REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: ASA-01

Product name(s): **VIARES**

Chemical active substance(s):

Acetamiprid, 300 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

Applicant: XXXX

Submission date: March 2024, update 2025-03-24

Evaluation date: May 2025

MS Finalisation date: December 2025

Version history

When	What
2025-03-24	Update on evaluator request
May 2025	Version evaluated by zRMS PL
December 2025	Final version by zRMS
January 2026	Update on Ministry request
February 2026	Update due to change in PUF value for metabolite IM-I-5 by zRMS PL

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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, Fnp G, Gn, Gnp or I** **	**Pests or Group of pests controlled** (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (Groundwater)**
					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			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL	Winter rape (BRSNW)	F	Pollen beetle *Brassicogethes aeneus* (MELIAE)	Spraying	Spring BBCH 50-60	a) 1 b) 1	-	a) 0.08-0.1 L/ha b) 0.08-0.1 L/ha	a) 24-30 g a.s./ha b) 24-30 g a.s./ha	200-400 L/ha	NR	-	
2	PL	Apple (MABSD)	F	Aphids *Aphdidae* (APXXSP)	spraying	Spring BBCH 56-75	a) 1 b) 1	-	a) 0.03-0.05 L/10000 m^2 LWA b) 0.03-0.05 L/10000 m^2 LWA	a) 9-15 g a.s./10000 m^2 LWA b) 9-15 g a.s. /10000 m^2 LWA	500-900 L/ha	14 days	max. 0.075 L/ha (max. 22.5 g as/ha)	
3	PL	Apple (MABSD)	F	Codling moth *Cydia pomonella* (CARPPO)	spraying	Spring BBCH 57-75	a) 1 b) 2	7-10 days	a) 0.07-0.09 L/10000 m^2 LWA b) 0.14-0.18 L/ 10000 m^2 LWA	a) 21-27 g a.s./10000 m^2 LWA b) 42-54 g a.s. /10000 m^2 LWA	500-750 L/ha	14 days	max. 0.09 L/ha (max. 27 g as/ha)	Tier 1 Tier 2
Minor uses art. 51														
4	PL	Wild apple (MABSY) Pear (PYUCO) Chinese Pear (PYULI) Quince (CYDOB) Medlar (MSPGE)	F	Aphids *Aphdidae* (APXXSP)	spraying	Spring BBCH 56-75	a) 1 b) 1	-	a) 0.03-0.05 L/10000 m^2 LWA b) 0.03-0.05 L/10000 m^2 LWA	a) 9-15 g a.s./10000 m^2 LWA b) 9-15 g a.s. /10000 m^2 LWA	500-900 L/ha	14 days	max. 0.075 L/ha max. 22.5 g as/ha	

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, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (Groundwater)**
					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			
5	PL	Wild apple (MABSY) Pear (PYUCO) Chinese Pear (PYULI) Quince (CYDOB) Medlar (MSPGE)	F	codling moth *Cydia pomonella* (CARPPO)	spraying	Spring BBCH 57-75	a) 1 b) 2	7-10 days	a) 0.07-0.09 L/10000 m^2 LWA b) 0.14-0.18 L/ 10000 m^2 LWA	a) 21-27 g a.s./10000 m^2 LWA b) 42-54 g a.s. /10000 m^2 LWA	500-750 L/ha	14 days	max. 0.09 L/ha max. 27 g as/ha	Tier 1 Tier 2

* 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

Comments of zRMS:	**Tier 1.** PUF = 0 for active substance and its all metabolites; the safe use of Viares can be concluded if: • formulation is used every 2 years in Use No 3 and 5 • formulation is used every year in Use No 1, 2 and 4. **Tier 2.** PUF values agreed at the EU level were used in PECgw assessment. The formulation application every year for all intended uses was safe and acceptable.

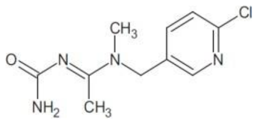
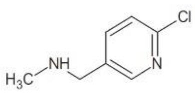
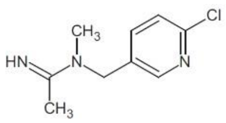
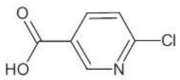
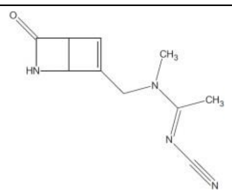
Table 8.1-2: Assessed (critical) uses during approval of acetamiprid concerning the Section Environmental Fate

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, G, or I *	Pests or Group of pestscontrolled (additionally: developmental stages of the pest or pest group)	**Application**				**Application rate**			PHI (days)	Remarks: e.g. g safener/ synergist perha
					Method /Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg product/ha a) max. rateper appl. b) max. totalrate per crop/season	kg as/ha a) max. rateper appl. b) max. totalrate per crop/season	Water L/ha min/max		
1	EU	Tomato	G	Aphids	Foliar	BBCH 61 – 89 (January - December)	a) 2 b) 2	a) 7 b) 7	a) 0.5 b) 1.0	a) 0.100 b) 0.200	300 - 1500	3	Use in greenhouse is in permanent structure
2	EU	Pome fruit	F	Aphids	Foliar	BBCH 77 – 87 (June – September)	a) 2 b) 2	a) 14 b) 14	a) 0.375 b) 0.750	a) 0.075 b) 0.150	300 - 1000	14	
3	EU	Potato	F	Colorado potato beetle/ aphids	Foliar	BBCH 45 – 93 (May – October)	a) 3 b) 3	a) 7 b) 7	a) 0.250 b) 0.750	a) 0.05 b) 0.150	400 - 600	7	

* F: professional field use, G: professional greenhouse use, I: indoor application

8.2 Metabolites considered in the assessment

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

Metabolite	Molar mass (g/mol)	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
IM-1-2	240.69		Maximum in soil: 55% Maximum in water/sediment: 13.4%	PECgw PECsoil PECsw/sed
IM-1-4	156.61		Maximum in soil: 72% Maximum in water/sediment: 81.5% *	PECgw PECsoil PECsw/sed
IM-1-5	197.66		Maximum in soil: 20% (calcareous soils only)	PECgw PECsoil PECsw/sed
IC-0 6-Chloronicotinic Acid (IV-0)	157.55		Maximum in soil: 11.3% Maximum in water/sediment: 29.5%	PECgw PECsoil PECsw/sed
IB-1-1	204.23		Maximum in water/sediment: 35% **	PECsw/sed

*Observed in aerobic mineralisation study
**Formed only via aqueous photochemical degradation

8.3 Rate of degradation in soil (KCP 9.1.1)

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

The rate of degradation of acetamiprid in soil was evaluated during the EU review (EFSA Journal 2016;14(11):4610). Four major metabolites (> 10% applied radioactivity (AR)) - IM-1-2, IM-1-4, IC-0, and IM-1-5 (calcareous soils only) - were identified. The metabolites IM-1-2, IC-0 and IM-1-5 were only formed in relevant amounts through the aerobic degradation pathway. They were found at levels of 55% AR (IM-1-2), 11.3% AR (IC-0) and 20% AR (IM-1-5). The metabolite IM-1-4 formed in soil via aerobic degradation (72% AR), anaerobic degradation (46.7% AR) and through photolysis. In the photolysis study, formation on irradiated samples was 46.5% AR and on dark control samples 65.3% AR, hence photolysis is not the major route of degradation.

Aerobic and anaerobic degradation pathways are illustrated in Figure 8.3-1 and Figure 8.3-2.

Figure 8.3-1: Proposed pathway of acetamiprid degradation in soil under aerobic conditions

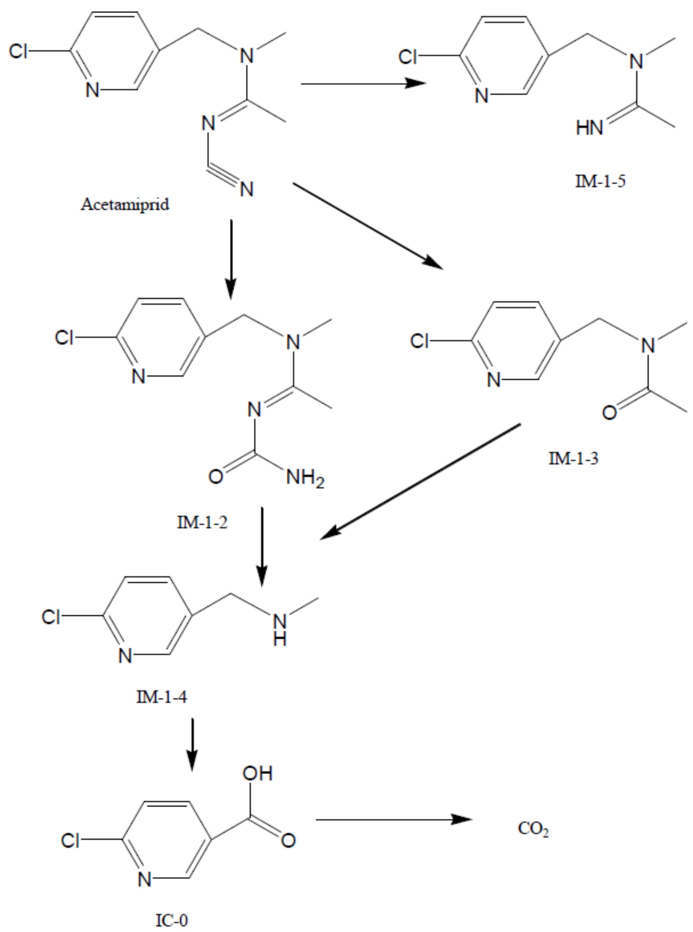
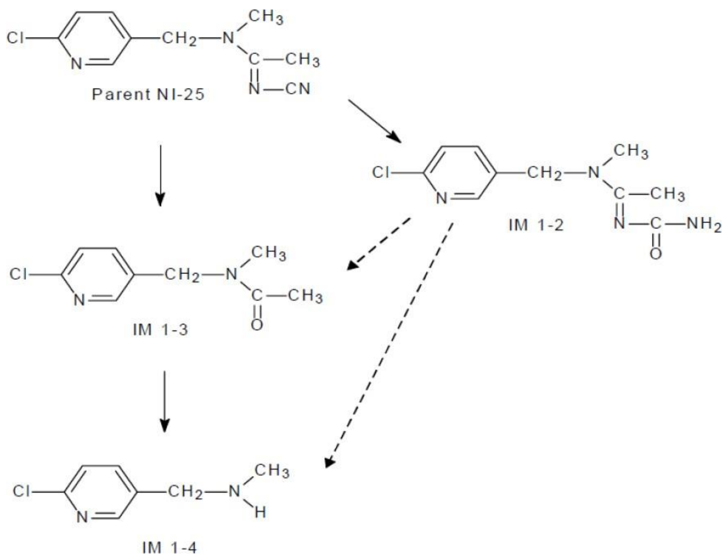


Figure 8.3-2: Proposed pathway of acetamiprid degradation in soil under anaerobic conditions



8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

8.3.1.1 Acetamiprid and its metabolites

Aerobic degradation of acetamiprid and its metabolites in soil was evaluated during the EU review (EFSA Journal 2016;14(11):4610). Additional data was not required.

Triggering endpoints

A summary of the triggering endpoints of laboratory aerobic degradation studies for acetamiprid and its metabolites is given in the tables below.

Table 8.3-1: Summary of aerobic degradation rates for acetamiprid - laboratory studies

Acetamiprid, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic model**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level**
Loamy sand	7.6	20	50% of pF2.5	1.4	4.7		7.7	SFO	Yes / EFSA, 2016
Clay loam	7.4	20	45	5.4	54.5	k1: 0.00806 k2: 0.1628 g: 0.155	6.9	DFOP	Yes / EFSA, 2016
Clay loam	7.4	10	45	7.9	49.3	k1: 0.1057 k2: 0.0065 g: 0.8686	3.7	DFOP	Yes / EFSA, 2016
Sandy loam	5.6	20	45	2.5	14.3	α: 1.744 β: 5.212	4.6	FOMC	Yes / EFSA, 2016
Silty clay loam	7.9-8.5	20	45	0.8	2.8		9.5	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	1.1	5.2	α: 2.278 β: 3.000	8.4	FOMC	Yes / EFSA, 2016
Clay	7.7	20	45	1.1	3.8		9.3	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1	3.3		8.4	SFO	Yes / EFSA, 2016

a) Measured in water

Table 8.3-2: Summary of aerobic degradation rates for IM-1-2 - laboratory studies

IM-1-2, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic models**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level y/ Reference**
Sandy loam	8.0	20	45	1.9	6.3	-	9.6	SFO b)	Yes / EFSA, 2016
Clay	7.7	20	45	1.9	6.3	-	13.0	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1.6	5.3	-	12.3	SFO	Yes / EFSA, 2016

IM-1-2, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC %**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic models**	**Chi2 (%)**	**Kinetic model**	**Evaluated on EU level y/ Reference**
Geometric mean (n=3)				1.8					
pH-dependency:				n					

[a)] Measured in water
[b)] Parent fitted with FOMC model

Table 8.3-3: Summary of aerobic degradation rates for IM-1-4 - laboratory studies

IM-1-4, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic model**	**Chi^2 (%)**	**Kinetic model**	**Evaluated onEU level**
Loamy sand	7.6	20	45	46.2	154	-	22.8	SFO	Yes / EFSA, 2016
Clay loam	7.4	20	45	142	473	-	8.7	SFO[b)]	Yes / EFSA, 2016
Clay loam	7.4	10	45	171	569	-	5.3	SFO[b)]	Yes / EFSA, 2016
Sandy loam	5.6	20	45	146	483	-	6.2	SFO[c)]	Yes / EFSA, 2016
Silty clay loam	7.9-8.5	20	45	3.7	12.3	-	9.1	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	4.2	14	-	22	SFO[c)]	Yes / EFSA, 2016
Clay	7.7	20	45	2.3	7.8	-	18.1	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	3	10	-	14.9	SFO	Yes / EFSA, 2016
Max (n=8)				146	483				

[a)] Measured in water
[b)] Parent kinetics DFOP
[c)] Parent kinetics FOMC

Table 8.3-4: Summary of aerobic degradation rates for IC-0 - laboratory studies

IC-0, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic model**	**Chi^2 (%)**	**Kinetic model**	**Evaluated onEU level**
Silty clay loam	7.9-8.5	20	45	3.6	11.8	-	32.6	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	1.2	4.1	-	4.3	SFO[b)]	Yes / EFSA, 2016
Clay	7.7	20	45	2.7	8.9	-	11.6	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1.8	6.0	-	10.0	SFO	Yes / EFSA, 2016
Sandy loam	6.7	20	45	3.1	10.1	-	10	SFO	Yes / EFSA, 2016

Silty clay loam	7.8	20	45	2.4	8.0	-	9.1	SFO	Yes / EFSA, 2016
Clay loam	7.2	20	45	5.6	18.5	-	9.8	SFO	Yes / EFSA, 2016
Max (n=7)				5.6	18.5				

Table 8.3-5: Summary of aerobic degradation rates for IM-1-5 - laboratory studies

IM-1-5, Laboratory studies, dark aerobic conditions – Triggering endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC(%)**	**DT50 (d)**	**DT90 (d)**	**Parameters bi-phasic model**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level**
Silty clay loam	7.9-8.5	20	45	319	1059	-	5.1	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	-	-	-	-	SFO	Yes / EFSA, 2016
Clay	7.7	10	45	-	-	-	-	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	486	1614	-	10.3	SFO	Yes / EFSA, 2016
Loam (France)	7.5		78.4% pF2 moisture	663	2203	-	4.7	SFO	Yes / EFSA, 2016
Loam (Hungary)	7.8		60.7% pF2 moisture	420	1395	-	3.5	SFO	Yes / EFSA, 2016
Sandy clayloam	7.6		66.4% pF2 moisture	378	1254	-	2.8	SFO	Yes / EFSA, 2016

a) Measured in water

Modelling endpoints

A summary of the modelling endpoints of laboratory aerobic degradation studies for acetamiprid and its metabolites is given in the tables below.

