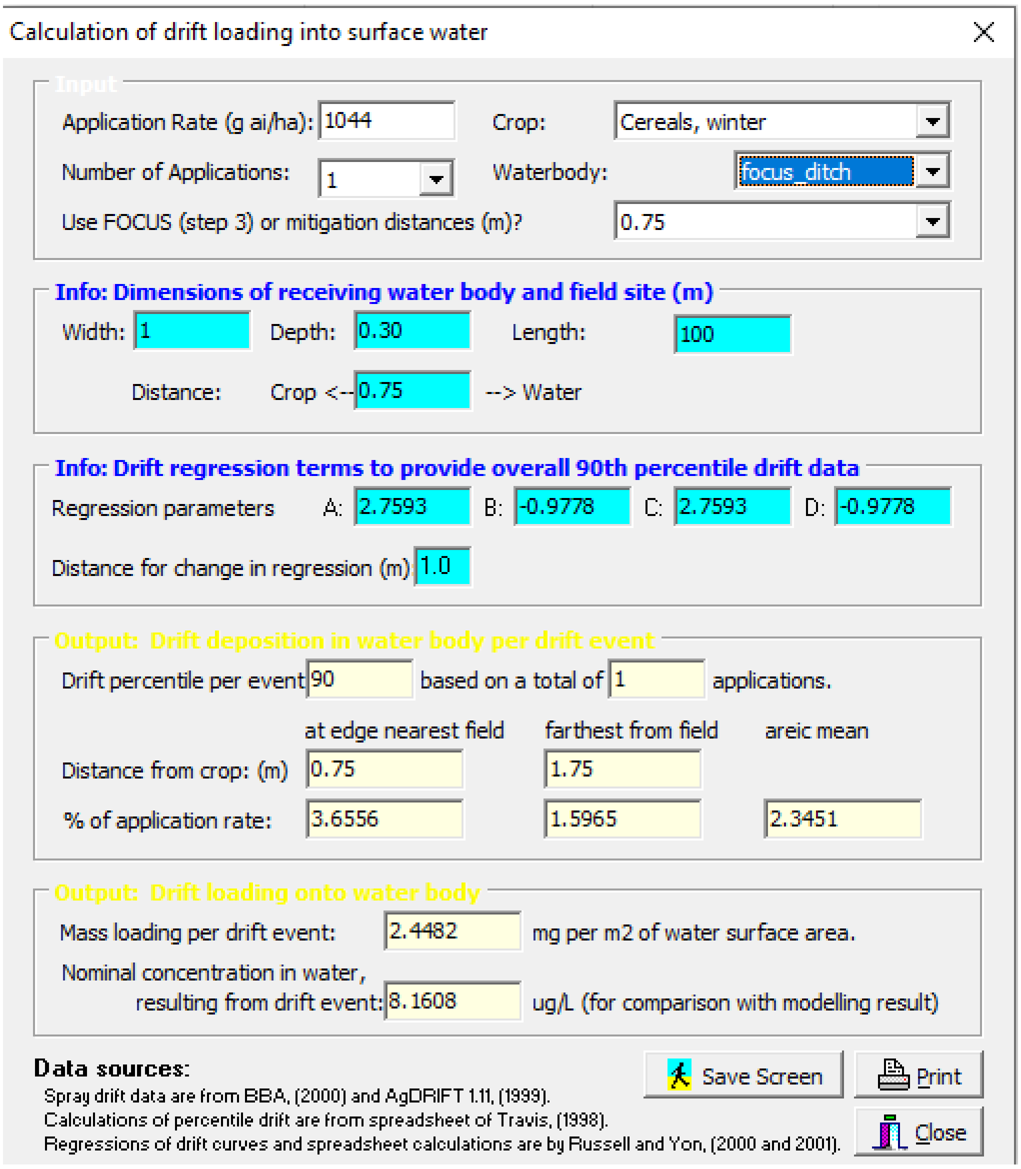
Mass loading per drift event: 0.1503 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 0.5010 ug/L (for comparison with modelling result)

Data sources:

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

Winter cereals



Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 0.75

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

Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 0.75 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	0.75	1.75	
% of application rate:	3.6556	1.5965	2.3451

Output: Drift loading onto water body

Mass loading per drift event: 2.4482 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 8.1608 ug/L (for comparison with modelling result)