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

Acetamiprid, Laboratory studies, dark aerobic conditions – Modelling endpoints									
Soil type	**pH a)**	**t (°C)**	**MWHC(%)**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C pF2/10kPa b)**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level**
Loamy sand	7.6	20	50 (pF2.5)	1.4	4.7	1.2	7.7	SFO	Yes / EFSA, 2016
Clay loam	7.4	20	45	4.7	15.8	4.7	11.8	SFO	Yes / EFSA, 2016
Sandy loam	5.6	20	45	2.5	8.3	2.5	8.8	SFO	Yes / EFSA, 2016
Silty clay loam	7.9-8.5	20	45	0.8	2.8	0.8	9.5	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	1.1	3.7	1.1	9.9	SFO	Yes / EFSA, 2016
Clay	7.7	20	45	1.1	3.8	1.1	9.7	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1.0	3.2	1.0	8.6	SFO	Yes / EFSA, 2016

Geometric mean (n=7)	1.45
pH-dependency:	No

a) Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7

Table 8.3-7: Summary of aerobic degradation rates for IM-1-2 - laboratory studies

IM-1-2, Laboratory studies, dark aerobic conditions – Modelling endpoints										
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**Formation fraction kf/kdp c)**	**DT50 (d) 20°C pF2/10kPa b)**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level**
Sandy loam	8.0	20	45	1.6	5.3	0.97	1.6	12.3	SFO	Yes / EFSA, 2016
Clay	7.7	20	45	1.9	6.3	0.68	1.9	13.0	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1.6	5.3	0.66	1.6	12.3	SFO	Yes / EFSA, 2016
Geometric mean (n=3)							1.7			
Arithmetic mean (n=3)						0.77				
pH-dependency:						No				

a) Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
c) Formation from acetamiprid

Table 8.3-8: Summary of aerobic degradation rates for IM-1-4 - laboratory studies

IM-1-4, Laboratory studies, dark aerobic conditions – Modelling endpoints										
Soil type	**pH a)**	**t (°C)**	**MWHC(%)**	**DT50 (d)**	**DT90 (d)**	**Formation fraction kf/kdp c)**	**DT50 (d) 20°C pF2/10kPa b)**	**Chi² (%)**	**Kinetic model**	**Evaluated on EU level**
Loamy sand	7.6	20	50% of pF2.5	46.2	154	0.56	40.0	22.8	SFO	Yes / EFSA, 2016
Clay loam	7.4	20	45	169	560	0.61	169	10.5	SFO	Yes / EFSA, 2016
Sandy loam	5.6	20	45	166	552.8	0.75	166	6.7	SFO	Yes / EFSA, 2016
Silty clay loam	7.9-8.5	20	45	3.7	12.3	1	3.7	9.1	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	4.8	16.1	0.44	4.8	22.3	SFO	Yes / EFSA, 2016
Clay	7.7	20	45	2.3	7.8	0.97	2.3	18.1	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	3	10	0.71	3.0	14.9	SFO	Yes / EFSA, 2016
Geometric mean (n=7)							14.6			
Arithmetic mean (n=7)						0.72				
pH-dependency:						No				

a) Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
c) Formation from IM-1-2

Table 8.3-9: Summary of aerobic degradation rates for IC-0 - laboratory studies

IC-0, Laboratory studies, dark aerobic conditions – Modelling endpoints										
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**Formation fraction kf/kdp c)**	**DT50 (d) 20°C pF2/10kPa b)**	**Chi² (%)**	**Kinetic model**	**Evaluated onEU level**
Silty clay loam	7.9-8.5	20	45	3.6	11.8	0.3	3.6	32.6	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	1.4	4.6	1	1.4	5.1	SFO	Yes / EFSA, 2016
Clay	7.7	20	45	2.7	8.9	0.39	2.7	11.6	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	1.8	6.0	1	1.8	11.9	SFO	Yes / EFSA, 2016
Sandy loam	6.7	20	45	3.1	10.1	-	3.1	10	SFO	Yes / EFSA, 2016
Silty clay loam	7.8	20	45	2.4	8.0	-	2.4	9.1	SFO	Yes / EFSA, 2016
Clay loam	7.2	20	45	5.6	18.5	-	5.6	9.8	SFO	Yes / EFSA, 2016
Geometric mean (n=7)							2.7			
Arithmetic mean (n=7)						0.67				
pH-dependency:						No				

a) Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
c) Formation from IM-1-4

Table 8.3-10: Summary of aerobic degradation rates for IM-1-5 - laboratory studies

IM-1-5, Laboratory studies, dark aerobic conditions – Modelling endpoints										
Soil type	**pH a)**	**t (°C)**	**MWHC(%)**	**DT50 (d)**	**DT90 (d)**	**Formationfraction kf/kdp e)**	**DT50 (d) 20°C pF2/10kPa b)**	**Chi² (%)**	**Kinetic model**	**Evaluated onEU level**
Silty clay loam	7.9-8.5	20	45	319	1059	0.21	319	5.1	SFO	Yes / EFSA, 2016
Sandy loam	8.0	20	45	-	-	0.16 c)	1000 d)	-	SFO	Yes / EFSA, 2016
Clay	7.7	20	45	-	-	0.12 c)	1000 d)	-	SFO	Yes / EFSA, 2016
Clay loam	7.9	20	45	486	1614	0.12	486	10.3	SFO	Yes / EFSA, 2016
Loam (France)	7.5	20	78.4% of pF2 moisture	663	2203	-	559	4.7	SFO	Yes / EFSA, 2016
Loam (Hungary)	7.8	20	60.7% of pF2 moisture	420	1395	-	296	3.5	SFO	Yes / EFSA, 2016
Sandy clayloam	7.6	20	66.4% of pF2 moisture	378	1254	-	284	2.8	SFO	Yes / EFSA, 2016

Max (n=7)		1000 [d)]
Geometric mean (n=7)		495
Arithmetic mean (n=4)	0.15	
pH-dependency:	No	

a) Measured in water
b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7
c) Formation fraction based on maximum fraction of occurrence (persistent metabolite)
d) Default DT_{50} value used as no decline of IM-1-5 was observed for this soil
e) Formation from acetamiprid

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

Anaerobic degradation of acetamiprid was evaluated during the EU review (EFSA, 2016). In anaerobic degradation studies, only the metabolite IM-1-4 was identified with a maximum occurrence of 46.7% AR. Additional data was not required.

A summary of the degradation rates of acetamiprid under anaerobic conditions is given in the table below.

Table 8.3-11: Summary of anaerobic degradation rates for acetamiprid - laboratory studies

Acetamiprid, Laboratory studies, dark anaerobic conditions									
Soil type	**pH a)**	**t (°C)**	**MWHC (%)**	**DT50 (d)**	**DT90 (d)**	**DT50 (d) 20°C**	**Chi² (%)**	**Kinetic model**	**Evaluated onEU level**
Loam	7.4	20	100	69.0	410.6	n.a.	4.7	FOMC α: 1.591 β: 126.319	Yes / EFSA, 2016

a) Measured in water

8.4 Field studies (KCP 9.1.1.2)

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

Studies on field dissipation rates, while are commonly performed with a formulation, are considered to be data provided in support of the active substance.

8.4.1.1 Acetamiprid and its metabolites

Soil dissipation studies of acetamiprid and its metabolites were evaluated during the EU review (EFSA Journal 2016;14(11):4610). No additional studies have been performed.

The degradation rates of acetamiprid and the maximum occurrence of its metabolites in field dissipation studies are summarised in the tables below.

Triggering endpoints

Table 8.4-1: Summary of aerobic degradation rates for acetamiprid - field studies: Triggering endpoints

Acetamiprid, Field studies – Triggering endpoints									
Soil type	**Location**	**pH**	**Depth (cm)**	**DissT50 (d) actual**	**DT90 (d) actual**	**Kinetic parameters**	**St. (x^2)**	**Method of calculation**	**Evaluated on EU level y/n/ Reference**
Clay loam	Italy	8.9 [a)]	0-30	0.4	19.8	k1: 4.122808 k2: 0.071185 g: 0.589717	14.1	DFOP	Yes / EFSA, 2016
Sandy loam	United Kingdom	5.9 [a)]	0-30	3.7	22.7	α: 1.544681 β: 6.600352	19.5	FOMC	Yes / EFSA, 2016
Silty clay loam	France	8.7 [a)]	0-30	9.6	31.3		16.4	SFO	Yes / EFSA, 2016
Sandy loam	Spain	7 [a)]	0-30	0.7	11.2	α: 0.67159 β: 0.374289	11.4	FOMC	Yes / EFSA, 2016
Loam	Spain	7.45 [b)]	0-50	12.96	43.06		28.1	SFO	Yes / EFSA, 2016
Loam	Southern France	7.36 [b)]	0-50	2.26	7.52		13.0	SFO	Yes / EFSA, 2016
Loam	Northern France	7.49 [b)]	0-50	2.24	7.43		12.1	SFO	Yes / EFSA, 2016
Loam	Hungary	8.06 [b)]	0-50	2.14	15.32	α and β: values not reported	25.9	FOMC	Yes / EFSA, 2016
			Maximum (n=x)	12.96	43.06				

a) Measured in 1 M KCl
b) Measured in 0.01 M $CaCl_2$

Table 8.4-2: Summary of the maximum occurrence for relevant metabolites - field studies

Metabolite max. formation proportion of max. measured parent, Field studies, aerobic conditions							
Soil type	**Location**	**pH**	**Depth (cm)**	**IM-1-4**	**IM-1-2**	**IM-1-5**	**Evaluated on EU level**
Clay loam	Italy	8.9 [a)]	0-10	50% after 28 days	39% after 4 days	Not analysed	Yes / EFSA, 2016
Sandy loam	United Kingdom	5.9 [a)]	0-10	50% after 30 days	< 3.9% after 2-7days	Not analysed	Yes / EFSA, 2016
Silty clay loam	France	8.7 [a)]	0-10	73% after 28 days	18% after 2 days	Not analysed	Yes / EFSA, 2016
Sandy loam	Spain	7 [a)]	0-10	55% after 31days	9% after 2 days	Not analysed	Yes / EFSA, 2016

Loam	Spain	7.45 [b)]	0-10	Not analysed	Not analysed	60% after 28 days	Yes / EFSA, 2016
Loam	Southern France	7.36 [b)]	0-10	Not analysed	Not analysed	25% after 29 days	Yes / EFSA, 2016
Loam	Northern France	7.49 [b)]	0-10	Not analysed	Not analysed	45% after 7 days	Yes / EFSA, 2016
Loam	Hungary	8.06 [b)]	0-10	Not analysed	Not analysed	24% after 169 days	Yes / EFSA, 2016

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

No soil accumulation studies were performed. Plateau concentrations of persistent metabolites are obtained by modelling (see B.8.7.2).

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 substance.

8.5.1 Acetamiprid and its metabolites

The mobility of acetamiprid and its metabolites in soil was evaluated during the EU review (EFSA Journal 2016;14(11):4610). Additional data was not required.

Summaries of all adsorption/desorption data for acetamiprid and its metabolites are given in the tables below.

Table 8.5-1: Summary of soil adsorption/desorption for acetamiprid

Acetamiprid						
Soil type	**OC (%)**	**pH [a)]**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
I Sand	0.43	5.7	0.60	138.39	0.842	Yes / EFSA, 2016
II Loamy sand	1.04	7.6	1.35	129.98	0.825	Yes / EFSA, 2016
III Sandy loam	1.57	7.1	1.12	71.09	0.893	Yes / EFSA, 2016
IV Silt loam	1.39	7.7	1.69	121.81	0.835	Yes / EFSA, 2016
V Silt loam	4.39	7.1	3.13	71.38	0.907	Yes / EFSA, 2016
Arithmetic mean (n=5)				106.5	0.860	
Geometric mean (n=5)				102.1	-	
pH-dependency:				No		

a) Measured in unknown medium

Table 8.5-2: Summary of soil adsorption/desorption for IM-1-2

IM-1-2						
Soil Type	**OC (%)**	**pH [a)]**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Clay loam 02/06	2.3	7.6	0.45	19	0.886	Yes / EFSA, 2016
Sandy loam 02/16	1.3	7.5	0.27	21	0.856	Yes / EFSA, 2016
Clay loam 01/24	3.8	6.1	3.60	95	0.927	Yes / EFSA, 2016
Sandy loam 02/18	0.2	7.4	0.16	80	0.944	Yes / EFSA, 2016
Arithmetic mean (n=4)				54	0.903	
Geometric mean (n=4)				41.7	-	
pH-dependency:				No		

a) Measured in $CaCl_2$ medium

Table 8.5-3: Summary of soil adsorption/desorption for IM-1-4

IM-1-4						
Soil Type	**OC (%)**	**pH [a)]**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
I Sand *	0.43	5.7	2.1	488	0.597	Yes / EFSA, 2016
II Laomy sand	1	7.6	2.24	223	0.714	Yes / EFSA, 2016
III Sandy loam	1.57	7.1	2.16	138	0.712	Yes / EFSA, 2016
IV Silt loam	1.39	7.7	2.67	192	0.816	Yes / EFSA, 2016
V Silt loam	4.39	7.1	5.79	132	0.813	
Arithmetic mean (n=5)				171	0.746	
Geometric mean (n=5)				167.1	-	
pH-dependency:				No		

a) Measured in unknown medium
* Sand soil was already excluded during the previous evaluation due to low 1/n value

Table 8.5-4: Summary of soil adsorption/desorption for IC-0

IC-0						
Soil Type	**OC (%)**	**pH [a)]**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
I Sand	0.43	5.7	0.643	258	0.967	Yes / EFSA, 2016
II Laomy sand	2.54	7.6	1.027	70	1.007	Yes / EFSA, 2016
III Sandy loam	0.76	7.1	0.569	129	0.971	Yes / EFSA, 2016
IV Silt loam	2.05	7.7	0.833	70	0.894	Yes / EFSA, 2016
V Silt loam	1.41	7.1	0.69	84	0.926	Yes / EFSA, 2016
Pond sediment *	4.32		2.121	85	0.867	Yes / EFSA, 2016

IC-0						
Soil Type	**OC (%)**	**pH a)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
			Arithmetic mean (n=5)	122	0.953	
			Geometric mean (n=5)	106	-	
			pH-dependency:	No		

a) Measured in unknown medium
* Sediment already excluded during the previous evaluation

Table 8.5-5: Summary of soil adsorption/desorption for IM-1-5

IM-1-5						
Soil Type	**OC (%)**	**pH a)**	**Kf (mL/g)**	**Kfoc (mL/g)**	**1/n (-)**	**Evaluated on EU level y/n/ Reference**
Spain (Canals)	3.3	7.6	5.70	173	0.8788	Yes / EFSA, 2016
S France (Meauzac)	1.14	7.6	4.89	429	0.9030	Yes / EFSA, 2016
Hungary	2.03	7.8	7.58	374	0.8454	Yes / EFSA, 2016
N France (Meistratzheim)	2.04	8.3	6.60	324	0.9176	Yes / EFSA, 2016
			Arithmetic mean (n=4)	325	0.886	
			Geometric mean (n=4)	308	-	
			pH-dependency:	No		

a) Measured in unknown medium
* Sediment already excluded during the previous evaluation

8.5.2 Column leaching (KCP 9.1.2.1)

Column leaching studies are not required as reliable adsorption coefficients are available for the active substance acetamiprid and its metabolites. However, two studies were submitted for the last EU renewal; the outcome of these studies as given by EFSA Journal 2016;14(11):4610 is provided in the following table.

Table 8.5-6: Results of column leaching studies

Study 1	Leachate: 0.3-1.3 % total residues/radioactivity in leachate 0.06 % active substance, 0.84 % IM-1-4 88.9- 93.7 % total residues/radioactivity retained in the four upper soil layers
Study 2	Elution (mm): 1038 mmTime period (d): 20 d Leachate: 4.14 – 22.22 % total residues/radioactivity in leachate, all associated withmetabolite IC-0 4.5 - 5.3 % total residues/radioactivity retained in top 6 cm

8.5.3 Lysimeter studies (KCP 9.1.2.2)

No lysimeter studies with acetamiprid and its metabolites were performed as they are not required.

8.5.4 Field leaching studies (KCP 9.1.2.3)

No field leaching studies with acetamiprid and its metabolites were performed as they are not required.

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

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

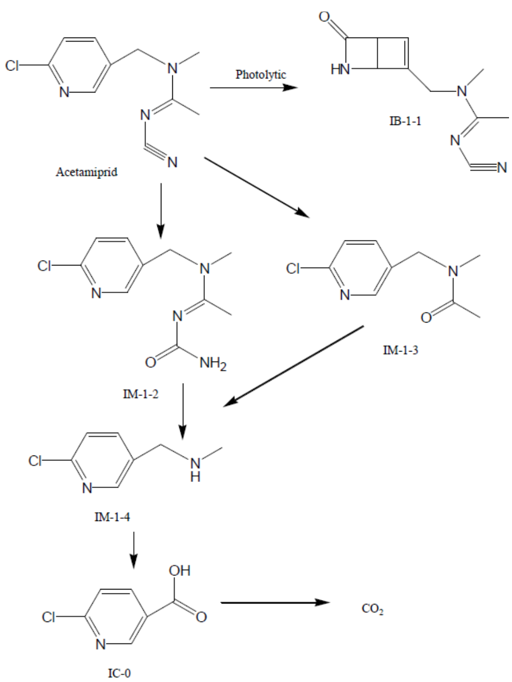
8.6.1 Acetamiprid and its metabolites

Studies on the degradation of acetamiprid in water/sediment systems have been evaluated during the EU review (EFSA Journal 2016;14(11):4610). Fate and behaviour of acetamiprid in the aquatic environment was investigated in two aerobic water/sediment systems. Thereby, three major metabolites (> 10% applied radioactivity (AR)) were identified in the water phase: IM-1-2 (max. 11% AR), IM-1-4 (max. 12% AR) and IC-0 (max. 26% AR). Metabolite IM-1-4 was also a major metabolite in the sediment phase (max. 31% AR).

One study investigating aerobic mineralisation in surface water was conducted and also evaluated during the EU review (EFSA Journal 2016;14(11):4610). Thereby, the major metabolite IM-1-4 was identified with a maximum occurrence of 81.5% AR. Further, the metabolite IB-1-1 was identified in aqueous photochemical degradation studies also evaluated during the EU review (EFSA Journal 2016;14(11):4610). Its maximum occurrence was 35% AR after 30 days and a DT50 of 24 days was determined.

The proposed degradation pathway of acetamiprid in water is illustrated in Figure 8.6-1

Figure 8.6-1: Proposed pathway of acetamiprid degradation in water



A summary of all data degradation rates of acetamiprid in water/sediment and aerobic mineralization studies, as well as a summary of the maximum occurrence of relevant metabolites is given in the following tables.

Table 8.6-1: Summary of degradation in water/sediment of acetamiprid

Acetamiprid distribution (max. water/sediment 101.42% after 0 days, sediment 39.05% after 14 days)											
Water/sediment system	**pH water/ sed.**	**DegT50 whole syst. (d)**	**t (°C)**	**DT50 whole syst. (d)**	**Chi² (x^2)**	**DT50 water (d)**	**Chi² (x^2)**	**DT50 sed. (d)**	**Chi² (x^2)**	**Method of calculation**	**Evaluated on EU level y/n/ Reference**
Manningtree	6.37/5.9	n.r.	20	23.1	7.6	4.9	8.3	n.c.		SFO/DFOP	Yes / EFSA,2016
Ongar	7.58/7.3	n.r.	20	31.6	6.7	6.1	5.9	n.c.		SFO/DFOP	Yes / EFSA,2016
Geometric mean at 20°C[a)] (n=2)				27							

a) Normalised using a Q10 of 2.58

Table 8.6-2: Summary of aerobic mineralisation of acetamiprid in surface water

Acetamiprid distribution (max. water/sediment 101.42% after 0 days, sediment 39.05% after 14 days)											
Water/sediment system	**pH water/ sed.**	**DegT50 whole syst. (d)**	**t (°C)**	**DT50 whole syst. (d)**	**Chi² (x^2)**	**DT50 water (d)**	**Chi² (x^2)**	**DT50 sed. (d)**	**Chi² (x^2)**	**Method of calculation**	**Evaluated on EU level y/n/ Reference**
Manningtree	6.37/5.9	n.r.	20	23.1	7.6	4.9	8.3	n.c.		SFO/DFOP	Yes / EFSA, 2016
Ongar	7.58/7.3	n.r.	20	31.6	6.7	6.1	5.9	n.c.		SFO/DFOP	Yes / EFSA, 2016
Geometric mean at 20°C[a)] (n=2)				27							

Table 8.6-3: Summary of observed metabolites

IM-1-2 Water/sediment system	Max. in total system 13.4% after 7 days (max. in water 10.96% after 7 days; max. insediment 3.93% after 14 days). No acceptable fit possible	Yes / EFSA, 2016
IM-1-4 Water/sediment system	Max. in total system 43% after 30 days (max in water 12.33% after 30 days; max. insediment 30.71% after 30 days); Max. 81.5% in aerobic mineralisation study.No acceptable fit possible	Yes / EFSA, 2016
IC-0 Water/sediment system	Max. in total system 29.5% after 62 days (max. in water 26.15% after 62 days; max. insediment 5.61% after 100 days). No acceptable fit possible	Yes / EFSA, 2016

8.7 Predicted Environmental Concentrations in soil (PEC_{soil}) (KCP 9.1.3)

<table>
<tr><td>zRMS Comments:</td><td>
Calculations of PEC_S for active substance, its metabolites and formulation were accepted. The endpoints used for PECs assessment were agreed at the EU level.
The risk envelope approach was used for PECs assessment.
<table>
<tr><th>Crop</th><th>Surrogate crop</th><th>Application rate
g a.s./ha</th></tr>
<tr><td>Winter OSR</td><td>not relevant</td><td>1 x 30</td></tr>
<tr><td>Apples/ Wild apple, Pear, Chinese Pear, Quince, Medlar</td><td>Pome/stone fruits</td><td>2 x 27</td></tr>
</table>
The maximum PEC_S values for active substance and its metabolites are presented in following table:
<table>
<tr><th>Crop</th><th>Acetamiprid</th><th>IM-I-2</th><th>IM-I-4</th><th>IC-0</th><th>IM—1-5</th><th>Formulation</th></tr>
<tr><td>Winter OSR
1 x 30 g a.s./ha</td><td>0.008</td><td>0.005</td><td>0.004
0.004*</td><td>0.001</td><td>0.001
0.002*</td><td>0.029</td></tr>
<tr><td>Pome fruits
2 x 27 g a.s./ha</td><td>0.024</td><td>0.009</td><td>0.014
0.018*</td><td>0.002</td><td>0.005
0.0.023*</td><td>0.104</td></tr>
</table>
* PECaccum
These values will be used in further risk assessment.
</td></tr>
</table>

8.7.1 Justification for new endpoints

All endpoints used for PEC soil calculations are EU approved and were evaluated on EU level.

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

The predicted environmental concentrations in soil PECs of acetamiprid and its metabolites were calculated using excel calculation sheet which is in line with Ctgb Evaluation Manual version 2.2 (January 2018) and FOCUS guidance – FOCUS (1997): Soil persistence models and EU registration. For further risk assessment worst case PECs values were used. Input parameters related to application and active substances/metabolites data for PECs calculation are summarized below.

Table 8.7-1: Input parameters related to application for PEC_{soil} calculations

Use No.	1	2, 3, 4, 5
Crop	Winter oilseed rape	Apple (worst case)
Application rate, parent (g as/ha)	30	27
Number of applications/interval	1/-	2/7
Crop interception (%)	80	60 (worst case)
Depth of soil layer (relevant for plateau concentration) (cm)	20 cm	5 cm

Table 8.7-2: Input parameter for active substance(s) and relevant metabolite(s) for PEC_{soil} calculation

Compound	Molecular weight (g/mol)	Max. occurrence (%)	Formation fraction (%)	DT50 (days)	K_{foc} (mL/g)	Value in accordance to EU endpoint y/n/ Reference
Acetamiprid	222.7	-	-	12.96 (SFO, non-normalised worst case field DT50)	102 (geomean, n=5)	EFSA Journal 2016;14(11):4610
IM-1-2	240.7	55	77, from parent	1.9 (SFO, non-normalised/normalised worst case lab DT50)	41.7 (geomean, n=4)	EFSA Journal 2016;14(11):4610
IM-1-4	156.6	72	72, from IM-1-2	146 (SFO, non-normalised worst case lab DT50)	167 (geomean, n=4)	EFSA Journal 2016;14(11):4610
IC-0	157.6	11.3	67, from IM-1-4	5.6 (SFO, non-normalised/normalised worst case lab DT50)	106 (geomean, n=5)	EFSA Journal 2016;14(11):4610
IM-1-5	197.7	20	15, from parent	1000 (SFO, default DT50)	308 (geomean, n=4)	EFSA Journal 2016;14(11):4610

8.7.2.1 Acetamiprid and its metabolites

Table 8.7-3: PEC_{soil} for acetamiprid on winter oilseed rape

PEC_{soil} (mg/kg)		Winter oilseed rape			
		Single application, 1 × 30 g/ha		Multiple applications	
		Actual	TWA	Actual	TWA
Initial		0.008	-	-	-
Short term	24h	0.008	0.008	-	-
	2d	0.007	0.008	-	-
	4d	0.006	0.007	-	-
Long term	7d	0.006	0.007	-	-
	14d	0.004	0.006	-	-
	21d	0.003	0.005	-	-
	28d	0.002	0.004	-	-
	50d	0.001	0.003	-	-
	100d	0.000	0.001	-	-
Background concentration (20cm) after 10 years		-	-	-	-
$PEC_{accumulation}$ (PEC_{act} + $PEC_{background}$)		-	-	-	-

Table 8.7-4: PEC$_{soil}$ for acetamiprid on apple

PEC$_{soil}$ (mg/kg)		Apple			
		Single application, 1 × 27 g/ha		Multiple applications, 2 × 27 g/ha	
		Actual	TWA	Actual	TWA
Initial		0.014	-	0.024	-
Short term	24h	0.014	0.014	0.023	0.024
	2d	0.013	0.014	0.022	0.023
	4d	0.012	0.013	0.020	0.022
Long term	7d	0.010	0.012	0.017	0.020
	14d	0.007	0.010	0.011	0.017
	21d	0.005	0.009	0.008	0.015
	28d	0.003	0.007	0.005	0.013
	50d	0.001	0.005	0.002	0.008
	100d	0.000	0.003	0.000	0.005
Background concentration (5 cm) after 10 years		-	-	-	-
PEC$_{accumulation}$ (PEC$_{act}$ +PEC$_{background}$)		-	-	-	-

PEC$_{soil}$ of metabolites

Table 8.7-5: PEC$_{soil}$ for IM-1-2 on winter oilseed rape

PEC$_{soil}$ (mg/kg)		Winter oilseed rape			
		Single application, 1 × 30 g/ha		Multiple applications	
		Actual	TWA	Actual	TWA
Initial		0.005	-	-	-
Short term	24h	0.003	0.004	-	-
	2d	0.002	0.003	-	-
	4d	0.001	0.003	-	-
Long term	7d	0.000	0.002	-	-
	14d	0.000	0.001	-	-
	21d	0.000	0.001	-	-
	28d	0.000	0.000	-	-
	50d	0.000	0.000	-	-
	100d	0.000	0.000		
Background concentration (20 cm) after 10 years		-	-	-	-
PEC$_{accumulation}$ (PEC$_{act}$ +PEC$_{background}$)		-	-	-	-

Table 8.7-6: PEC$_{soil}$ for IM-1-2 on apple

PEC$_{soil}$ (mg/kg)		Apple			
		Single application, 1 × 27 g/ha		Multiple applications, 2 × 27 g/ha	
		Actual	TWA	Actual	TWA
Initial		0.009	-	0.009	
Short term	24h	0.006	0.007	0.006	0.008
	2d	0.004	0.006	0.004	0.007
	4d	0.002	0.005	0.002	0.005
Long term	7d	0.001	0.003	0.001	0.003
	14d	0.000	0.002	0.000	0.002
	21d	0.000	0.001	0.000	0.001
	28d	0.000	0.001	0.000	0.001
	50d	0.000	0.000	0.000	0.001
	100d	0.000	0.000	0.000	0.000
Background concentration (5 cm) after 10 years		-	-	-	-
PEC$_{accumulation}$ (PEC$_{act}$ +PEC$_{background}$)		-	-	-	-

Table 8.7-7: PEC$_{soil}$ for IM-1-4 on winter oilseed rape

PEC$_{soil}$ (mg/kg)		Winter oilseed rape			
		Single application, 1 × 30 g/ha		Multiple applications	
		Actual	TWA	Actual	TWA
Initial		0.004	-	-	-
Short term	24h	0.004	0.004	-	-
	2d	0.004	0.004	-	-
	4d	0.004	0.004	-	-
Long term	7d	0.004	0.004	-	-
	14d	0.004	0.004	-	-
	21d	0.004	0.004	-	-
	28d	0.004	0.004	-	-
	50d	0.003	0.004	-	-
	100d	0.003	0.003	-	-
Background concentration (20 cm) after 10 years		0.000	-	-	-
PEC$_{accumulation}$ (PEC$_{act}$ +PEC$_{background}$)		0.004	-	-	-

Table 8.7-8: PEC_{soil} for IM-1-4 on apple

PEC_{soil} (mg/kg)		Apple			
		Single application, 1 × 27 g/ha		Multiple applications, 2 × 27 g/ha	
		Actual	TWA	Actual	TWA
Initial		0.007	-	0.014	-
Short term	24h	0.007	0.007	0.014	0.014
	2d	0.007	0.007	0.014	0.014
	4d	0.007	0.007	0.014	0.014
Long term	7d	0.007	0.007	0.014	0.014
	14d	0.007	0.007	0.013	0.014
	21d	0.007	0.007	0.013	0.014
	28d	0.006	0.007	0.013	0.013
	50d	0.006	0.006	0.011	0.013
	100d	0.005	0.006	0.009	0.011
Background concentration (5 cm) after 10 years		0.002	-	0.003	-
$PEC_{accumulation}$ (PEC_{act} +$PEC_{background}$)		0.009	-	0.018	-

Table 8.7-9: PEC_{soil} for IC-0 on winter oilseed rape

PEC_{soil} (mg/kg)		Winter oilseed rape			
		Single application, 1 × 30 g/ha		Multiple applications	
		Actual	TWA	Actual	TWA
Initial		0.001	-	-	-
Short term	24h	0.001	0.001	-	-
	2d	0.000	0.001	-	-
	4d	0.000	0.001	-	-
Long term	7d	0.000	0.000	-	-
	14d	0.000	0.000	-	-
	21d	0.000	0.000	-	-
	28d	0.000	0.000	-	-
	50d	0.000	0.000	-	-
	100d	0.000	0.000	-	-
Background concentration (20 cm) after 10 years		-	-	-	-
$PEC_{accumulation}$ (PEC_{act} +$PEC_{background}$)		-	-	-	-

Table 8.7-10: PEC_{soil} for IC-0 on apple

PEC_{soil} (mg/kg)		Apple			
		Single application, 1 × 27 g/ha		Multiple applications, 2 × 27 g/ha	
		Actual	TWA	Actual	TWA
Initial		0.001	-	0.002	-
Short term	24h	0.001	0.001	0.001	0.002
	2d	0.001	0.001	0.001	0.001
	4d	0.001	0.001	0.001	0.001
Long term	7d	0.000	0.001	0.001	0.001
	14d	0.000	0.001	0.000	0.001
	21d	0.000	0.000	0.000	0.001
	28d	0.000	0.000	0.000	0.000
	50d	0.000	0.000	0.000	0.000
	100d	0.000	0.000	0.000	0.000
Background concentration (5 cm) after 10 years		-	-	-	-
$PEC_{accumulation}$ (PEC_{act} + $PEC_{background}$)		-	-	-	-

Table 8.7-11: PEC_{soil} for IM-1-5 on winter oilseed rape

PEC_{soil} (mg/kg)		Winter oilseed rape			
		Single application, 1 × 30 g/ha		Multiple applications	
		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	-	-
	42d	0.001	0.001	-	-
	50d	0.001	0.001	-	-
	100d	0.001	0.001	-	-
Background concentration (20 cm) after 10 years		0.001	-	-	-
$PEC_{accumulation}$ (PEC_{act} + $PEC_{background}$)		0.002	-	-	-

Table 8.7-12: PEC$_{soil}$ for IM-1-5 on apple

PEC$_{soil}$ (mg/kg)		Apple			
		Single application, 1 × 27 g/ha		Multiple applications, 2 × 27 g/ha	
		Actual	TWA	Actual	TWA
Initial		0.003	-	0.005	-
Short term	24h	0.003	0.003	0.005	0.005
	2d	0.003	0.003	0.005	0.005
	4d	0.003	0.003	0.005	0.005
Long term	7d	0.003	0.003	0.005	0.005
	14d	0.003	0.003	0.005	0.005
	21d	0.003	0.003	0.005	0.005
	28d	0.003	0.003	0.005	0.005
	50d	0.002	0.003	0.005	0.005
	100d	0.002	0.002	0.005	0.005
Background concentration (5 cm) after 10 years		0.009	-	0.018	-
PEC$_{accumulation}$ (PEC$_{act}$ +PEC$_{background}$)		0.012	-	0.023	-

8.7.2.2 PEC$_{soil}$ of ASA-01

Table 8.7-13: PEC$_{soil}$ for ASA-01

Crop	Active substance	Application rate (g/ha)	PEC$_{act}$ (mg/kg)	PEC$_{twa}$21 d (mg/kg)	Tillage depth (cm)	PEC$_{soil,background}$ (mg/kg)	PEC$_{accu}$ = PEC$_{act}$ + PEC$_{soil,background}$ (mg/kg)
Winter oilseed rape	acetamiprid	30	0.008	0.005	5	-	-
	ASA-01	108	0.029	NR	NR	NR	NR
Apple	acetamiprid	54	0.024	0.015	5	-	-
	ASA-01	194.4	0.104	NR	NR	NR	NR

The application rate of the formulation was calculated based on density of 1.080 g/mL

8.8 Predicted Environmental Concentrations in groundwater (PEC$_{gw}$) (KCP 9.2.4)

zRMS Comments:	The PECgw assessment was submitted for following application pattern: • winter OSR, appl. rate of 1 x 30 g a.s./ha, BBCH 50 • apples, appl. rate of 1 x 22.5 g a.s./ha, BBCH 56 • apples, appl. rate of 2 x 27 g a.s./ha, BBCH 57 All used endpoints were agreed at the EU level. The application dates were accepted. The recommended FOCUS models were used: FOCUS PELMO, FOCUS PEARL and FOCUS MACRO. The geom. mean of Kfoc was used in PECgw assessment; accepted as this value is required in FOCUS models.

	Calculations of PECgw for active substances and its relevant metabolites were provided at Tier 1 with PUF = 0. At Tier 2, PUF = 0.5 was used for metabolite IM-1-5; this value was agreed at the EU level. **Tier 1**. The maximum PECgw values for acetamipirid and its metabolites for proposed use in winter OSR and in apples at single application were below the trigger value of 0.1 µg/L. For multiple application in apples (2 x 27 g a.s./ha) the PECgw values for metabolite IM-1-5 exceed the trigger in scenarios Châteaudun, Hamburg, Piacenza and Thiva. (max of 0.134 µg/L). The additional PECgw assessment for every other year application was provided for Use No 3 and 5. The PECgw values for metabolite IM-I-5 in all scenarios were below the trigger Considering the PUF value of 0 for active substance and its all metabolites the safe use of Viares can be concluded if: • formulation is used every 2 years in Use No 3 and 5 • formulation is used every year in Use No 1, 2 and 4. **Tier 2**. Using the agreed PUF = 0.5 for metabolite IM-1-5, the maximum PECgw values for acetamipirid and its metabolites for all proposed uses were below the trigger value of 0.1 µg/L.

8.8.1 Justification for new endpoints

All endpoints used for PEC ground water calculations are EU approved and were evaluated on EU level.

8.8.2 Acetamiprid and relevant metabolites (KCP 9.2.4.1)

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

Use No.	1	2,4	3,5
Crop	Winter oilseed rape BBCH 50	Apple BBCH 56	Apple BBCH 57
Application rate (g as/ha)	acetamiprid 30 g/ha	acetamiprid 22.5 g/ha	acetamiprid 27 g/ha
Number of applications/interval (d)	1/-	1/-	2/7
Crop interception (%)	80	60	60
Frequency of application	annual		
Models used for calculation	FOCUS PEARL v5.5.5., FOCUS PELMO v6.6.4, FOCUS MACRO v5.5.4		

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

Crop	Scenario	Application dates (absolute)
Winter oilseed rape	Châteaudun	31/03 (90)*
	Hamburg	27/04
	Kremsmünster	25/04
	Okehampton	20/04
	Piacenza	27/03
	Porto	23/02
Apple aphids	Châteaudun	10/05 (130)*
	Hamburg	04/06
	Jokioinen	20/05
	Kremsmünster	04/06
	Okehampton	18/05
	Piacenza	10/05
	Porto	24/05
	Sevilla	04/05
	Thiva	24/05
Apple Codling moth	Châteaudun	12/05-19/05 (132-139)*
	Hamburg	06/06-13/06
	Jokioinen	20/05-27/05
	Kremsmünster	06/06-13/06
	Okehampton	20/05-27/05
	Piacenza	12/05-19/05
	Porto	27/05-03/06
	Sevilla	06/05-13/05
	Thiva	27/05-03/06

*Respective Julian day in brackets

Table 8.8-3: Input parameters related to active substance acetamiprid and its metabolites for PEC_{gw} calculations

Compound	acetamiprid	IM-1-2	IM-1-4	IC-0	IM-1-5	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	222.68	240.69	156.61	157.55	197.66	EFSA Journal 2016;14(11):4610
Water solubility (g/mol):	2950 at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	EFSA Journal 2016;14(11):4610
Saturated	1 x 10^{-6} at	1 x 10^{-8} at 20°C	1 x 10^{-8} at	1 x 10^{-8} at	1 x 10^{-8} at	EFSA Journal

Compound	acetamiprid	IM-1-2	IM-1-4	IC-0	IM-1-5	Value in accordance with EU endpoint y/n/ Reference*
vapour pressure (Pa):	20°C		20°C	20°C	20°C	2016;14(11):4610
DT_{50} in soil (d)	1.45 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	1.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=3)	14.6 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	2.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	495 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	EFSA Journal 2016;14(11):4610
Transformation rate	0.368085 to IM-1-2 0.071705 to IM-1-5	0.293568 to IM-1-4	0.031809 to IC-0	0.256721 to sink	0.0014 to sink	PELMO: (ln(2)/DT_{50})xFF
K_{foc} (mL/g)/K_{fom}	102/59.2 (geomean, n=5)	42/24.4 (geomean, n=4)	167/96.9 (geomean, n=4)	106/61.5 (geomean, n=5)	308/178.6 (geomean, n=5)	EFSA Journal 2016;14(11):4610
1/n	0.86 (arithmetic mean, n=5)	0.9 (arithmetic mean, n=4)	0.764 (arithmetic mean, n=4)	0.953 (arithmetic mean, n=5)	0.886 (arithmetic mean, n=4)	EFSA Journal 2016;14(11):4610
Plant uptake factor	0	0	0	0	Tier 1: 0 Tier 2: 0.5	Default
Formation fraction	-	0.77 from parent	0.72 from IM-1-2	0.67 from IM-1-4	0.15 from parent	EFSA Journal 2016;14(11):4610
Conversion factor for MACRO	-	0.832	0.390	0.263	0.133	Calculated*

*Calculated as: Formation fraction x Molar Mass Metabolite / Molar Mass Parent

Table 8.8-4: PEC$_{gw}$ for acetamiprid its and metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5./PELMO 6.6.4.)