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

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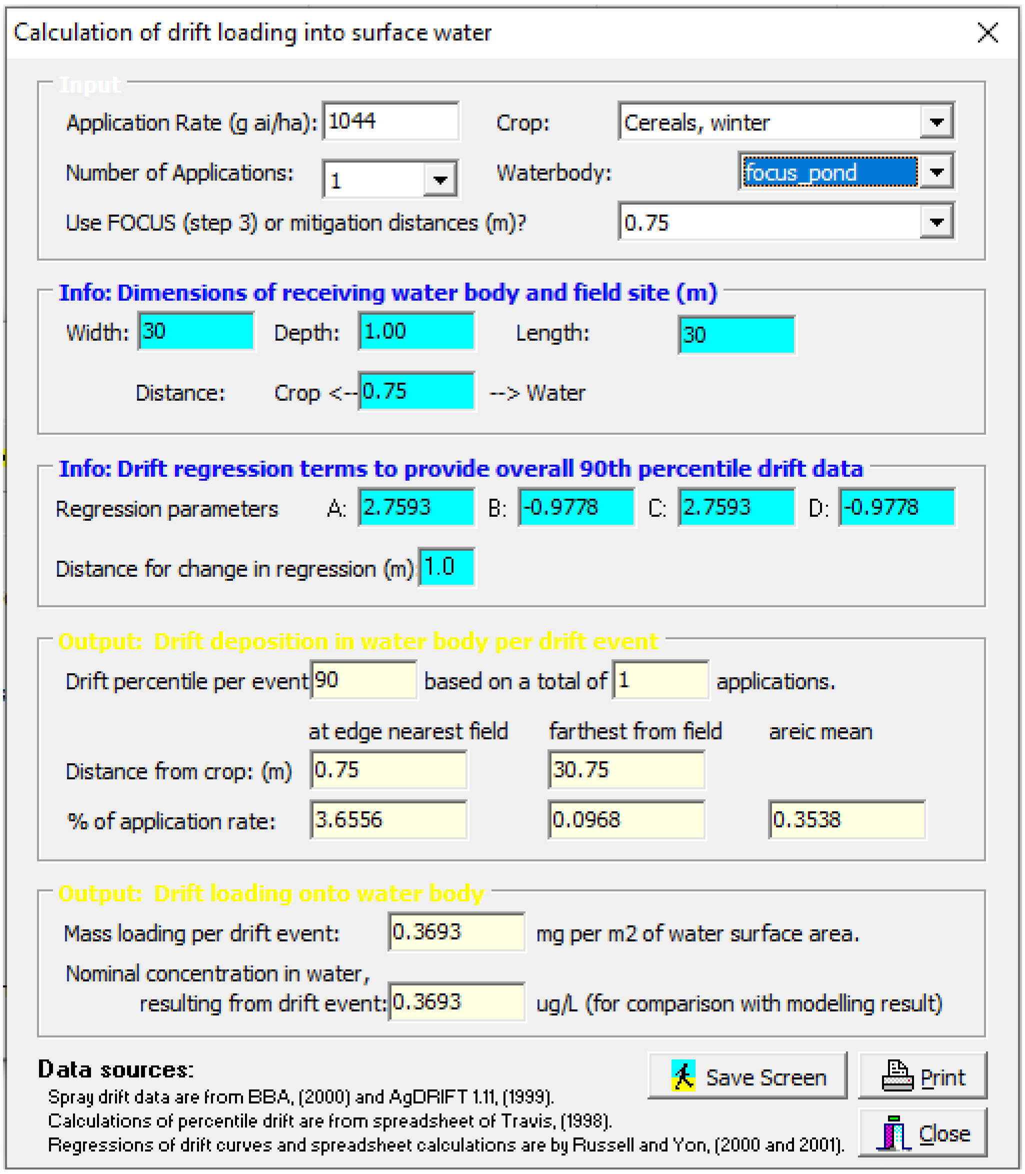
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 0.75
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 0.75 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 0.75 30.75
% of application rate: 3.6556 0.0968 0.3538
Output: Drift loading onto water body
Mass loading per drift event: 0.3693 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.3693 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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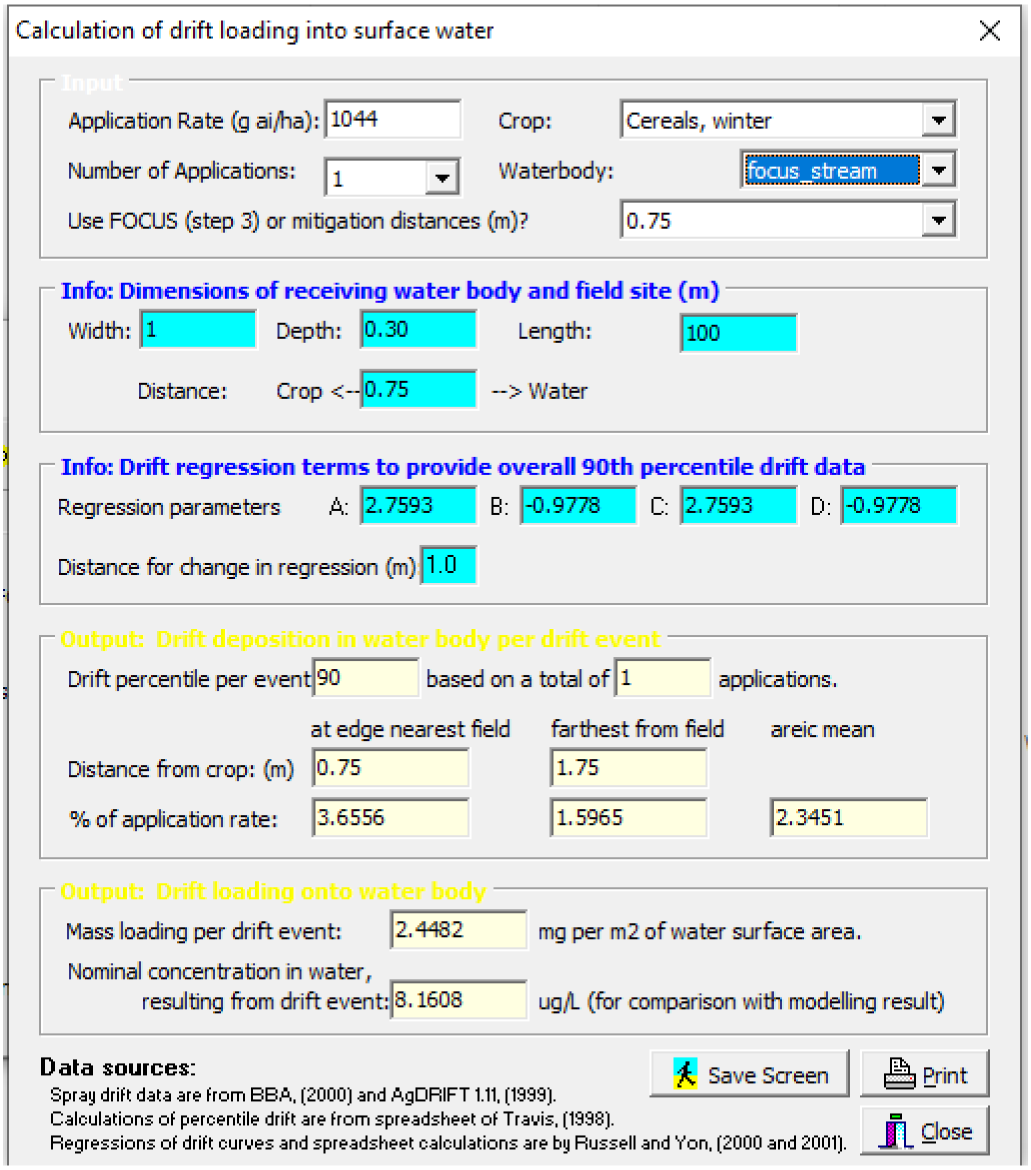
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 0.75
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 0.75 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 0.75 1.75
% of application rate: 3.6556 1.5965 2.3451
Output: Drift loading onto water body
Mass loading per drift event: 2.4482 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 8.1608 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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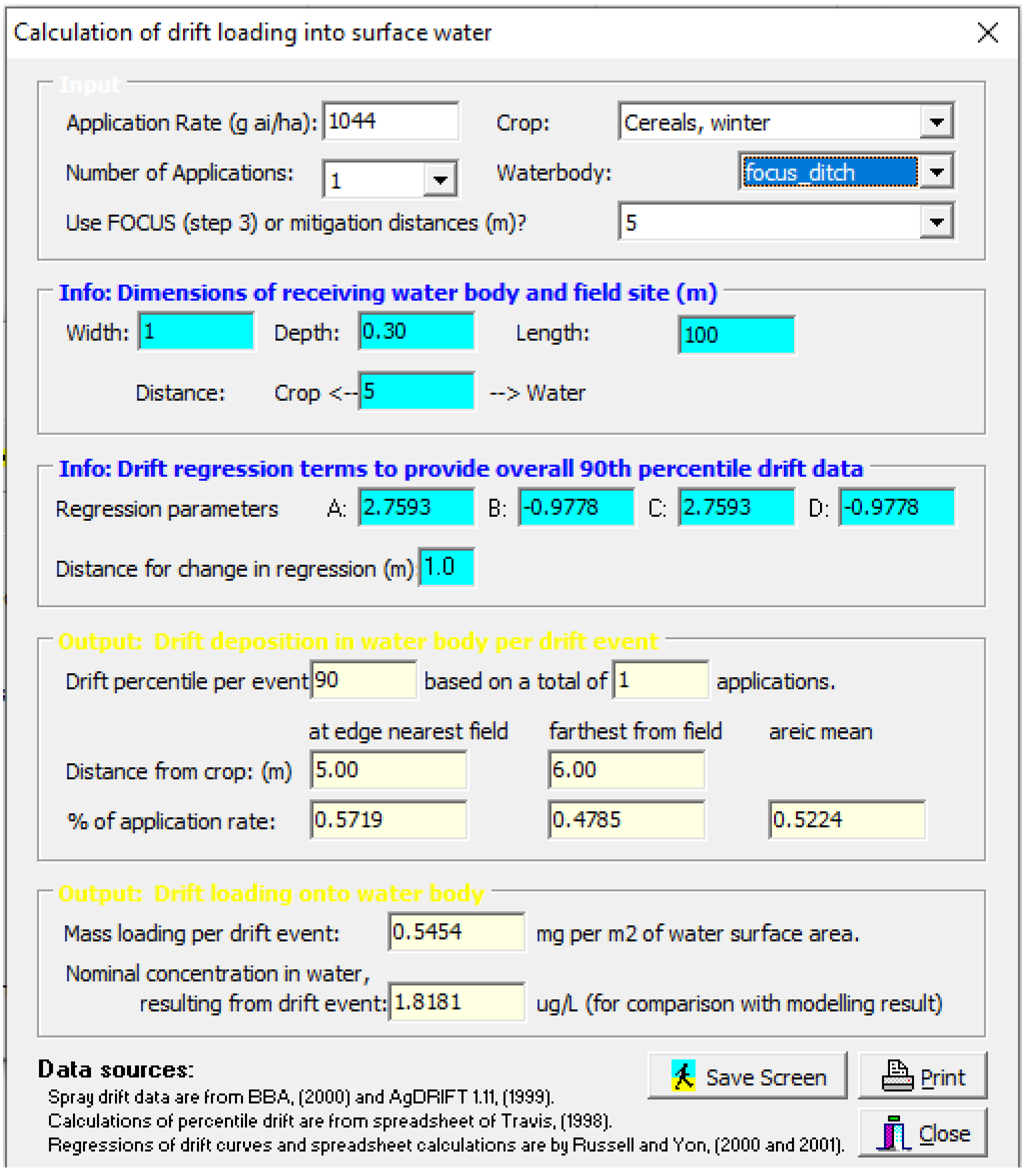
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 0.5719 0.4785 0.5224
Output: Drift loading onto water body
Mass loading per drift event: 0.5454 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 1.8181 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