Crop	Scenario	80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)				
		acetamiprid	IM-1-2	IM-1-4	IC-0	IM-1-5
FOCUS PEARL 5.5.5.						
Winter oilseed rape 1×30 g/ha	Châteaudun	0.000000	0.000000	0.000000	0.000000	0.002194
	Hamburg	0.000000	0.000000	0.000000	0.000000	0.013528
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.009812
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.013761
	Piacenza	0.000000	0.000000	0.000000	0.000000	0.006625
	Porto	0.000000	0.000000	0.000000	0.000000	0.007390
PELMO 6.6.4.						
Winter	Châteaudun	0.000000	0.000000	0.000000	0.000000	0.000

oilseed rape 1×30 g/ha	Hamburg	0.000000	0.000000	0.000000	0.000000	0.000
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.001
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.001
	Piacenza	0.000000	0.000000	0.000000	0.000000	0.002
	Porto	0.000000	0.000000	0.000000	0.000000	0.002

Table 8.8-5: PEC$_{gw}$ for acetamiprid its and metabolites on apple (with FOCUS PEARL 5.5.5./PELMO 6.6.4.)

Crop	Scenario	80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)				
		acetamiprid	**IM-1-2**	**IM-1-4**	**IC-0**	**IM-1-5**
FOCUS PEARL 5.5.5.						
						Tier 1 PUF=0
Apple 1×22.5 g/ha BBCH 56	Châteaudun	0.000000	0.000000	0.000000	0.000000	0.035127
	Hamburg	0.000000	0.000000	0.000000	0.000000	0.036118
	Jokioinen	0.000000	0.000000	0.000000	0.000000	0.000001
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.023070
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.026831
	Piacenza	0.000000	0.000000	0.000000	0.000000	0.033571
	Porto	0.000000	0.000000	0.000000	0.000000	0.014853
	Sevilla	0.000000	0.000000	0.000000	0.000000	0.029923
	Thiva	0.000000	0.000000	0.000000	0.000000	0.043075
PELMO 6.6.4.						
Apple 1×22.5 g/ha BBCH 56	Châteaudun	0.000000	0.000000	0.000000	0.000000	0.008
	Hamburg	0.000000	0.000000	0.000000	0.000000	0.001
	Jokioinen	0.000000	0.000000	0.000000	0.000000	0.000
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.002
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.005
	Piacenza	0.000000	0.000000	0.000000	0.000000	0.026
	Porto	0.000000	0.000000	0.000000	0.000000	0.011
	Sevilla	0.000000	0.000000	0.000000	0.000000	0.008
	Thiva	0.000000	0.000000	0.000000	0.000000	0.014

Table 8.8-6: PEC$_{gw}$ for acetamiprid its and metabolites on apple (with FOCUS PEARL 5.5.5./PELMO 6.6.4.)

Crop	Scenario	80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)				
		acetamiprid	**IM-1-2**	**IM-1-4**	**IC-0**	**IM-1-5**
FOCUS PEARL 5.5.5.						

						Tier 1 PUF=0	**Tier 2** PUF=0.5	**Tier 1** appl. every 2 years PUF=0
Apple 2×27g/ha Annual BBCH 57	Châteaudun	0.000000	0.000000	0.000000	0.000000	**0.112682**	0.065693	0.045264
	Hamburg	0.000000	0.000000	0.000000	0.000000	**0.115439**	0.072773	0.052198
	Jokioinen	0.000000	0.000000	0.000000	0.000000	0.000075	0.000054	0.000025
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.075715	0.050846	0.033214
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.080634	0.062760	0.033976
	Piacenza	0.000000	0.000000	0.000000	0.000000	**0.105152**	0.054739	0.054801
	Porto	0.000000	0.000000	0.000000	0.000000	0.045709	0.035111	0.019166
	Sevilla	0.000000	0.000000	0.000000	0.000000	0.095023	0.042716	0.040213
	Thiva	0.000000	0.000000	0.000000	0.000000	**0.133604**	0.060247	0.058932
PELMO 6.6.4.								
						Tier 1 PUF=0		
Apple 2×27g/ha annual BBCH 57	Châteaudun	0.000000	0.000000	0.000000	0.000000	0.033		
	Hamburg	0.000000	0.000000	0.000000	0.000000	0.005		
	Jokioinen	0.000000	0.000000	0.000000	0.000000	0.000		
	Kremsmünster	0.000000	0.000000	0.000000	0.000000	0.012		
	Okehampton	0.000000	0.000000	0.000000	0.000000	0.021		
	Piacenza	0.000000	0.000000	0.000000	0.000000	0.080		
	Porto	0.000000	0.000000	0.000000	0.000000	0.040		
	Sevilla	0.000000	0.000000	0.000000	0.000000	0.030		
	Thiva	0.000000	0.000000	0.000000	0.000000	0.049		

Table 8.8-7: PEC$_{gw}$ for acetamiprid its and metabolites on apple (with MACRO 5.5.4)

Crop	**Scenario**	**80th Percentile PEC$_{gw}$ at 1 m Soil Depth (µg/L)**				
		acetamiprid	**IM-1-2**	**IM-1-4**	**IC-0**	**IM-1-5**
FOCUS PEARL 5.5.5.						
Winter oilseed rape 1×30 g/ha	Châteaudun	0.0000	-	-	-	0.00112
Apple 1×22.5 g/ha annual	Châteaudun	0.0000	-	-	-	0.00453
Apple 2×27g/ha annual	Châteaudun	0.0000	-	-	-	0.0211

Based on FOCUS PEARL, PELMO and MACRO simulations values of PEC$_{gw}$ for acetamiprid and its metabolites are far below the threshold concentration of 0.1 µg/L for all scenarios and crops with exception of metabolite IM-1-5. At tier 1, metabolite IM-1-5 showed PEC$_{gw}$ value greater than trigger of 0.1 µg/L in some scenarios for use in apple against codling moth. PEC$_{gw}$ value in PEARL model for

Châteaudun was 0.1122682 µg/L, for Hamburg was 0.115439 µg/L, for Piacenza was 0.105152 µg/L and for Thiva was 0.133604 µg/L. At tier 2, PEC_{gw} value for IM-1-5 did not exceed trigger value 0.1 µg/L. IM-1-5 metabolite only appears in calcareous soils with pH (water) > 8 and none of the FOCUS scenarios has pH greater than 8, only Châteaudun has pH = 8 and Hamburg has a pH of 6.5. Therefore, under realistic conditions this metabolite will never be found in Hamburg scenario.
Relevance evaluation of IM-1-5 was conducted in dRR Part 10.

At the request of the Polish Ministry of Agriculture and Rural Development and the evaluator, the PECgw calculations for the application of 2 x 27 g as/ha at BBCH 57 in orchards were carried out taking into account every 2 years application and the value of PUF = 0. The results indicate that the PECgw for the active substance and its metabolites, including metabolite IM-1-5, are below the trigger value of 0.1 µg/L, which indicates that there is no unacceptable risk of groundwater contamination. Additional modelling with PELMO was not required since all PECgw values in every year calculation with PUF=0 were below the trigger value 0.1 µg/L.

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

zRMS Comments:	
	The submitted PECsw and PECsed calculations were accepted. All used endpoints for active substances and their metabolites were agreed at the EU level. Calculations of PEC_{SW} for active substance and its relevant metabolites were provided in Tier 1 with PUF = 0, in accordance with LoEP, 2016. The recommended FOCUS models were used: FOCUS Step 1 & 2, Step 3 and Step 4. In Step 4 the SWAN model was used and mitigation measures were proposed. Scenarios D2 (ditch and stream) are not relevant for Central Zone and were not considered. **Central Zone**. The max PECsw and relevant mitigation measure are presented in the table below: **Acetamipirid. Central Zone, max PECsw in Step 4; NOEC = 0.0235 µg/L**

Crop	Application rate g a.s./ha	Max PEC_{sw} µg/l	Mitigation measure
Winter OSR	1 x 30	0.01769 or 0.01702 R3 stream	20 m NSS + 20 VFS m or 10 m NSS + 10 VFS m + 50%
Pome fruits	1 x 22.5	0.00514 or 0.01358 R3 stream	100 m NSS + 20 VFS m or 50 m NSS + 20 VFS m + 50% DRT
Pome fruits	2 x 27	0.006213 or 0.01641 D5 stream	100 m NSS + 20 VFS m or 50 m NSS + 20 VFS m + 90% DRT

Acetamipirid. Poland, max PECsw in Step 4; NOEC = 0.0235 µg/L

Crop	Application rate g a.s./ha	Max PEC_{sw} µg/l	Mitigation measure
Winter OSR	1 x 30	0.01470 or 0.01414 D4 stream	20 m NSS + 20 VFS m or 10 m NSS + 10 VFS m + 50%
Pome fruits	1 x 22.5	0.004793 or 0.01266 D4 stream	100 m NSS + 20 VFS m or 50 m NSS + 20 VFS m + 50% DRT or 20mVFS + +20 m NSS +90%DRN
Pome fruits	2 x 27	0.005753 or 0.01519 D4 stream	100 m NSS + 20 VFS m or 50 m NSS + 20 VFS m + 90% DRT

Metabolites of acetamipirid. All relevant metabolites were considered. The max PECsw and PECsed values are presented in the table below:

Metabolite	Step 2	
	PECsw µg/L	PECsed µg/kg
IM-1-2	0.111	0.0596
IM-1-4	0.3721	0.6262
IC-0	0.0629	0.0759
IM-1-5	0.0821	0.2669
IB-1-1	0.0905	<0.001

Formulation. Taking into consideration the drift from formulation use, the following non-spray buffer strips were proposed. The drift exposure was assessed using the Drift Calculator in SWASH model:
The max PECsw are presented in the table below.
NOEC = 861 µg/L

Crop	Application rate g[prod]/ha	No spray buffer (m)	Max PEC_{sw} (µg/L)
Winter OSR	109 (equiv. to 1 x 30 g a.s./ha)	1	0.7003
Pome fruits	82 (equiv. to 1 x 22.5 g a.s./ha)	20	0.7117
Pome fruits	99 (equiv. to 1 x 27 g a.s./ha)	20	0.8593

ZRMS is of the opinion, that relevant mitigation measures will be considered at the Member State level.

	The relevant mitigation measure will be recommended in ecotoxicological section.

8.9.1 Justification for new endpoints

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

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

Plant protection product	ASA-01		
Use No.	1	2,4	3,5
Crop	Winter oilseed rape	Pome fruit	Pome fruit
Application rate (g as/ha)	acetamiprid 30 g/ha	acetamiprid 22.5 g/ha	acetamiprid 27 g/ha
Number of applications/interval (d)	1/-	1/-	2/7
Application window	North Europe: March-May, June-September Southern Europe: March-May, June-September	pome/stone fruit, early application North Europe: March-May, June-September Southern Europe: March-May, June-September	
Crop interception	Full canopy	Avarage crop cover	Avarage crop cover
Application method	Foliar ground spray	Air blast	Air blast
CAM (Chemical application method)	2		
Soil depth (cm)	4		
Models used for calculation	FOCUS STEP12 v 3.2, FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v5.5.3, ECPA SWAN v5.0.1		

Table 8.9-2: FOCUS Step 3 Scenario related input parameters for $PEC_{sw/sed}$ calculations for the application of ASA-01

Crop	Scenario	Application window used in modelling
Winter oilseed rape 1×30 g/ha BBCH 50-60	D2	28/04 (118) - 15/07 (196)
	D3	09/04 (99) - 24/06 (175)
	D4	18/04 (108) – 05/07 (186)
	D5	05/04 (95) – 09/06 (160)
	R1	05/05 (125) – 24/06 (175)
	R3	29/03 (88) - 20/05 (140)
Pome fruit 1×22.5 g/ha BBCH 56-75	D3	4/06 (155) – 30/08 (242)
	D4	9/06 (160) – 2/09 (245)
	D5	10/05 (130) – 2/08 (214)
	R1	4/06 (155) – 30/08 (242)
	R2	13/06 (164) – 14/09 (257)

Crop	Scenario	Application window used in modelling
	R3	10/05 (130) – 3/08 (215)
	R4	4/05 (124) – 3/08 (215)
Pome fruit 2×27 g/ha BBCH 57-75	D3	6/06 (157) – 30/08 (242)
	D4	11/06 (162) – 2/09 (245)
	D5	12/05 (132) – 2/08 (214)
	R1	6/06 (157) – 30/08 (242)
	R2	16/08 (167) – 14/09 (257)
	R3	12/05 (132) – 3/08 (215)
	R4	6/05 (126) – 3/08 (215)

8.9.2.1 Acetamiprid and its metabolites

Compound	acetamiprid	IM-1-2	IM-1-4	IC-0	IM-1-5	IB-1-1	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	222.68	240.69	156.61	157.55	197.66	204.23	EFSA Journal 2016;14(11):4610
Saturated vapour pressure (Pa)	1 x 10^{-6} at 20°C	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(11):4610
Water solubility (mg/L)	2950 at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	1 x 10^{6} at 25°C	EFSA Journal 2016;14(11):4610
Diffusion coefficient in water (m²/d)	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2/ 4.3 x 10^{-5}	not required for Step 1+2/ 4.3 x 10^{-5}	default
Diffusion coefficient 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+2/0.43	not required for Step 1+2/0.43	not required for Step 1+2/0.43	not required for Step 1+2/0.43	default
K_{foc} (mL/g)	102/59.2 (geomean, n=5)	42/24.4 (geomean, n=4)	167/96.9 (geomean, n=4)	106/61.5 (geomean, n=5)	308/178.6 (geomean, n=5)	0 (default value)	EFSA Journal 2016;14(11):4610
Freundlich Exponent 1/n	0.86 (arithmetic mean, n=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(11):4610
Plant Uptake	0	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	-
Wash-Off factor from Crop (1/mm)	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	Default

Compound	acetamiprid	IM-1-2	IM-1-4	IC-0	IM-1-5	IB-1-1	Value in accordance to EU endpoint y/n/ Reference
$DT_{50,soil}$ (d)	1.45 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	1.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=3)	14.6 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	2.7 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	495 (geomean, normalisation to 10 kPa or pF2, 20 °C with Q_{10} of 2.58, n=7)	-**	EFSA Journal 2016;14(11):4610
$DT_{50,water}$ (d)	27	1000 (default)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	EFSA Journal 2016;14(11):4610
$DT_{50,sed}$ (d)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	EFSA Journal 2016;14(11):4610
$DT_{50,whole\ system}$ (d)	27	1000 (default)	1000 (default)	1000 (default)	1000 (default)	1000 (default)	EFSA Journal 2016;14(11):4610
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 55 Total system: 13.4	Soil: 72 Total system: 81.5	Soil: 11.3 Total system: 29.5	Soil: 20 Total system: 0*	Soil: 0** Total system: 35	EFSA Journal 2016;14(11):4610

$PEC_{sw/sed}$

Table 8.9-3: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for acetamiprid following single application of ASA-01 to winter oilseed rape (1 × 30 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominant entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Step 1	---	9.0787	---	6.9931	8.9927
Step 2					
Northern Europe	March-May	0.2947	---	0.2272	0.2916
	June-Sept	0.2947	---	0.2272	0.2916
Southern Europe	March-May	0.3598	---	0.2788	0.3578
	June-Sept	0.3272	---	0.2530	0.3247
Step 3					
D2	ditch	0.1926	drainage	0.05675	0.1867
D2	stream	0.1714	drainage	0.04897	0.1668
D3	ditch	0.1901	drainage	0.009611	0.05861

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominant entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
D4	pond	0.006561	drainage	0.005436	0.01529
D4	stream	0.1460	drainage	0.000338	0.005086
D5	pond	0.006561	drainage	0.005388	0.01524
D5	stream	0.1541	drainage	0.000304	0.004604
R1	pond	0.01415	runoff/erosion	0.01173	0.03143
R1	stream	0.2837	runoff/erosion	0.01020	0.06113
R3	stream	0.1757	runoff/erosion	0.002299	0.02619

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-4: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for acetamiprid following single application of ASA-01 to pome fruit (1 × 22.5 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominant entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Step 1	---	8.7919	---	6.5997	8.4798
Step 2					
Northern Europe	March-May	2.1898	---	1.6270	1.9072
	June-Sept	2.1898	---	1.6270	1.9072
Southern Europe	March-May	2.1898	---	1.7082	2.0265
	June-Sept	2.1898	---	1.6676	1.9669
Step 3					
D3	ditch	1.753	drainage	0.1461	0.6000
D4	pond	0.1063	drainage	0.08069	0.1691
D4	stream	1.858	drainage	0.02416	0.2440
D5	pond	0.1063	drainage	0.08458	0.1863
D5	stream	1.899	drainage	0.008857	0.1156
R1	pond	0.1062	runoff/erosion	0.08110	0.1662
R1	stream	1.424	runoff/erosion	0.01994	0.1610
R2	stream	1.909	runoff/erosion	0.01149	0.1243
R3	stream	1.993	runoff/erosion	0.02727	0.2674
R4	stream	1.392	runoff/erosion	0.01566	0.1025

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-5: FOCUS Step 1, 2 and 3 PEC_{sw} and PEC_{sed} for acetamiprid following double application of ASA-01 to pome fruit (2 × 27 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominant entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Step 1	---	21.1005	---	15.8394	20.3516
Step 2					
Northern Europe	March-May	4.0801	---	3.0939	3.6150
	June-Sept	4.0801	---	3.0939	3.6150
Southern Europe	March-May	4.0801	---	3.1948	3.7633
	June-Sept	4.0801	---	3.1443	3.6891
Step 3					
D3	ditch	2.104 / 1.812	drainage	0.1753 / 0.3090	0.7117 / 0.8488
D4	pond	0.1276 / 0.1427	drainage	0.09687 / 0.1133	0.2006 /0.3392
D4	stream	2.230 / 1.904	drainage	0.02900 / 0.02475	0.2906 / 0.2497
D5	pond	0.1276 / 0.1940	drainage	0.1008 / 0.1544	0.2151 / 0.3565
D5	stream	2.409 / 2.058	drainage	0.04317 / 0.07456	0.3830 / 0.3800
R1	pond	0.1275 / 0.1784	runoff/erosion	0.09739 / 0.1357	0.1972 / 0.3268
R1	stream	1.709 / 1.459	runoff/erosion	0.02402 / 0.03609	0.1918 / 0.1940
R2	stream	2.291 / 1.955	runoff/erosion	0.01170 / 0.01997	0.1483 / 0.1473
R3	stream	2.392 / 2.056	runoff/erosion	0.03273 / 0.06460	0.3185 / 0.3646
R4	stream	1.670 / 1.426	runoff/erosion	0.01756 / 0.02429	0.1223 / 0.1313