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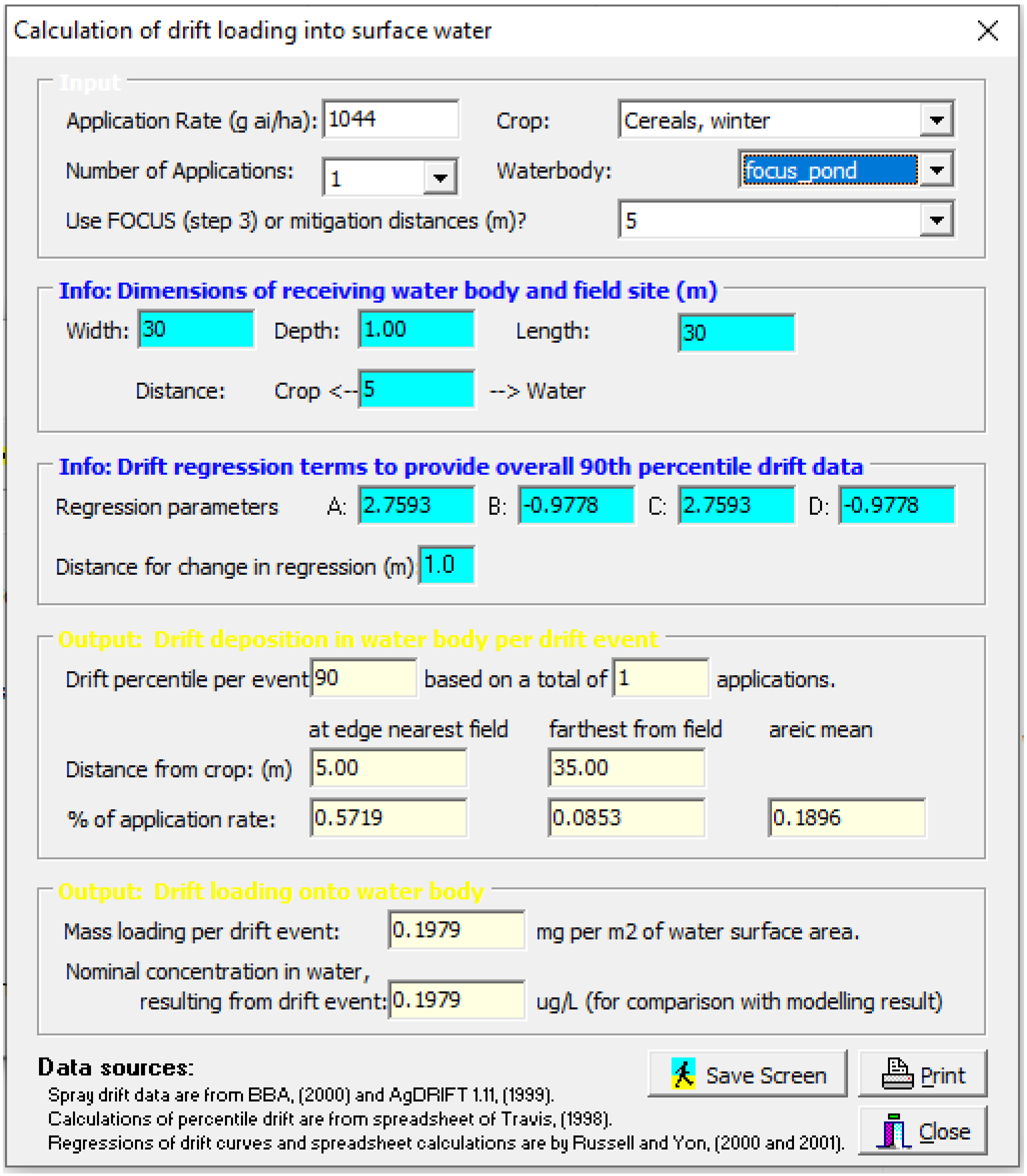
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 35.00
% of application rate: 0.5719 0.0853 0.1896
Output: Drift loading onto water body
Mass loading per drift event: 0.1979 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.1979 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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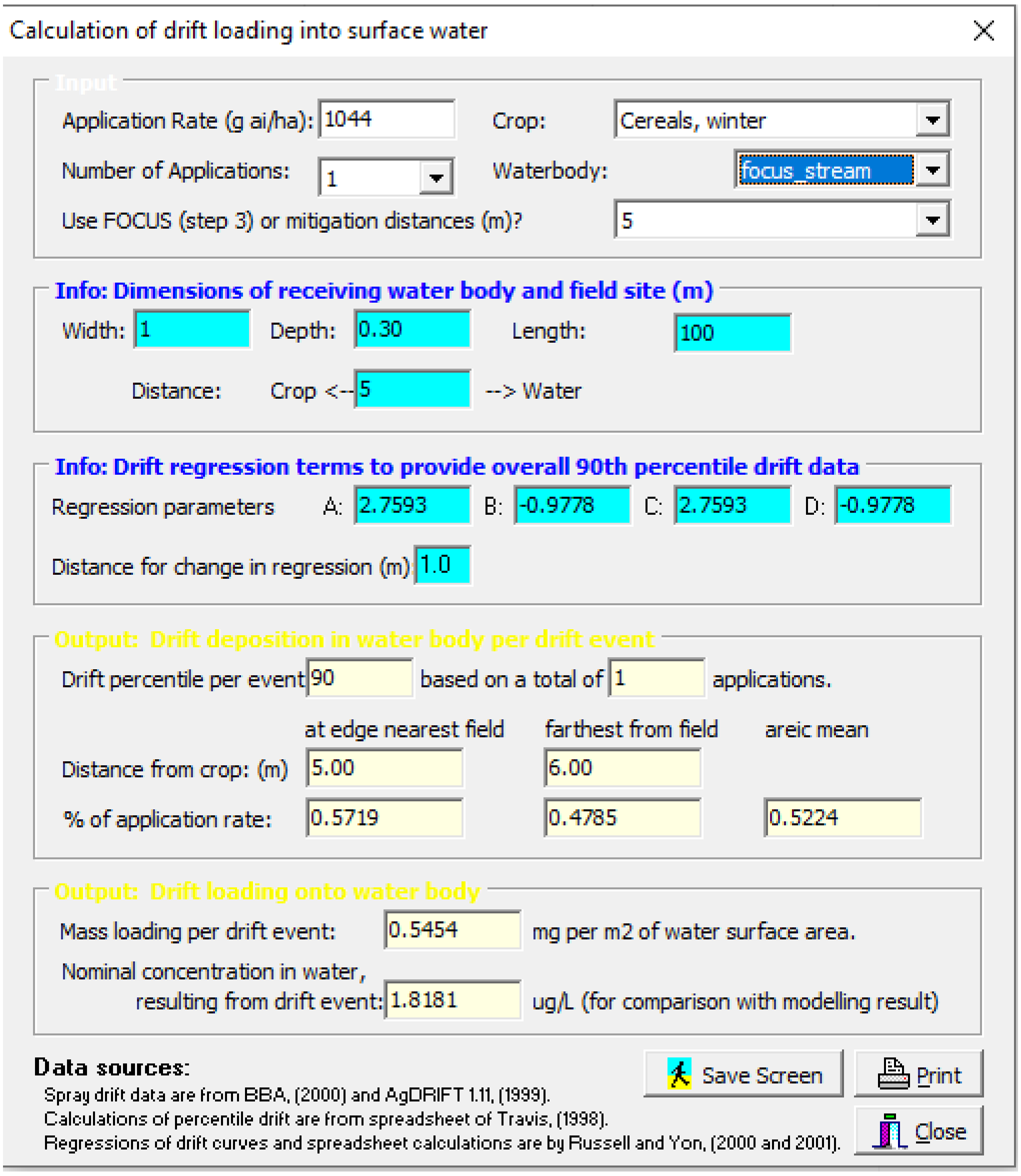
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 0.5719 0.4785 0.5224
Output: Drift loading onto water body
Mass loading per drift event: 0.5454 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 1.8181 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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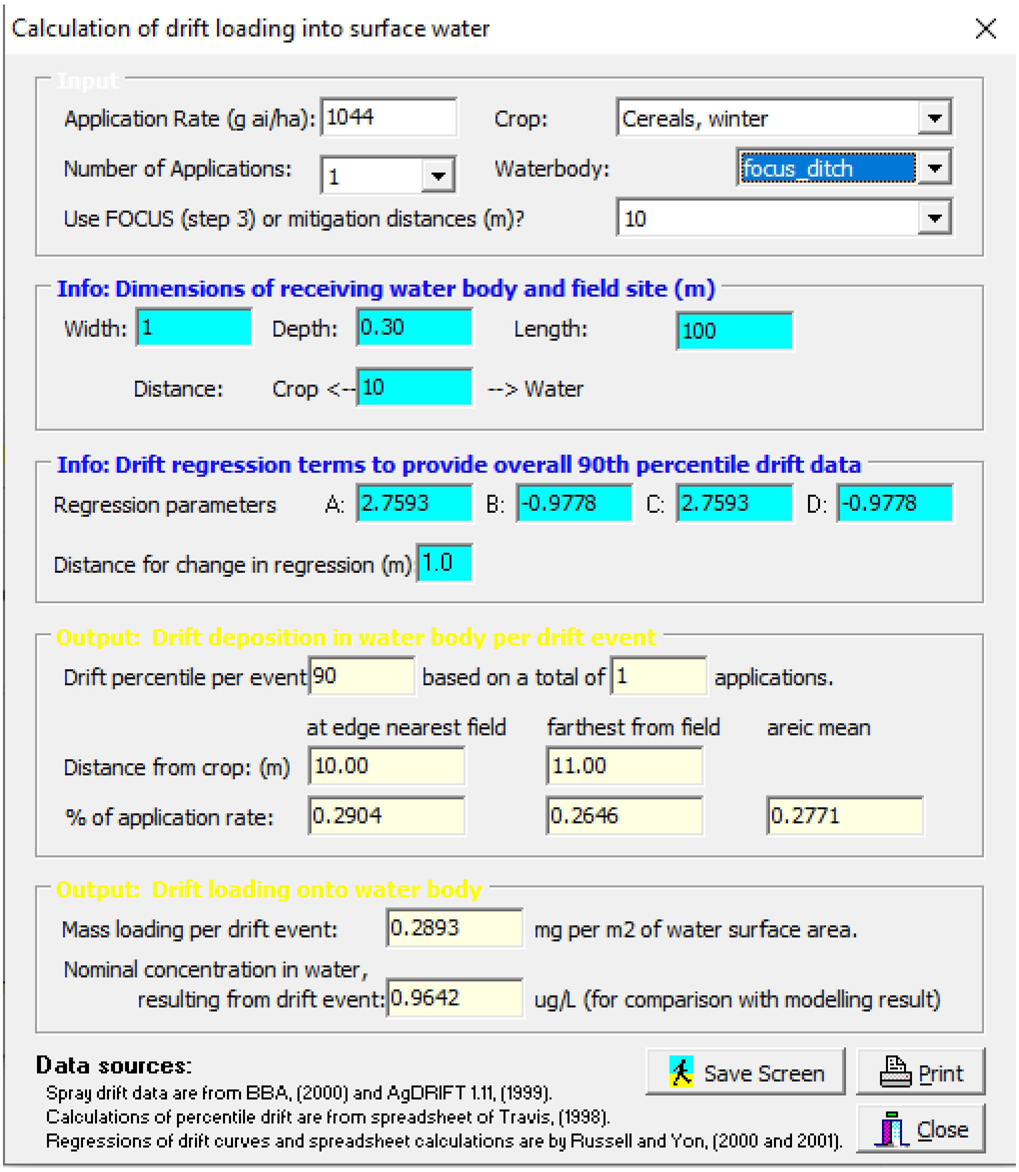
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 10
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 10 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters
A: 2.7593
B: -0.9778
C: 2.7593
D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 11.00
% of application rate: 0.2904 0.2646 0.2771
Output: Drift loading onto water body
Mass loading per drift event: 0.2893 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.9642 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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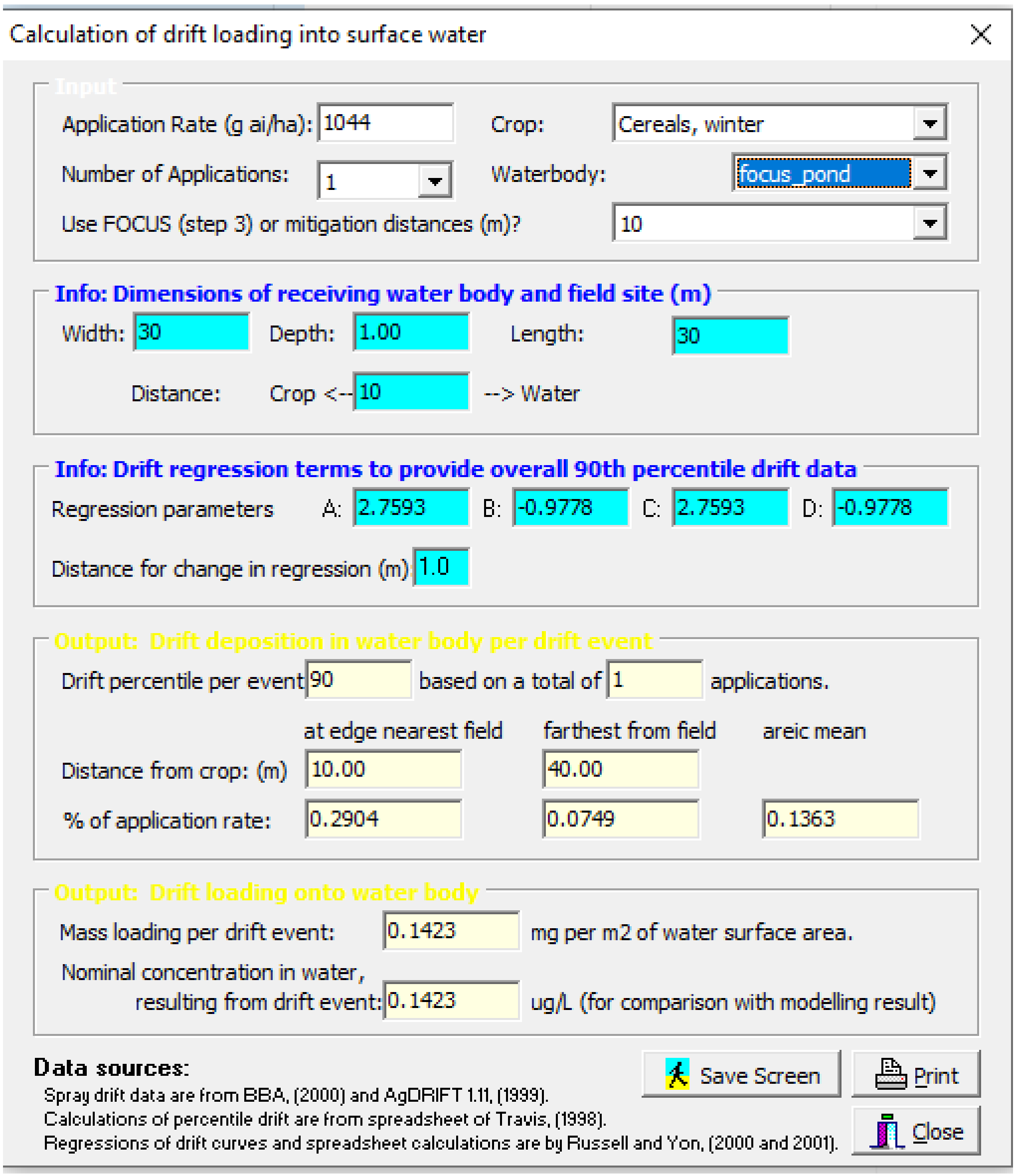
Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 1044 Crop: Cereals, winter