* single applications should be marked.
** twa-time as required by ecotox
Single/multiple application

Step 4

Table 8.9-6: Global maximum PEC_{sw} values for acetamiprid, following single application of ASA-01 (1× 30 g/ha) to winter oilseed rape according to the central zone GAP according to surface water Step 4

PEC_{sw} (µg/L)	Scenario	STEP 4 acetamiprid						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFSmod	20 VFSmod
	No spray buffer (m)	1/3	5	10	15	20	10	20
None	D2 ditch	0.1926	0.05221	0.02769	-	-	0.02769	0.01439
50 %		-	-	-	-	-	0.01385	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None		0.1714	0.06261	0.03320	-	-	0.03320	0.01725

PEC$_{sw}$ (µg/L)	Scenario	STEP 4 acetamiprid						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFSmod	20 VFSmod
	No spray buffer (m)	1/3	5	10	15	20	10	20
50 %	D2 stream	-	-	-	-	-	0.01660	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	D3 ditch	0.1901	0.05154	0.02734	-	-	0.02734	0.01421
50 %		-	-	-	-	-	0.01367	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	D4 pond	0.006561	0.005676	0.004080	-	-	0.004080	0.002725
50 %		-	-	-	-	-	0.002040	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	D4 stream	0.1460	0.05335	0.02829	-	-	0.02829	0.01470
50 %		-	-	-	-	-	0.01414	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	D5 pond	0.006561	0.005677	0.004081	-	-	0.004081	0.002725
50 %		-	-	-	-	-	0.002040	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	D5 stream	0.1541	0.05630	0.02986	-	-	0.02986	0.01551
50 %		-	-	-	-	-	0.01493	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	R1 pond	0.01415	0.01348	0.01227	-	-	0.004080	0.002725
50 %		-	-	-	-	-	0.002040	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	R1 stream	0.2837	0.2837	0.2837	-	-	0.02407	0.01251
50 %		-	-	-	-	-	0.01204	-
75 %		-	-	-	-	-	-	-
90 %		-	-	-	-	-	-	-
None	R3 stream	0.1757	0.06421	0.04989	-	-	0.03405	0.01769
50 %		-	-	-	-	-	0.01702	-
75 %		-	-	-	-	-	-	-

PEC$_{sw}$ (µg/L)	Scenario	STEP 4 acetamiprid						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFSmod	20 VFSmod
	No spray buffer (m)	1/3	5	10	15	20	10	20
90 %		-	-	-	-	-	-	-

Table 8.9-7: Global maximum PEC$_{sw}$ values for acetamiprid, following single application of ASA-01 (1× 22.5 g/ha) to pome fruit according to the central zone GAP according to surface water Step 4

PEC$_{sw}$ (µg/L)	Scenario	STEP 4 acetamiprid								
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod
	No spray buffer (m)	1/3	5	10	15	20	10	20	50	100
None	D3 ditch	1.753	1.378	0.8459	0.3807	0.1935	0.8459	0.1935	0.02185	0.004137
50 %		-	0.6888	0.4230	0.1903	-	-	0.09671	0.01092	-
75 %		-	0.3444	0.2115	0.09516	-	-	0.04837	-	-
90 %		-	0.1378	0.08459	0.03807	-	-	0.01935	-	-
None	D4 pond	0.1063	0.1197	0.06561	0.03464	0.02122	0.06561	0.02122	0.003870	0.000925
50 %		-	0.05983	0.03281	0.01732	-	-	0.01061	0.001935	-
75 %		-	0.02991	0.01640	0.008660	-	-	0.005305	-	-
90 %		-	0.01197	0.006561	0.003464	-	-	0.002122	-	-
None	D4 stream	1.858	1.597	0.9806	0.4411	0.2242	0.9806	0.2242	0.02532	0.004793
50 %		-	0.7982	0.4902	0.2206	-	-	0.1121	0.01266	-
75 %		-	0.3993	0.2451	0.1103	-	-	0.05606	-	-
90 %		-	0.1597	0.09806	0.04411	-	-	0.02242	-	-
None	D5 pond	0.1063	0.1197	0.06561	0.03464	0.02122	0.06561	0.02122	0.003870	0.000925
50 %		-	0.05983	0.03281	0.01732	-	-	0.01061	0.001935	-
75 %		-	0.02991	0.01640	0.008660	-	-	0.005305	-	-
90 %		-	0.01197	0.006561	0.003464	-	-	0.002122	-	-
None	D5 stream	1.899	1.632	1.002	0.4507	0.2291	1.002	0.2291	0.02588	0.004898
50 %		-	0.8157	0.5009	0.2254	-	-	0.1146	0.01294	-
75 %		-	0.4080	0.2505	0.1127	-	-	0.05729	-	-
90 %		-	0.1632	0.1002	0.04507	-	-	0.02291	-	-
None	R1 pond	0.1062	0.1196	0.06557	0.03462	0.02121	0.06557	0.02121	0.003868	0.000924
50 %		-	0.05979	0.03279	0.01731	-	-	0.01060	0.001934	-
75 %		-	0.02990	0.01639	0.008963	-	-	0.005301	-	-
90 %		-	0.01196	0.007332	0.004929	-	-	0.002121	-	-

PEC$_{sw}$ (µg/L)	Scenario	STEP 4 acetamiprid								
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod
	No spray buffer (m)	1/3	5	10	15	20	10	20	50	100
None	R1 stream	1.424	1.224	0.7515	0.3380	0.1718	0.7515	0.1718	0.01940	0.003673
50 %		-	0.6117	0.3756	0.1690	-	-	0.08590	0.009702	-
75 %		-	0.3060	0.1878	0.1453	-	-	0.04296	-	-
90 %		-	0.1453	0.1453	0.1453	-	-	0.01718	-	-
None	R2 stream	1.909	1.640	1.007	0.4530	0.2303	1.007	0.2303	0.02601	0.004923
50 %		-	0.8199	0.5035	0.2265	-	-	0.1151	0.01300	-
75 %		-	0.4101	0.2518	0.1133	-	-	0.05758	-	-
90 %		-	0.1640	0.1007	0.04530	-	-	0.02303	-	-
None	R3 stream	1.993	1.712	1.052	0.4730	0.2404	1.052	0.2404	0.02715	0.005140
50 %		-	0.8560	0.5257	0.2365	-	-	0.1202	0.01358	-
75 %		-	0.4282	0.2629	0.1183	-	-	0.06012	-	-
90 %		-	0.1712	0.1052	0.04730	-	-	0.02404	-	-
None	R4 stream	1.392	1.196	0.7345	0.3303	0.1679	0.7345	0.1679	0.01897	0.003590
50 %		-	0.5979	0.3671	0.2081	-	-	0.08396	0.009483	-
75 %		-	0.2991	0.2081	0.2081	-	-	0.04199	-	-
90 %		-	0.2081	0.2081	0.2081	-	-	0.01679	-	-

~~Table 8.9-8: Global maximum PEC$_{sw}$ values for acetamiprid, following double application of ASA-01 (2 × 27 g/ha) to pome fruit according to the central zone GAP according to surface water Step 4~~

~~PEC$_{sw}$ (µg/L)~~	~~Scenario~~	~~STEP 4 acetamiprid~~						
~~Nozzle reduction~~	~~Vegetative strip (m)~~	~~None~~	~~None~~	~~None~~	~~None~~	~~None~~	~~10 VFS~~	~~20 VFS~~
	~~No spray buffer (m)~~	~~1/3~~	~~5~~	~~10~~	~~15~~	~~20~~	~~10~~	~~20~~
~~None~~	~~D3 ditch~~	~~1.812~~	~~1.397~~	~~0.8254~~	~~0.4533~~	~~0.2138~~	~~0.8254~~	~~0.2138~~
~~50 %~~		~~-~~	~~0.6987~~	~~0.4129~~	~~0.2266~~	~~-~~	~~-~~	~~-~~
~~75 %~~		~~-~~	~~0.3494~~	~~0.2064~~	~~0.1133~~	~~-~~	~~-~~	~~-~~
~~90 %~~		~~-~~	~~0.1397~~	~~0.08257~~	~~0.04534~~	~~-~~	~~-~~	~~-~~
~~None~~	~~D4 pond~~	~~0.1427~~	~~0.1601~~	~~0.09089~~	~~0.04769~~	~~0.02738~~	~~0.09089~~	~~0.02738~~
~~50 %~~		~~-~~	~~0.07998~~	~~0.04540~~	~~0.02383~~	~~-~~	~~-~~	~~-~~
~~75 %~~		~~-~~	~~0.03996~~	~~0.02269~~	~~0.01190~~	~~-~~	~~-~~	~~-~~
~~90 %~~		~~-~~	~~0.01597~~	~~0.009063~~	~~0.004755~~	~~-~~	~~-~~	~~-~~
~~None~~		~~1.904~~	~~1.616~~	~~0.9548~~	~~0.5243~~	~~0.2472~~	~~0.9548~~	~~0.2472~~

PEC_{sw} (µg/L)	Scenario	STEP 4 acetamiprid						
Nozzle reduction	Vegetative strip (m)	None	None	None	None	None	10 VFS	20 VFS
	No spray buffer (m)	1/3	5	10	15	20	10	20
50 %	D4 stream	-	0.8081	0.4774	0.2621	-	-	-
75 %		-	0.4041	0.2387	0.1310	-	-	-
90 %		-	0.1616	0.09548	0.05243	-	-	-
None	D5 pond	0.1940	0.2177	0.1235	0.06480	0.03719	0.1235	0.03719
50 %		-	0.1087	0.06169	0.03236	-	-	-
75 %		-	0.05428	0.03081	0.01616	-	-	-
90 %		-	0.02168	0.01230	0.006451	-	-	-
None	D5 stream	2.058	1.747	1.032	0.5666	0.2672	1.032	0.2672
50 %		-	0.8734	0.5160	0.2833	-	-	-
75 %		-	0.4367	0.2580	0.1416	-	-	-
90 %		-	0.1747	0.1032	0.05666	-	-	-
None	R1 pond	0.1784	0.1999	0.1124	0.06090	0.03384	0.1124	0.03384
50 %		-	0.1008	0.05807	0.03140	-	-	-
75 %		-	0.05134	0.03000	0.01837	-	-	-
90 %		-	0.02203	0.01581	0.01194	-	-	-
None	R1 stream	1.459	1.239	0.7317	0.4018	0.1894	0.7317	0.1894
50 %		-	0.6193	0.3658	0.2008	-	-	-
75 %		-	0.3096	0.1830	0.1767	-	-	-
90 %		-	0.1767	0.1767	0.1767	-	-	-
None	R2 stream	1.955	1.660	0.9807	0.5385	0.2539	0.9807	0.2539
50 %		-	0.8300	0.4904	0.2692	-	-	-
75 %		-	0.4150	0.2452	0.1346	-	-	-
90 %		-	0.1660	0.09807	0.05385	-	-	-
None	R3 stream	2.056	1.746	1.031	0.5663	0.2670	1.031	0.2670
50 %		-	0.8729	0.5157	0.2831	-	-	-
75 %		-	0.4364	0.2579	0.1415	-	-	-
90 %		-	0.1746	0.1031	0.05663	-	-	-
None	R4 stream	1.426	1.211	0.7152	0.3927	0.1852	0.7152	0.1852
50 %		-	0.6053	0.3576	0.1963	-	-	-
75 %		-	0.3027	0.1788	0.1561	-	-	-
90 %		-	0.1561	0.1561	0.1561	-	-	-

Table 8.9-8: Global maximum PEC_{sw} values for acetamiprid, following single/double application of ASA-01 (2 × 27 g/ha) to pome fruit according to the central zone GAP according to surface water Step 4

PEC_{sw} (µg/L) Scenario	STEP 4 acetamiprid										
Vegetative strip (m)	-	-	-	-	-	10 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod
No spray buffer (m)	1/3	5	10	15	20	10	20	20	50	50	100
Nozzle Reduction (%)	-	-	-	-	-	-	-	90	-	50	-
D3 ditch	2.104/ 1.812	1.653/ 1.397	1.015/ 0.8254	0.4566/ 0.4533	0.2321/ 0.2138	1.015/ 0.8254	0.2321/ 0.2138	0.02321/ 0.02138	0.02622/ 0.01898	0.01311/ 0.009491	0.004963/ 0.002991
D4 pond	0.1276/ 0.1427	0.1436/ 0.1601	0.07874/ 0.09089	0.04156/ 0.04769	0.02546/ 0.02738	0.07874/ 0.09089	0.02546/ 0.02738	0.002546/ 0.002729	0.004644/ 0.004056	0.002322/ 0.002026	0.001110/ 0.000822
D4 stream	2.230/ 1.904	1.916 / 1.616	1.176/ 0.9548	0.5294/ 0.5243	0.2690/ 0.2472	1.176/ 0.9548	2.230/ 1.904	0.02690/ 0.02472	0.03039/ 0.02194	0.01519/ 0.01097	0.005753/ 0.003457
D5 pond	0.1276/ 0.1940	0.1437/ 0.2177	0.07875/ 0.1235	0.04157/ 0.06480	0.02546/ 0.03719	0.07875/ 0.1235	0.1276/ 0.1940	0.002546/ 0.003701	0.004645/ 0.005502	0.002323/ 0.002747	0.001110/ 0.001113
D5 stream	2.409/ 2.058	2.069/ 1.747	1.271/ 1.032	0.5717/ 0.5666	0.2906/ 0.2672	1.271/ 1.032	0.2906/ 0.2672	0.02906/ 0.02672	0.03282/ 0.02371	0.01641/ 0.01186	0.006213/ 0.003736

PEC$_{sw}$ (µg/L) Scenario	STEP 4 acetamiprid										
Vegetative strip (m)	-	-	-	-	-	10 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod	20 VFSmod
No spray buffer (m)	1/3	5	10	15	20	10	20	20	50	50	100
Nozzle Reduction (%)	-	-	-	-	-	-	-	90	-	50	-
R1 pond	0.1275/ 0.1784	0.1435/ 0.1999	0.07869/ 0.1124	0.04154 0.06090	0.02544/ 0.03384	0.07869/ 0.1124	0.02544/ 0.03384	0.002544/ 0.003368	0.004642/ 0.005007	0.002321/ 0.002500	0.001109/ 0.001013
R1 stream	1.709/ 1.459	1.468/ 1.239	0.9015/ 0.7317	0.4057/ 0.4018	0.2062/ 0.1894	0.9015/ 0.7317	0.2062/ 0.1894	0.02062/ 0.01894	0.02328/ 0.01681	0.01164/ 0.008407	0.004409/ 0.002649
R2 stream	2.291/ 1.955	1.968 / 1.660	1.208/ 0.9807	0.5437/ 0.5385	0.2763/ 0.2539	1.208/ 0.9807	0.2763/ 0.2539	0.02763/ 0.02539	0.03121/ 0.02254	0.01560/ 0.01127	0.005909/ 0.003551
R3 stream	2.392/ 2.056	2.055/ 1.746	1.262/ 1.031	0.5677/ 0.5663	0.2885 / 0.2670	1.262/ 1.031	0.2885/ 0.2670	0.02885/ 0.02670	0.03259/ 0.02370	0.01629/ 0.01185	0.006170/ 0.003734
R4 stream	1.670/ 1.426	1.435/ 1.211	0.8812/ 0.7152	0.3965/ 0.3927	0.2015/ 0.1852	0.8812/ 0.7152	0.2015/ 0.1852	0.02015/ 0.01852	0.02276/ 0.01643	0.01138/ 0.008217	0.004309/ 0.002589

Metabolites of acetamiprid

Table 8.9-9: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for metabolites of acetamiprid following single application to winter oilseed rape (1 × 30 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
IM-1-2					
Step 1	---	7.0411	---	6.9881	2.9543
Step 2					
Northern Europe	March-May	0.1036	---	0.1022	0.0432
	June-Sept	0.1036	---	0.1022	0.0432
Southern Europe	March-May	0.1689	---	0.1670	0.0706
	June-Sept	0.1363	---	0.1346	0.0569
IM-1-4					
Step 1	---	8.9877	---	8.8947	14.9510
Step 2					
Northern Europe	March-May	0.3432	---	0.3327	0.5589
	June-Sept	0.3432	---	0.3327	0.5589
Southern Europe	March-May	0.5491	---	0.5371	0.9025
	June-Sept	0.4462	---	0.4349	0.7307
IM-1-5					
Step 1	---	1.2585	---	1.2494	3.8761
Step 2					
Northern Europe	March-May	0.0626	---	0.0621	0.1927
	June-Sept	0.0626	---	0.0621	0.1927
Southern Europe	March-May	0.1251	---	0.1242	0.3854
	June-Sept	0.0939	---	0.0932	0.2891
IC-0					
Step 1	---	2.5868	---	2.5611	2.7325
Step 2					
Northern Europe	March-May	0.0785	---	0.0759	0.0809
	June-Sept	0.0785	---	0.0759	0.0809
Southern Europe	March-May	0.1046	---	0.1017	0.1085
	June-Sept	0.0916	---	0.0888	0.0947
IB-1-1					
Step 1	---	3.2986	---	3.2747	0.0000
Step 2					
Northern	March-May	0.1120	---	0.1112	0.0000

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Europe	June-Sept	0.1120	---	0.1112	0.0000
Southern Europe	March-May	0.1358	---	0.1348	0.0000
	June-Sept	0.1358	---	0.1348	0.0000

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-10: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for metabolites of acetamiprid following single application to pome fruit (1 × 22.5 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
IM-1-2					
Step 1	---	5.5680	---	5.5114	2.3299
Step 2					
Northern Europe	March-May	0.4223	---	0.4140	0.1750
	June-Sept	0.4223	---	0.4140	0.1750
Southern Europe	March-May	0.5397	---	0.5306	0.2243
	June-Sept	0.4810	---	0.4723	0.1996
IM-1-4					
Step 1	---	7.8773	---	7.5988	7.5988
Step 2					
Northern Europe	March-May	1.4605	---	1.3858	2.3269
	June-Sept	1.4605	---	.3858	2.3269
Southern Europe	March-May	1.8311	---	1.7537	2.9454
	June-Sept	1.6458	---	1.5698	2.6362
IM-1-5					
Step 1	---	0.9439	---	0.9370	2.9071
Step 2					
Northern Europe	March-May	0.1126	---	0.1118	0.3469
	June-Sept	0.1126	---	0.1118	0.3469
Southern Europe	March-May	0.2253	---	0.2236	0.6938
	June-Sept	0.1689	---	0.1677	0.5203
IC-0					
Step 1	---	2.3540	---	2.2821	2.4335
Step 2					
Northern Europe	March-May	0.4634	---	0.4434	0.4727
	June-Sept	0.4634	---	0.4434	0.4727
Southern	March-May	0.5103	---	0.4900	0.5224

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Europe	June-Sept	0.4869	---	0.4667	0.4975
IB-1-1					
Step 1	---	3.1104	---	3.0879	0.0000
Step 2					
Northern Europe	March-May	0.7437	---	0.7383	0.0000
	June-Sept	0.7437	---	0.7383	0.0000
Southern Europe	March-May	0.7864	---	0.7807	0.0000
	June-Sept	0.7650	---	0.7595	0.0000

* single applications should be marked.
** twa-time as required by ecotox

Table 8.9-11: FOCUS Step 1 and 2 PEC_{sw} and PEC_{sed} for metabolites of acetamiprid following double application to pome fruit (2 × 27 g/ha)

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
IM-1-2					
Step 1	---	13.3632	---	13.2273	5.5917
Step 2					
Northern Europe	March-May	0.7869	---	0.7702	0.3255
	June-Sept	0.7869	---	0.7702	0.3255
Southern Europe	March-May	0.9354	---	0.9177	0.3879
	June-Sept	0.8611	---	0.8440	0.3567
IM-1-4					
Step 1	---	18.9055	---	18.2371	30.6349
Step 2					
Northern Europe	March-May	2.9945	---	2.8386	4.7661
	June-Sept	2.9945	---	2.8386	4.7661
Southern Europe	March-May	3.7072	---	3.5461	5.9555
	June-Sept	3.3508	---	3.1923	5.3608
IM-1-5					
Step 1	---	2.2652	---	2.2488	6.9770
Step 2					
Northern Europe	March-May	0.2690	---	0.2670	0.8285
	June-Sept	0.2690	---	0.2670	0.8285
Southern Europe	March-May	0.5380	---	0.5341	1.6570
	June-Sept	0.4035	---	0.4006	1.2427
IC-0					

Scenario FOCUS	Waterbody	Max PEC_{sw} (µg/L)*	Dominat entry route	21 d- $PEC_{sw,twa}$ (µg/L)**	Max PEC_{sed} (µg/kg)*
Step 1	---	5.6495	---	5.4770	5.8404
Step 2					
Northern Europe	March-May	0.9338	---	0.8922	0.9511
	June-Sept	0.9338	---	0.8922	0.9511
Southern Europe	March-May	0.9956	---	0.9535	1.0165
	June-Sept	0.9647	---	0.9229	0.9838
IB-1-1					
Step 1	---	7.4650	---	7.4110	0.0000
Step 2					
Northern Europe	March-May	1.5206	---	1.5096	0.0000
	June-Sept	1.5206	---	1.5096	0.0000
Southern Europe	March-May	1.5736	---	1.5622	0.0000
	June-Sept	1.5471	---	1.5359	0.0000

* single applications should be marked.
** twa-time as required by ecotox

$PEC_{sw/sed}$ of ASA-01

The PECsw of the formulation ASA-01 were calculated based on the FOCUS spray drift values of the SWASH drift calculator and the density of the formulation of 1.080 g/mL.

Table 8.9-12: PECsw for ASA-01

Crop	Waterbody	Application rate (g formulation/ha)	Buffer zone (m)	PEC_{sw} (µg formulation/L)
Winter oilseed rape, 1×108 g form/ha	ditch	108	NR	0.6939
	pond	108		0.0237
	stream	108		0.5149
	ditch	108	5m	0.1881
	pond	108		0.0205
	stream	108		0.1881
	ditch	108	10m	0.0997
	pond	108		0.0147
	stream	108		0.0997
	ditch	108	20m	0.0518
	pond	108		0.0098
	stream	108		0.0518
Pome fruit 1×81 g form/ha	ditch	81	NR	6.3716
	pond	81		0.3831
	stream	81		5.8273
	ditch	81	5m	5.0066
	pond	81		0.4313
	stream	81		5.006
	ditch	81	10m	3.0746
	pond	81		0.2365
	stream	81		3.0746
	ditch	81	20m	0.7030
	pond	81		0.0765
	stream	81		0.7030
Pome fruit 2×97.2 g form/ha	ditch	97.2	NR	6.5747
	pond	97.2		0.4017
	stream	97.2		5.9705
	ditch	97.2	5m	5.0681
	pond	97.2		0.4506
	stream	97.2		5.0681
	ditch	97.2	10m	2.9942
	pond	97.2		0.2560

Crop	Waterbody	Application rate (g formulation/ha)	Buffer zone (m)	PEC_{sw} (µg formulation/L)
	stream	97.2		2.9942
	ditch	97.2	20m	0.7752
	pond	97.2		0.0772
	stream	97.2		0.7752

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

Table 8.10-1 Summary of atmospheric degradation and behaviour

Compound	Acetamiprid
Direct photolysis in air	No data required
Quantum yield of direct phototransformation	-
Photochemical oxidative degradation in air	Overall rate constant: 76.435 cm^3 x $molecule^{-1}$ x sec^{-1} DT50: 0.140 days (derived by the Atkinson model assuming a OH(12 h) concentration of 1.5 x 106 OH/cm^3)
Volatilisation	Vapour pressure (Pa): 1.73 x 10^{-7} Henry's Law Constant (Pa m^3/mol): < 5.3 x 10^{-8} (25 °C)
Metabolites	No data

The vapour pressure at 20 °C of the active substance acetamiprid is < 10-5 Pa. Hence, the active substance acetamiprid is regarded as non-volatile. Its volatilisation from plant and soil surfaces is regarded to be very low. Additionally, it is rapidly degraded in air (DT50 = 0.14 days). Therefore, exposure of adjacent surface waters and terrestrial ecosystems by the active substance acetamiprid due to volatilization with subsequent deposition does not have to be considered.

Appendix 1 Lists of data considered in support of the evaluation

Tables considered not relevant can be deleted as appropriate.

MS to blacken authors of vertebrate studies in the version made available to third parties/public.

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 9.2.4	Hara-Skrzypiec A.	2024	ASA-01- A Leaching Assessment for acetamiprid and its metabolites using the PEARL 5.5.5, PELMO 6.6.4 and MACRO 5.5.4 Groundwater Models Following Spray Application to winter oilseed rape and apple. Company Report No: EST/3/2024 ESTICON Sp. z o.o., Poland Not GLP Unpublished	N	XXXX
KCP 9.2.5	Hara-Skrzypiec A.	2024	ASA-01 - A European Environmental Fate Assessment for acetamiprid and its metabolites using the FOCUS Surface Water Models at Steps 1 to 4 Following Spray Application to winter oilseed rape and apple. Update Company Report No: EST/4/2024 Not GLP Unpublished	N	XXXX

* XXXX

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

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

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

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

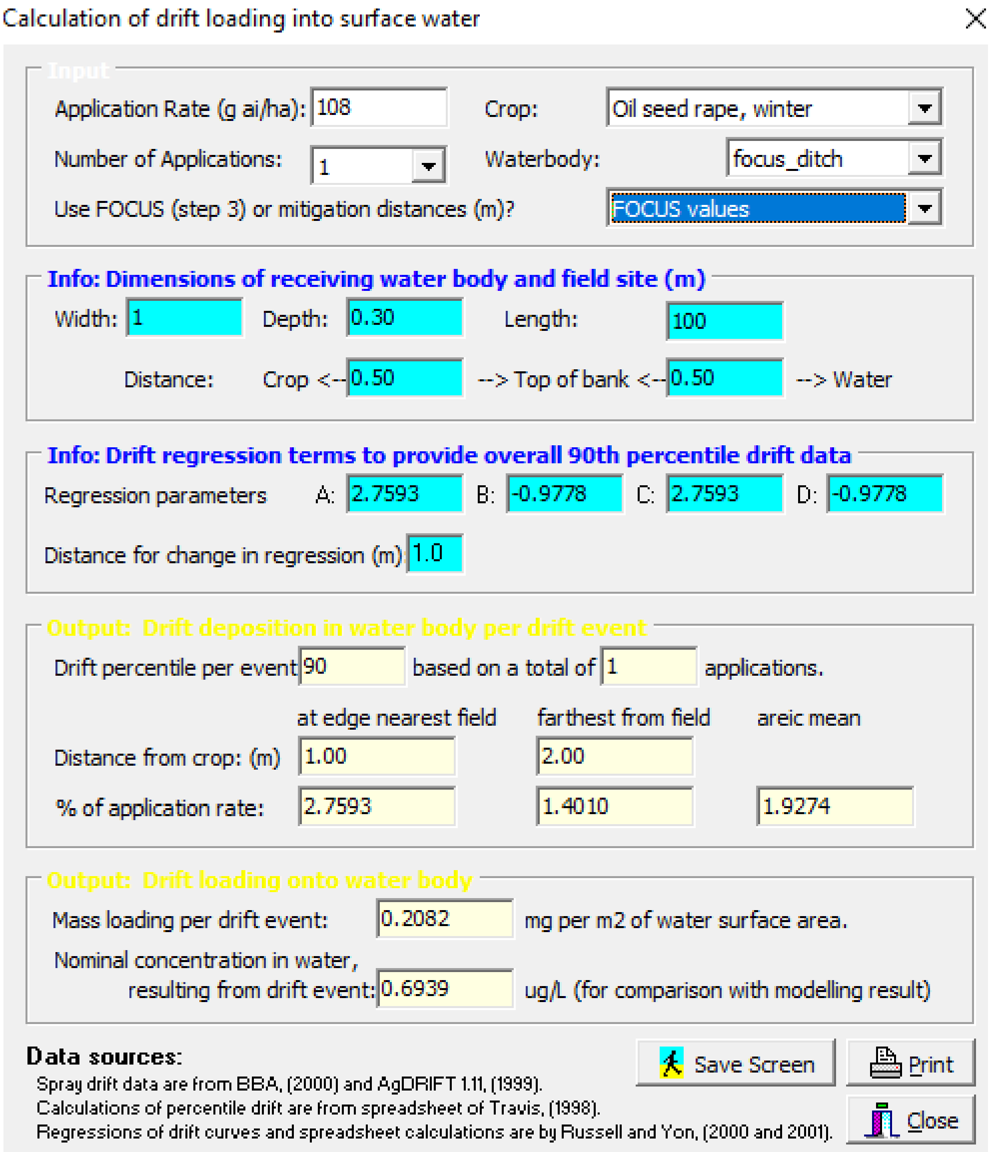
List of data relied on not submitted by the applicant but necessary for evaluation

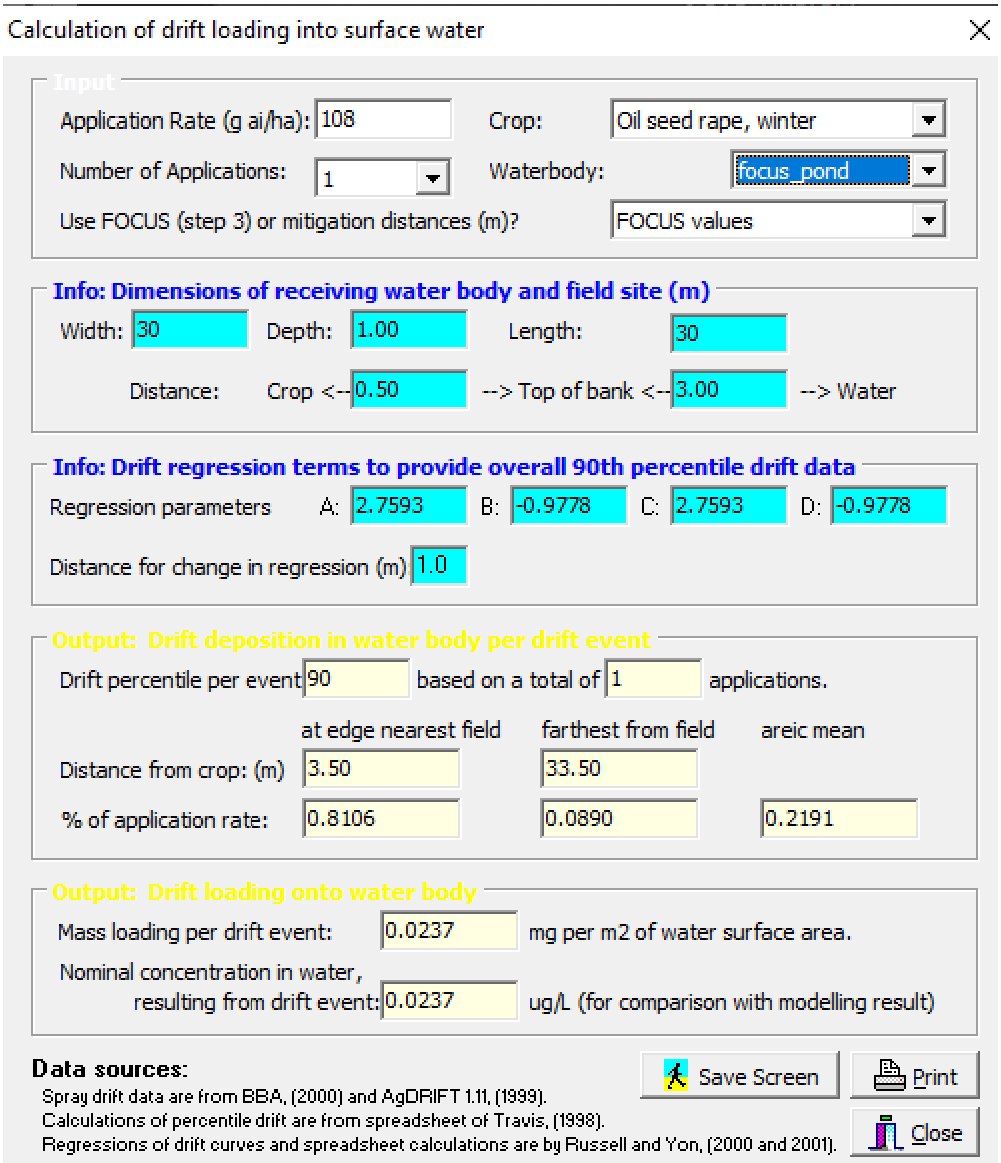
Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner

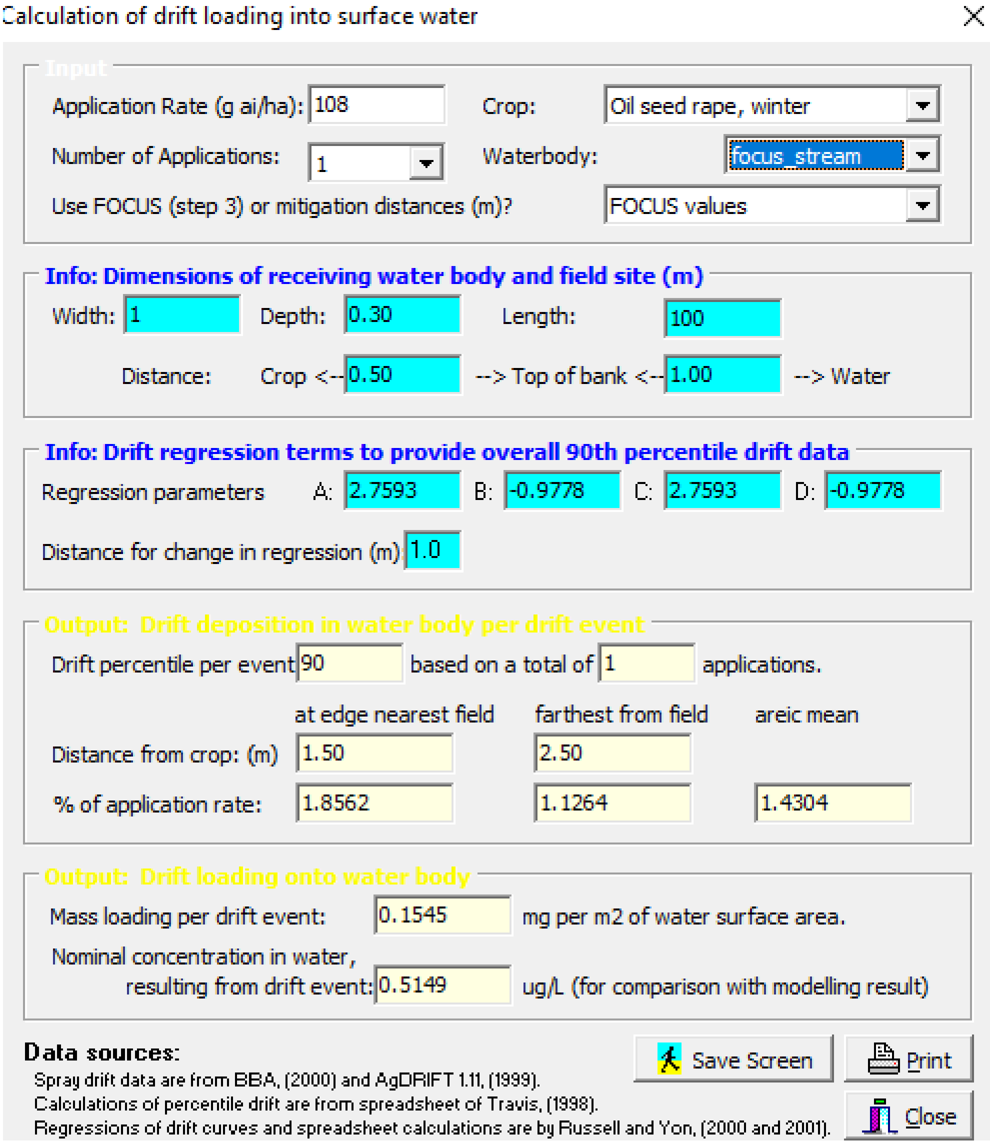
Appendix 2 Detailed evaluation of the new Annex II studies