Number of Applications: 1 Waterbody: focus_pond

Use FOCUS (step 3) or mitigation distances (m)? 10

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

Width: 30 Depth: 1.00 Length: 30

Distance: Crop <-- 10 --> Water

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

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

Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	40.00	
% of application rate:	0.2904	0.0749	0.1363

Output: Drift loading onto water body

Mass loading per drift event: 0.1423 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 0.1423 ug/L (for comparison with modelling result)

Data sources:

Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).

Calculations of percentile drift are from spreadsheet of Travis, (1998).

Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

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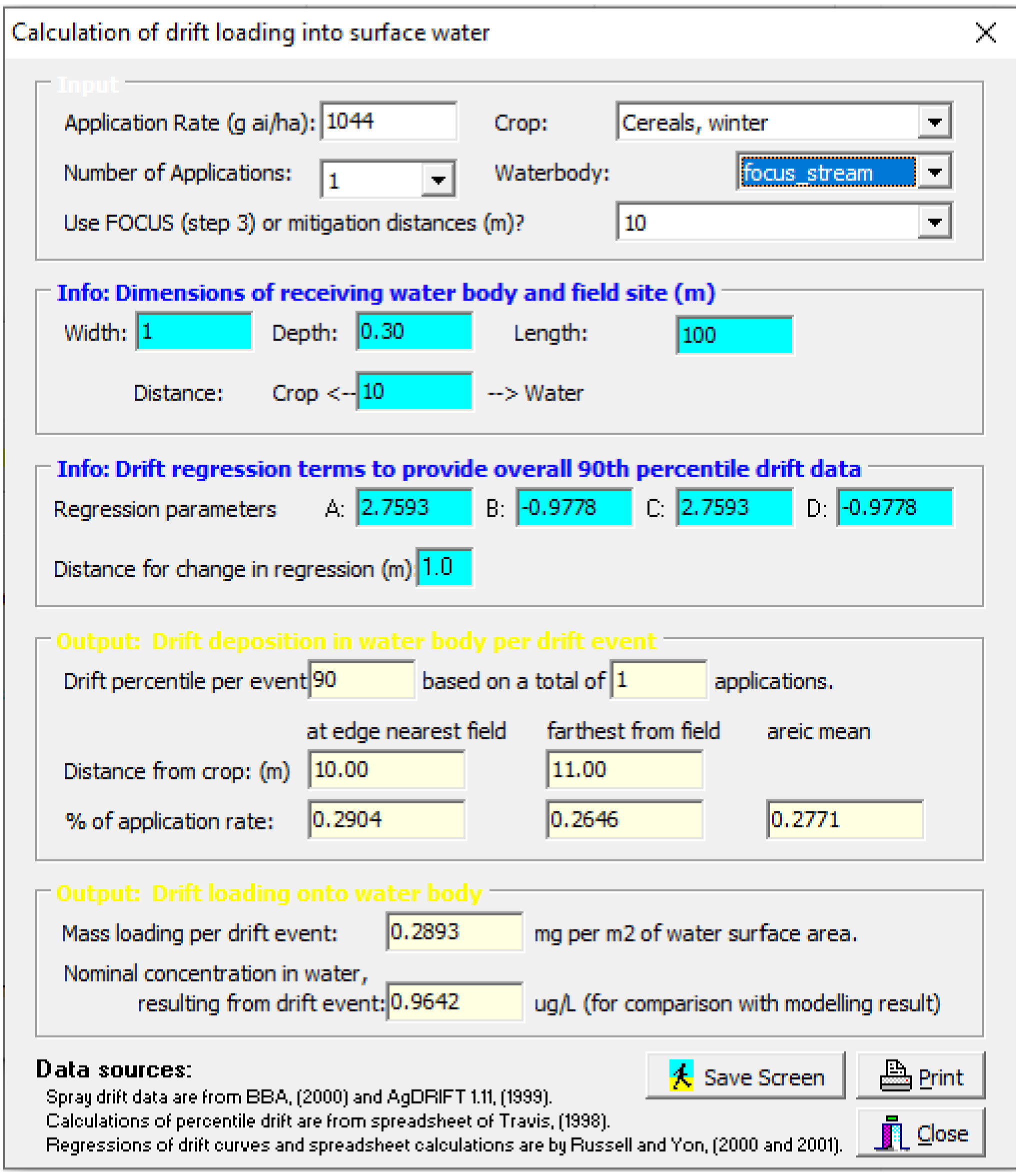
Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 10

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

Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 10 --> Water

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

Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	11.00	
% of application rate:	0.2904	0.2646	0.2771

Output: Drift loading onto water body

Mass loading per drift event: 0.2893 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.9642 ug/L (for comparison with modelling result)

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

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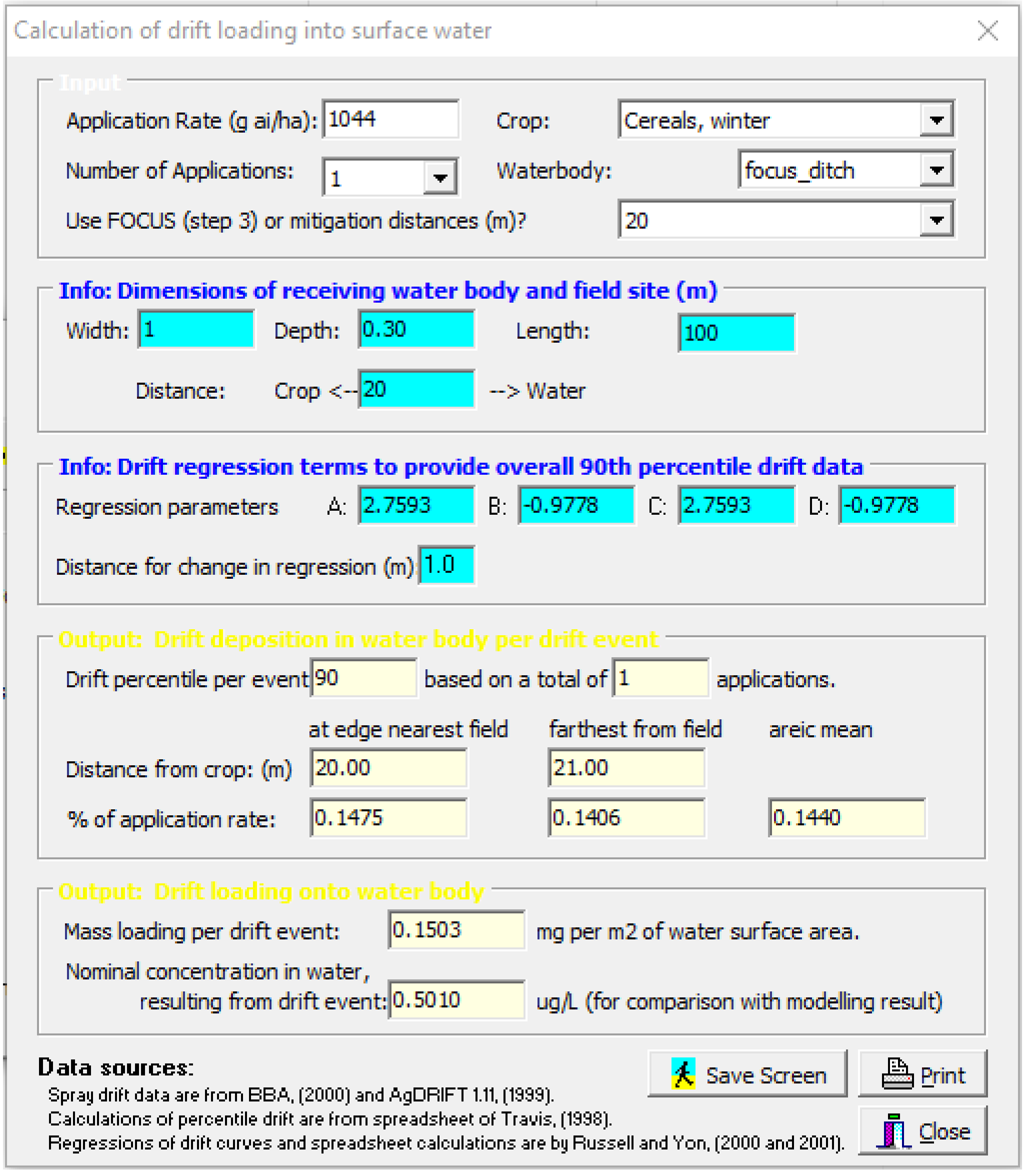

Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 21.00
% of application rate: 0.1475 0.1406 0.1440
Output: Drift loading onto water body
Mass loading per drift event: 0.1503 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.5010 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
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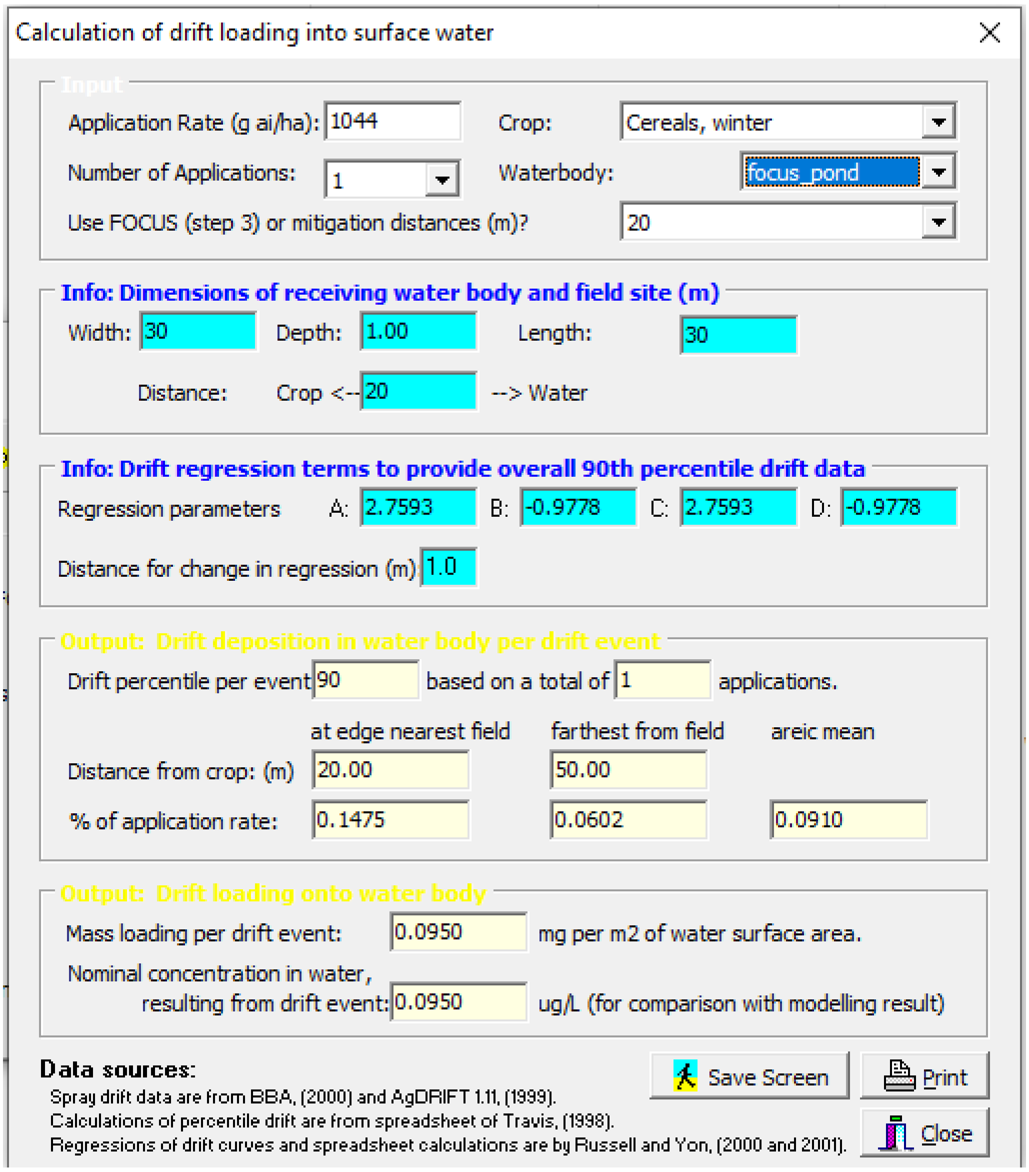
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 50.00
% of application rate: 0.1475 0.0602 0.0910
Output: Drift loading onto water body
Mass loading per drift event: 0.0950 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0950 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
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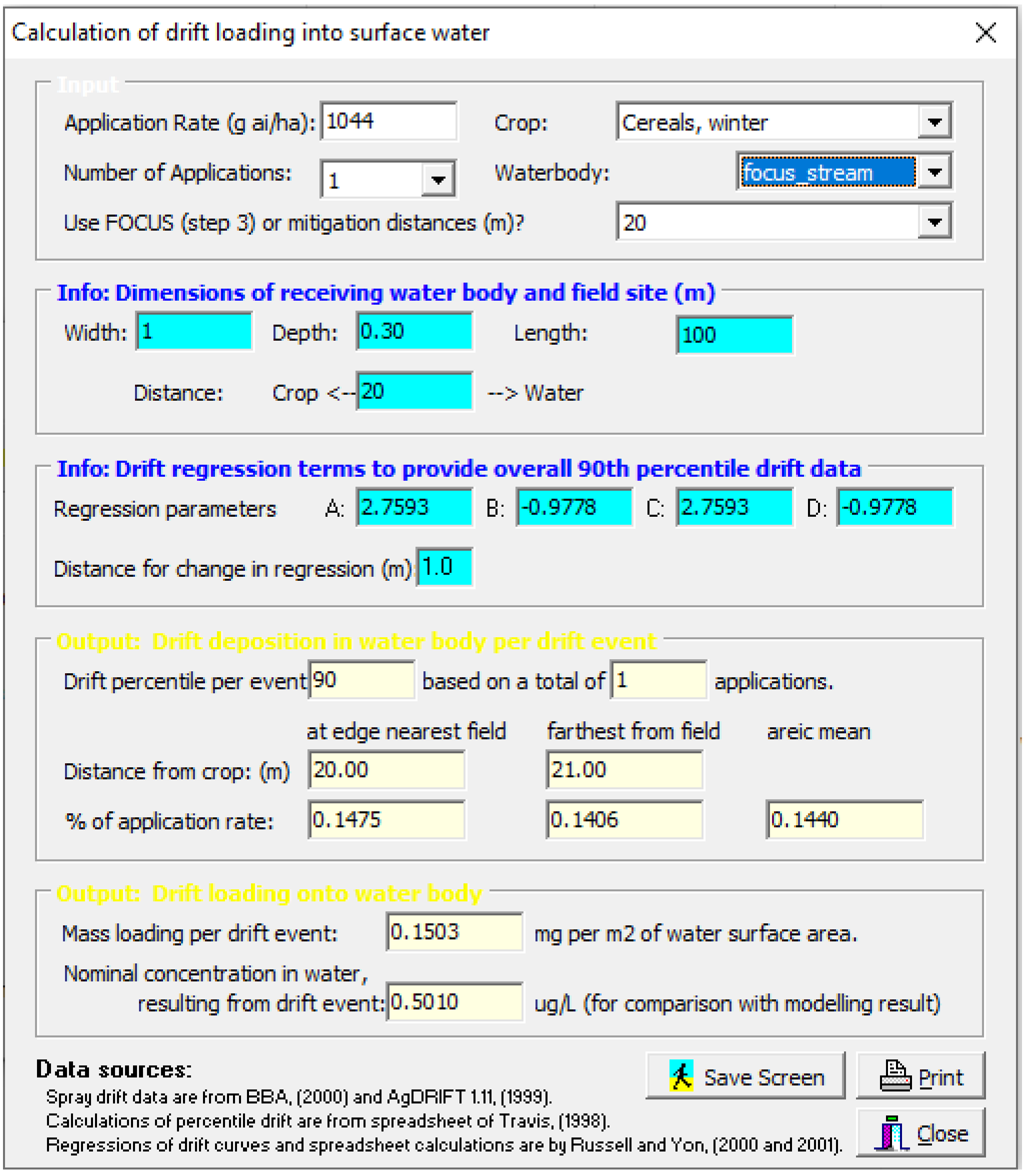
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 1044
Crop: Cereals, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 21.00
% of application rate: 0.1475 0.1406 0.1440
Output: Drift loading onto water body
Mass loading per drift event: 0.1503 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.5010 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
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