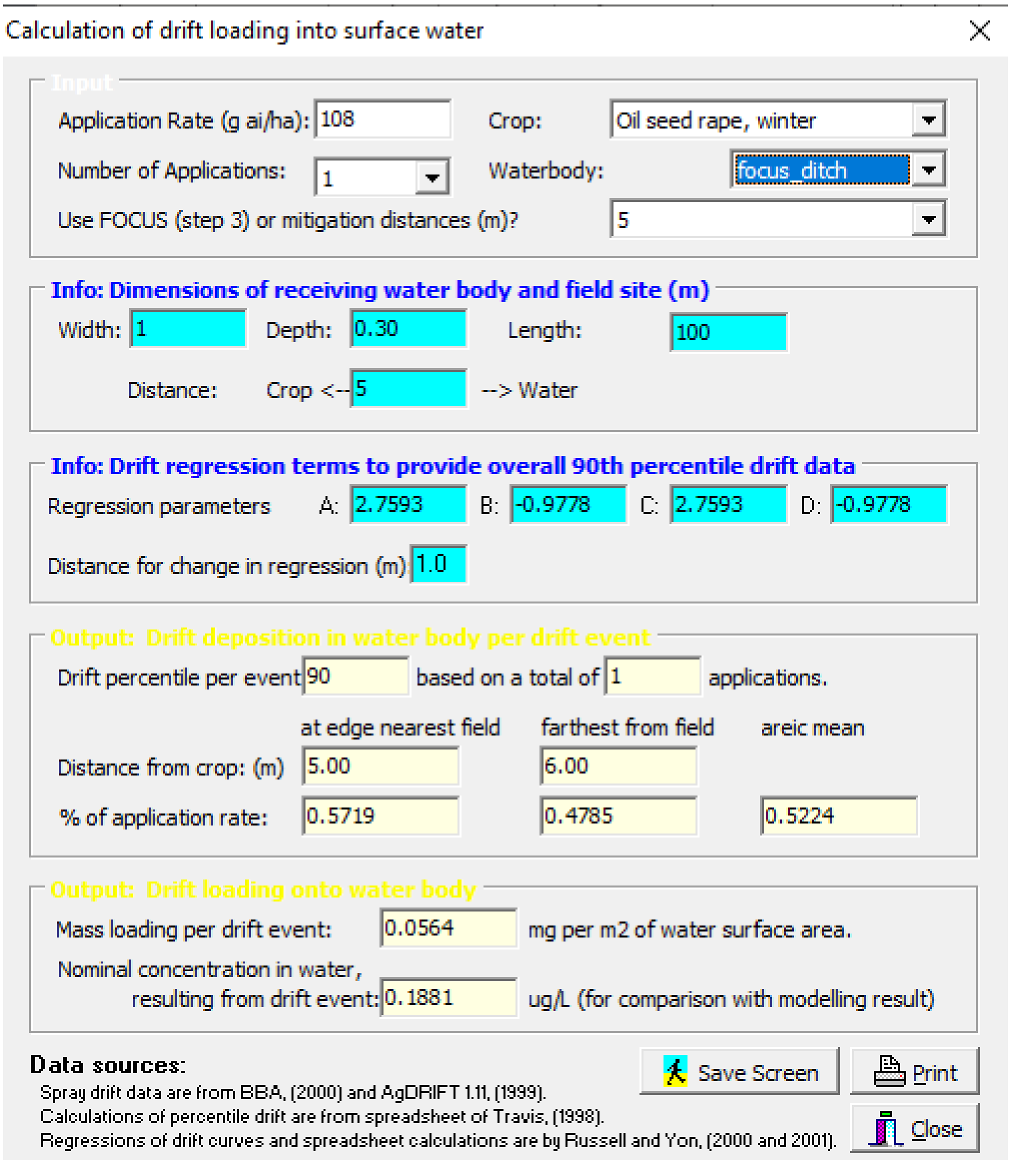
Appendix 3 Additional information provided by the applicant (e.g. detailed modelling data)

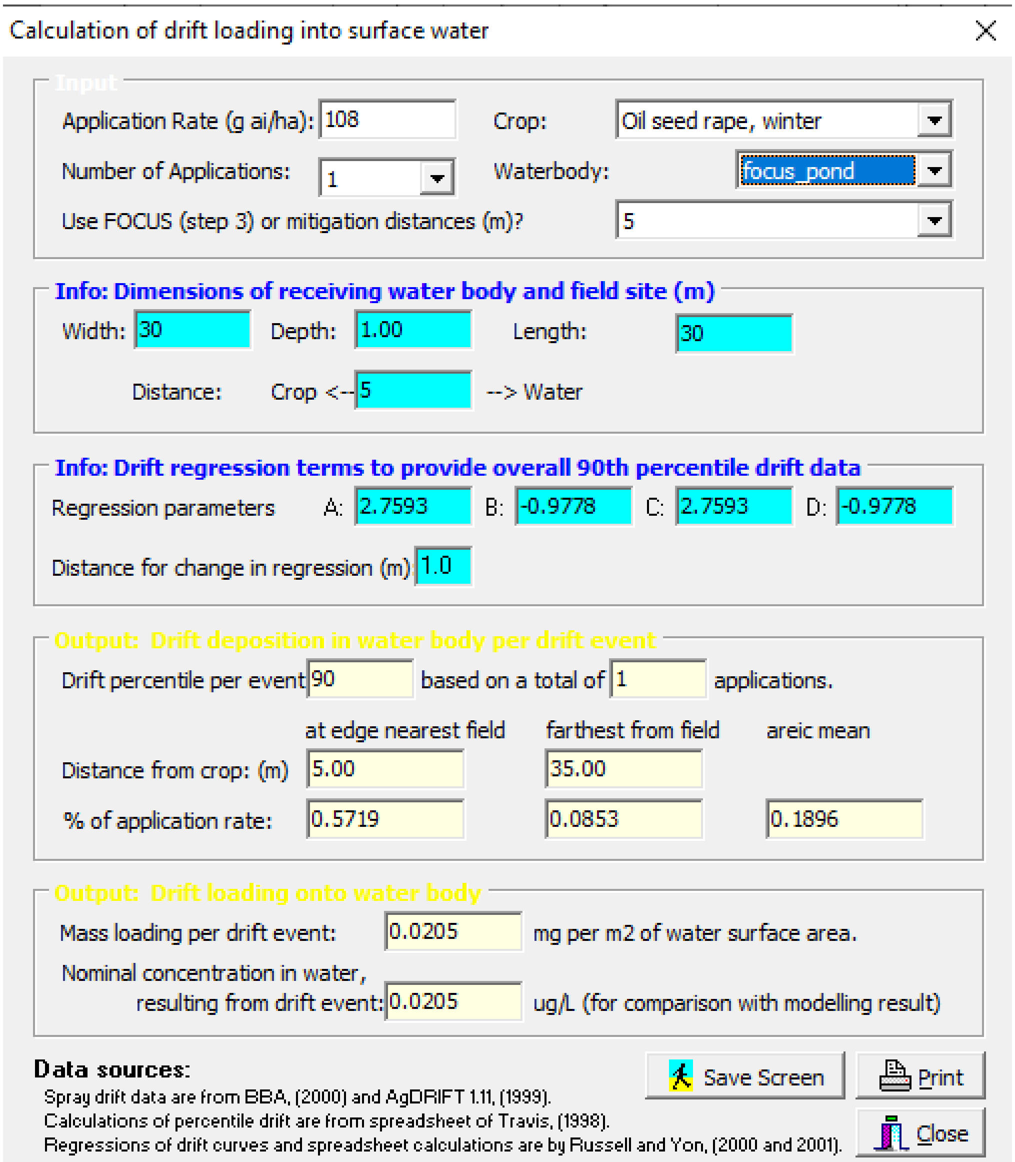
PECsw for formulation

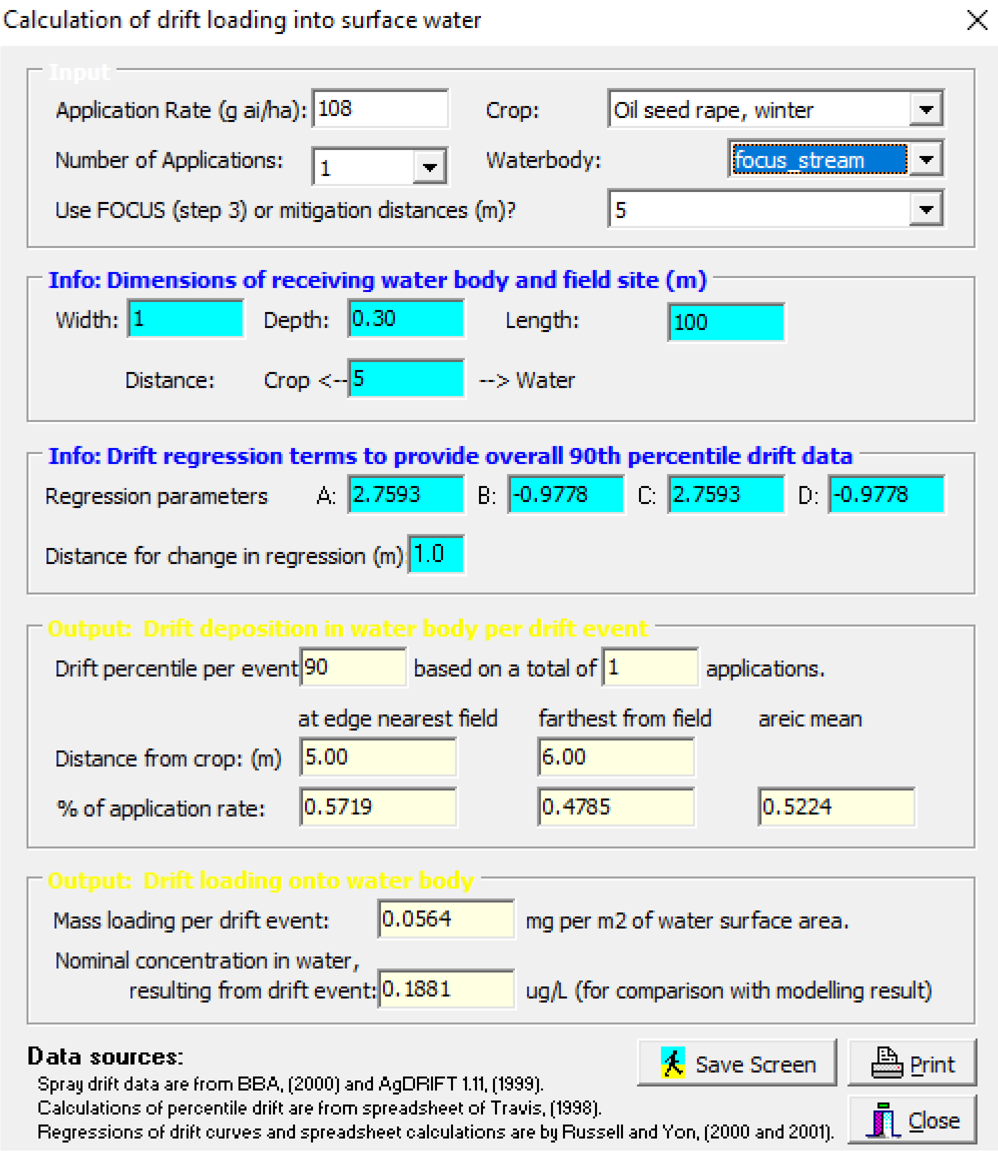



Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, winter
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 0.50 --> Top of bank <-- 3.00 --> 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) 3.50 33.50
% of application rate: 0.8106 0.0890 0.2191
Output: Drift loading onto water body
Mass loading per drift event: 0.0237 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0237 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close

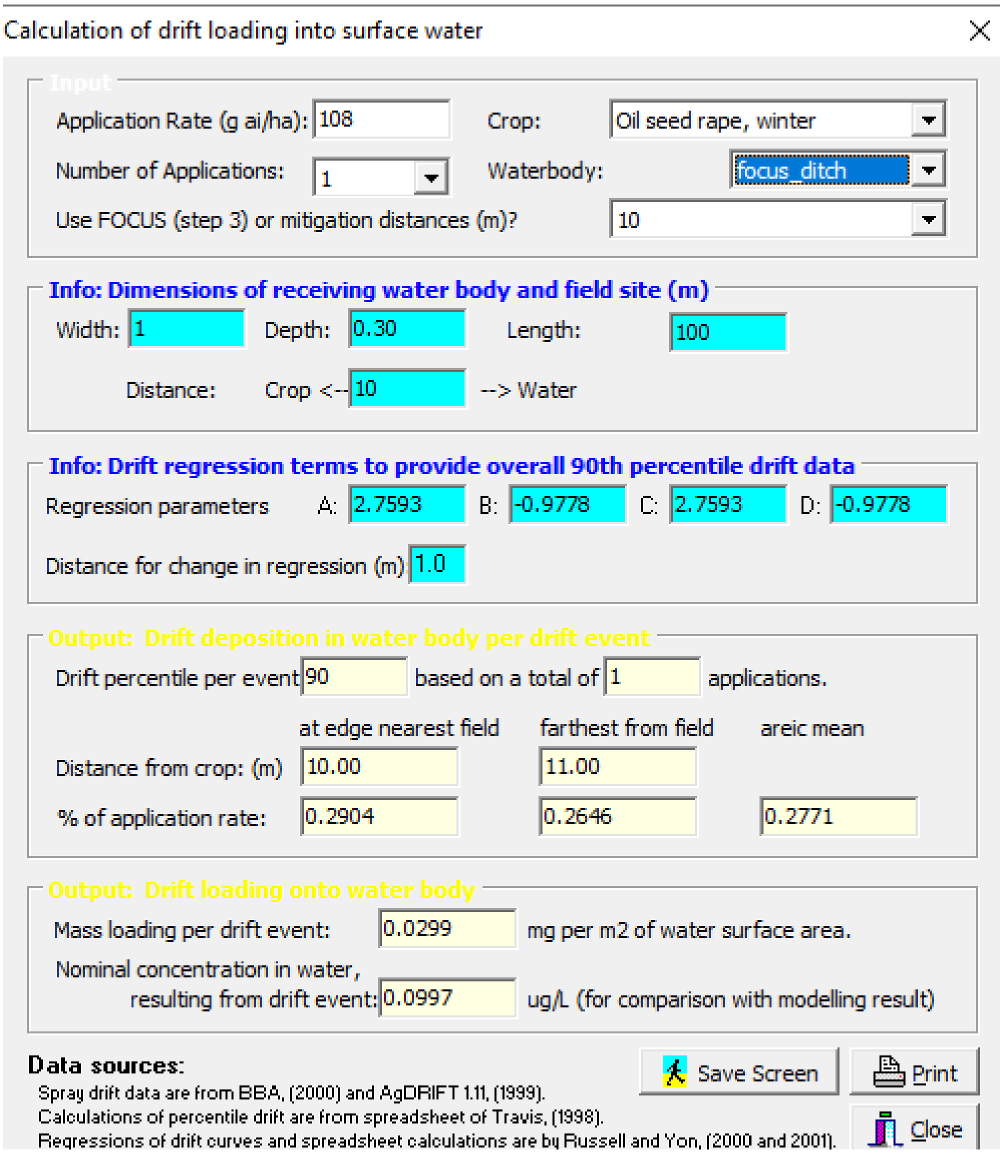

Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 0.50 --> Top of bank <-- 1.00 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 2.7593 B: -0.9778 C: 2.7593 D: -0.9778
Distance for change in regression (m) 1.0
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 1.50 2.50
% of application rate: 1.8562 1.1264 1.4304
Output: Drift loading onto water body
Mass loading per drift event: 0.1545 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.5149 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0564 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.1881 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0205 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0205 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close



Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0564 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.1881 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0299 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0997 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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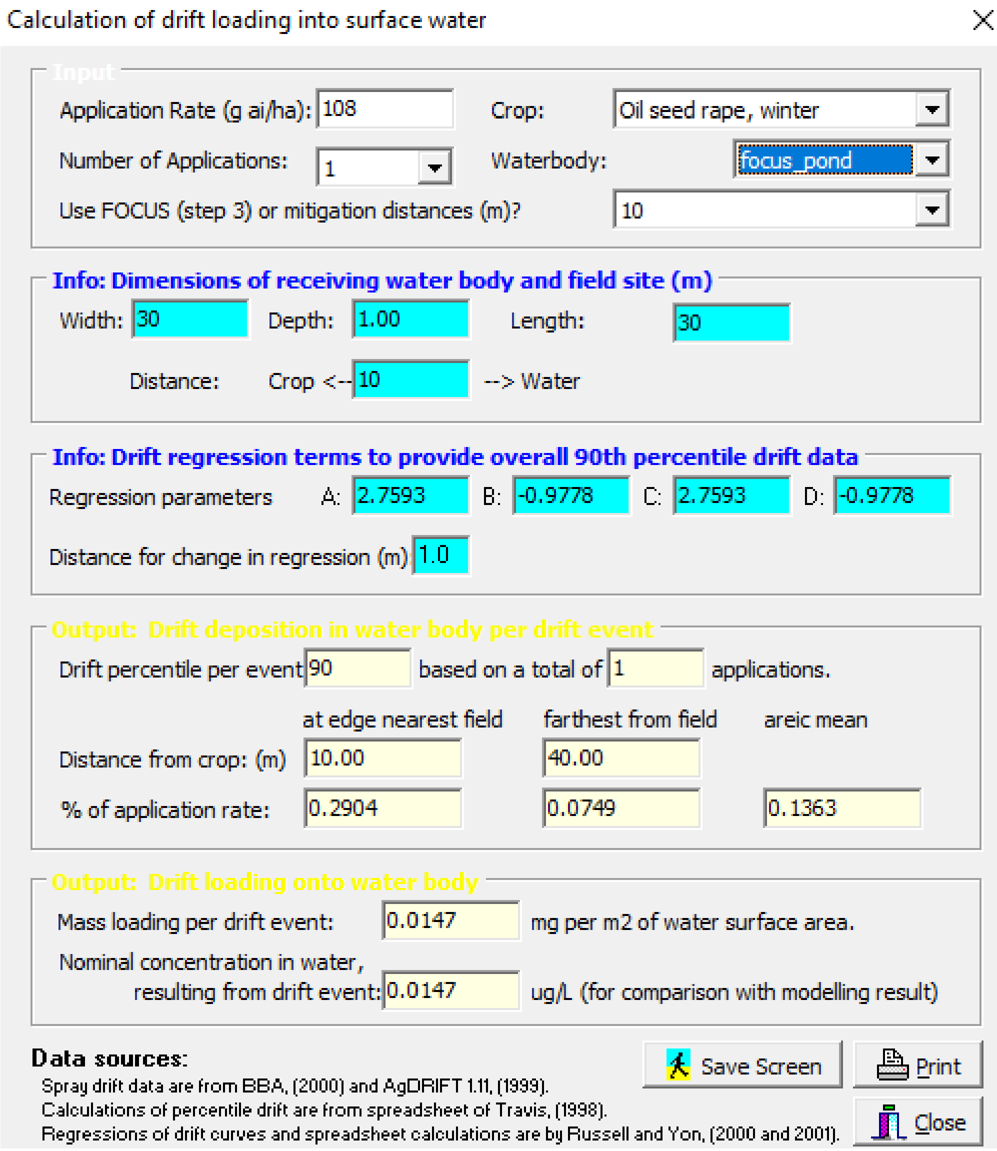
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0147 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0147 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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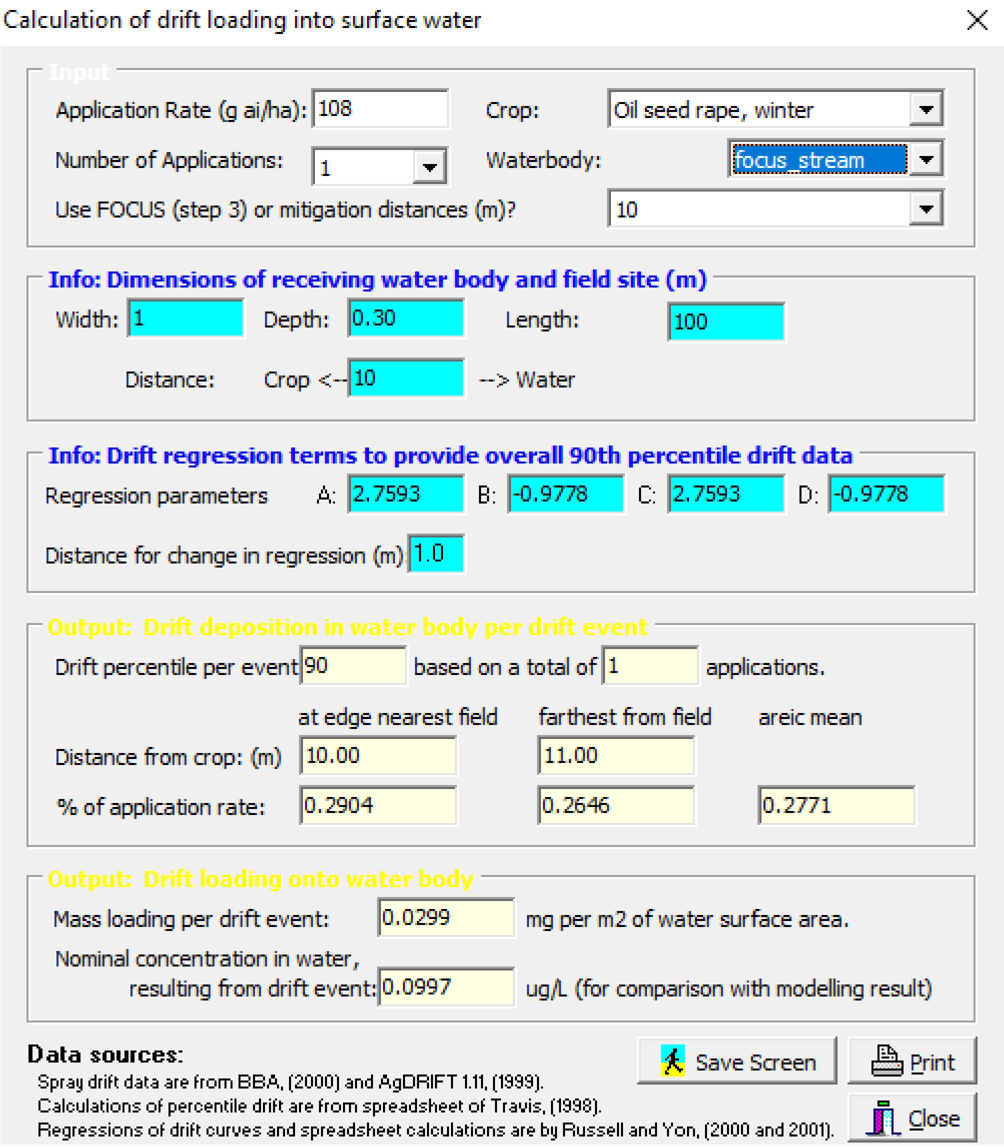
Close


Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0299 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0997 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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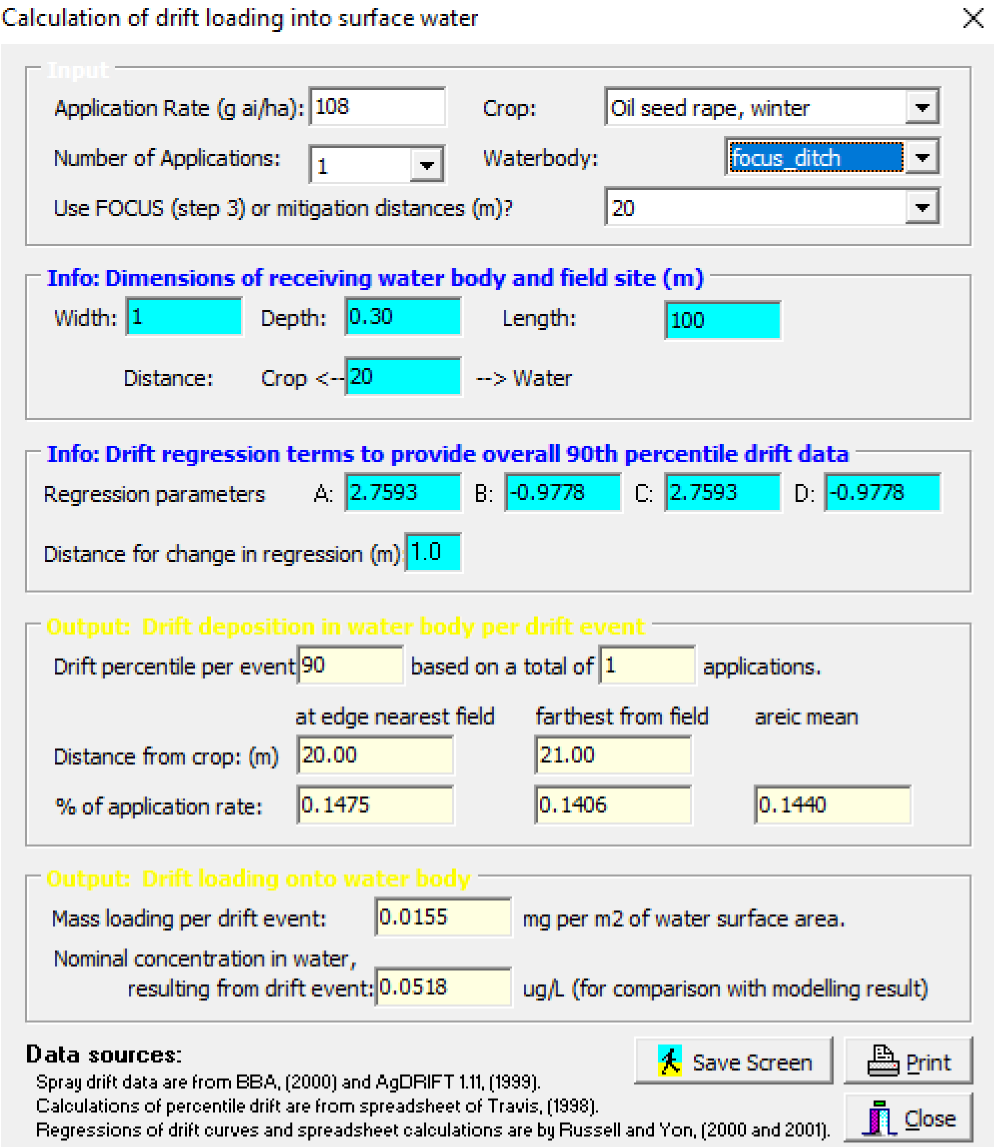
Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0155 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0518 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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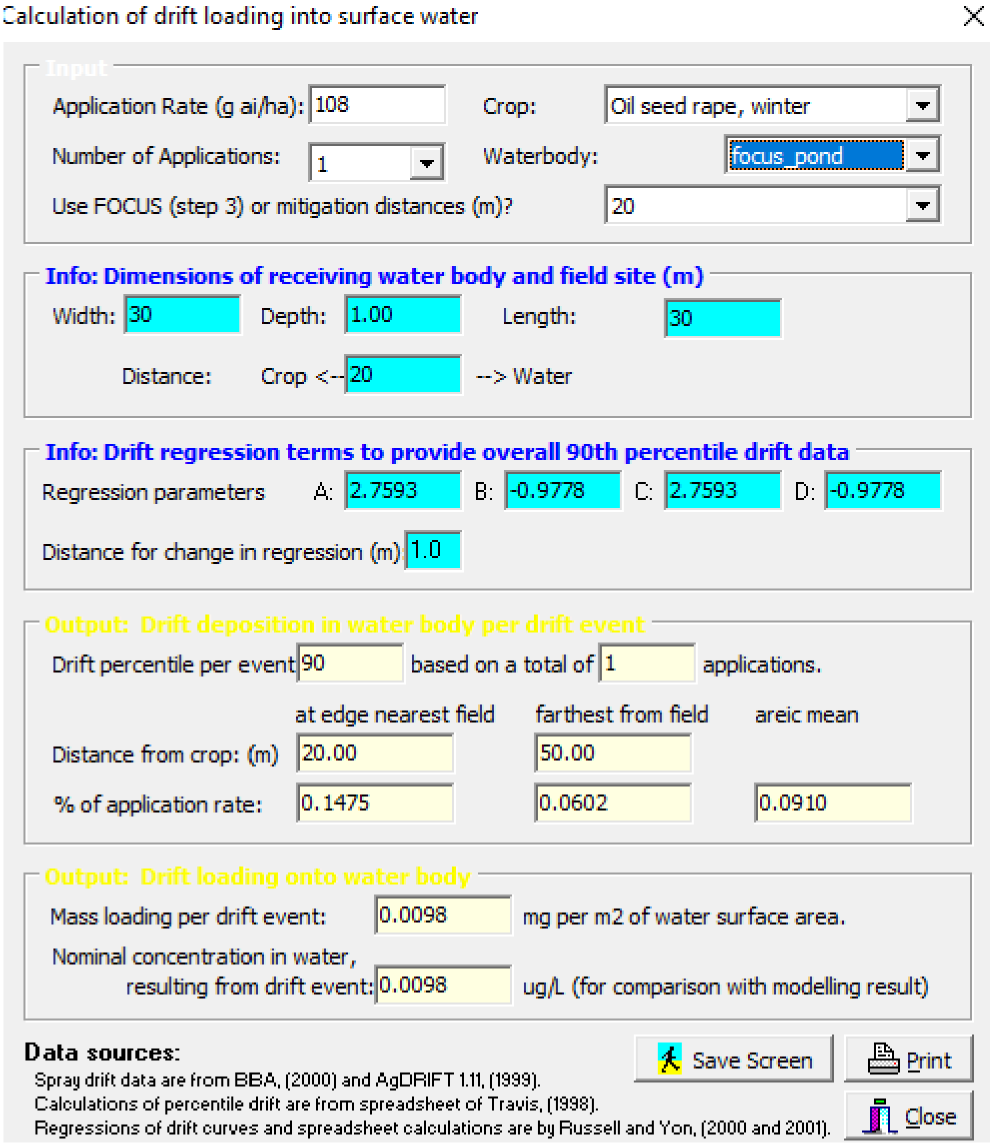
Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 108
Crop: Oil seed rape, 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: 0.0098 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0098 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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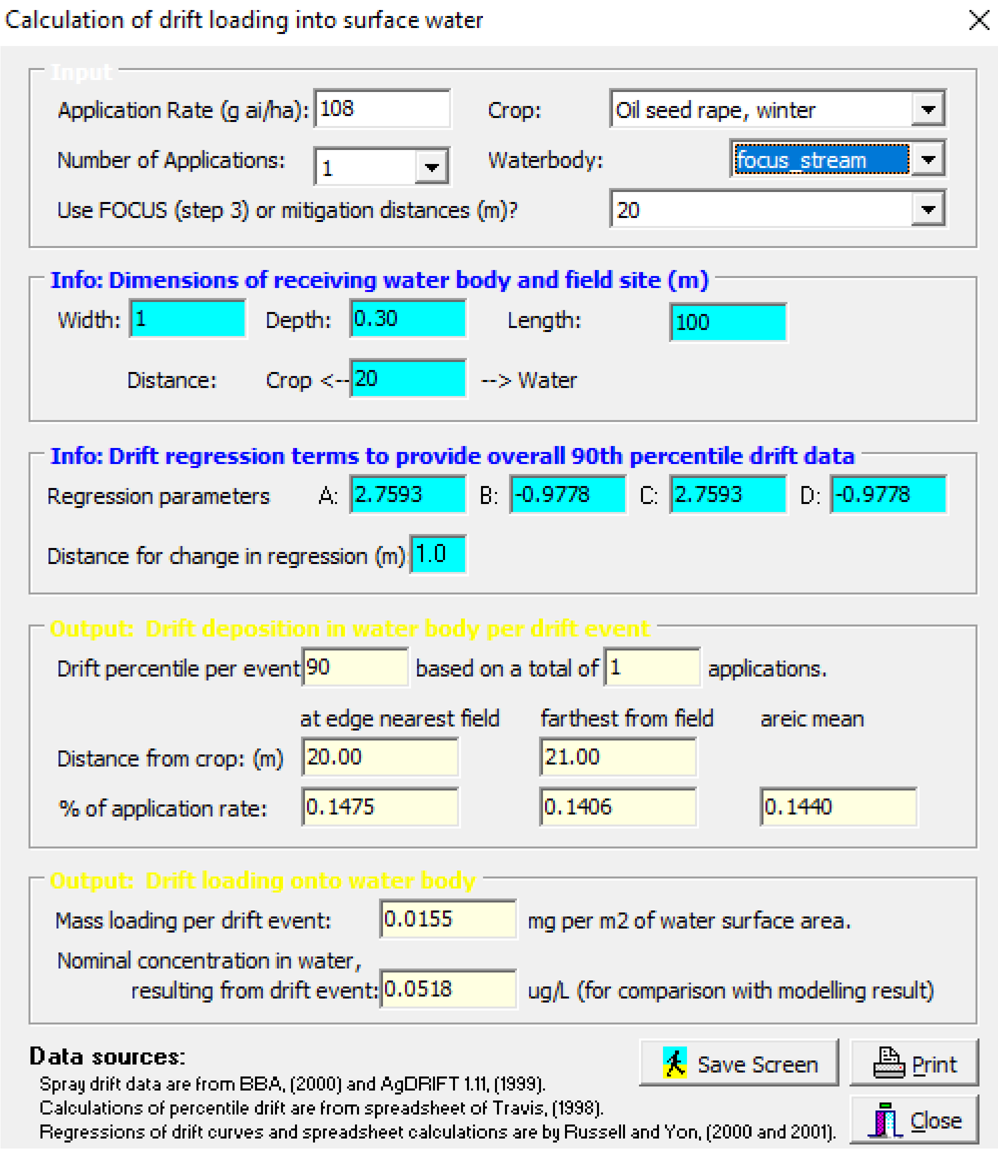
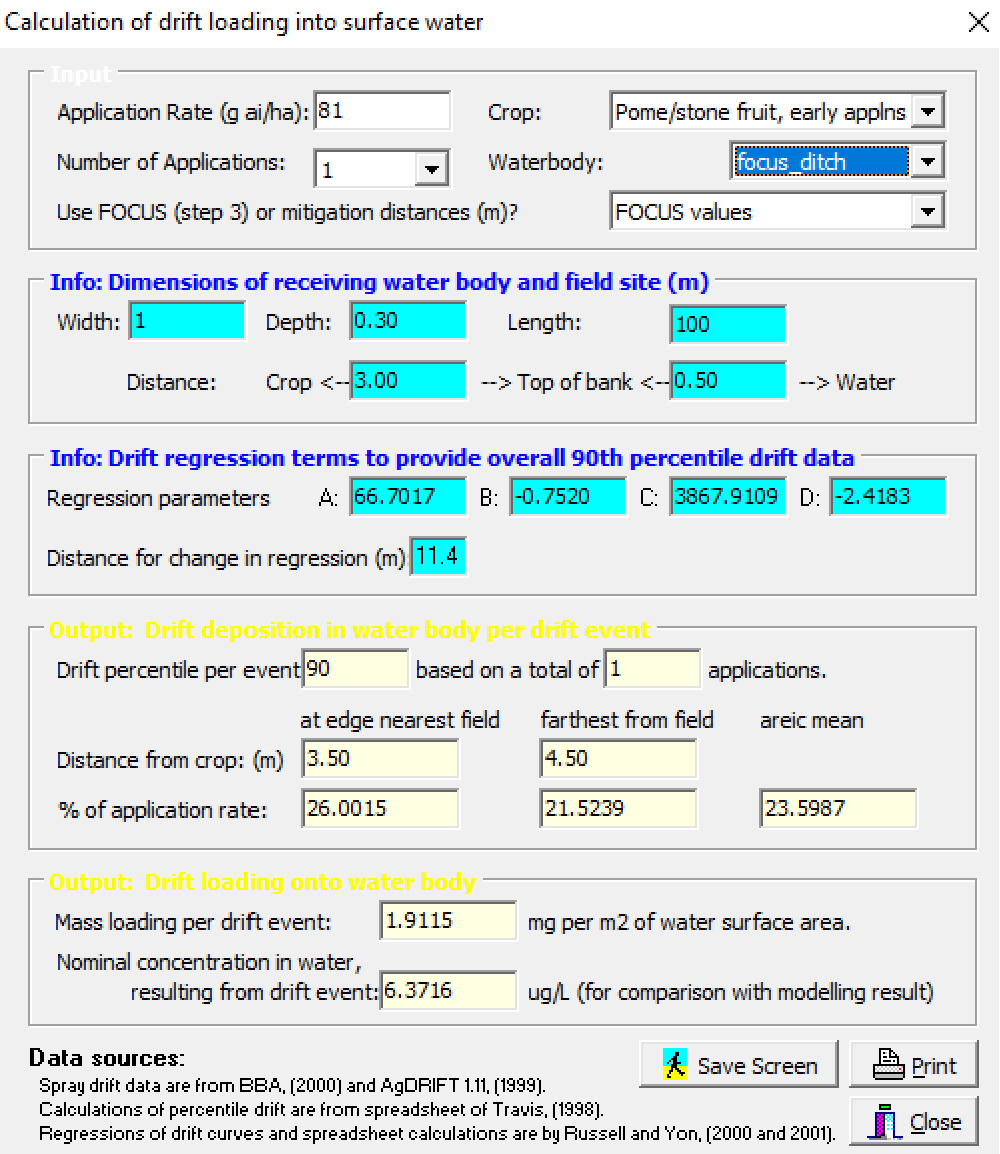
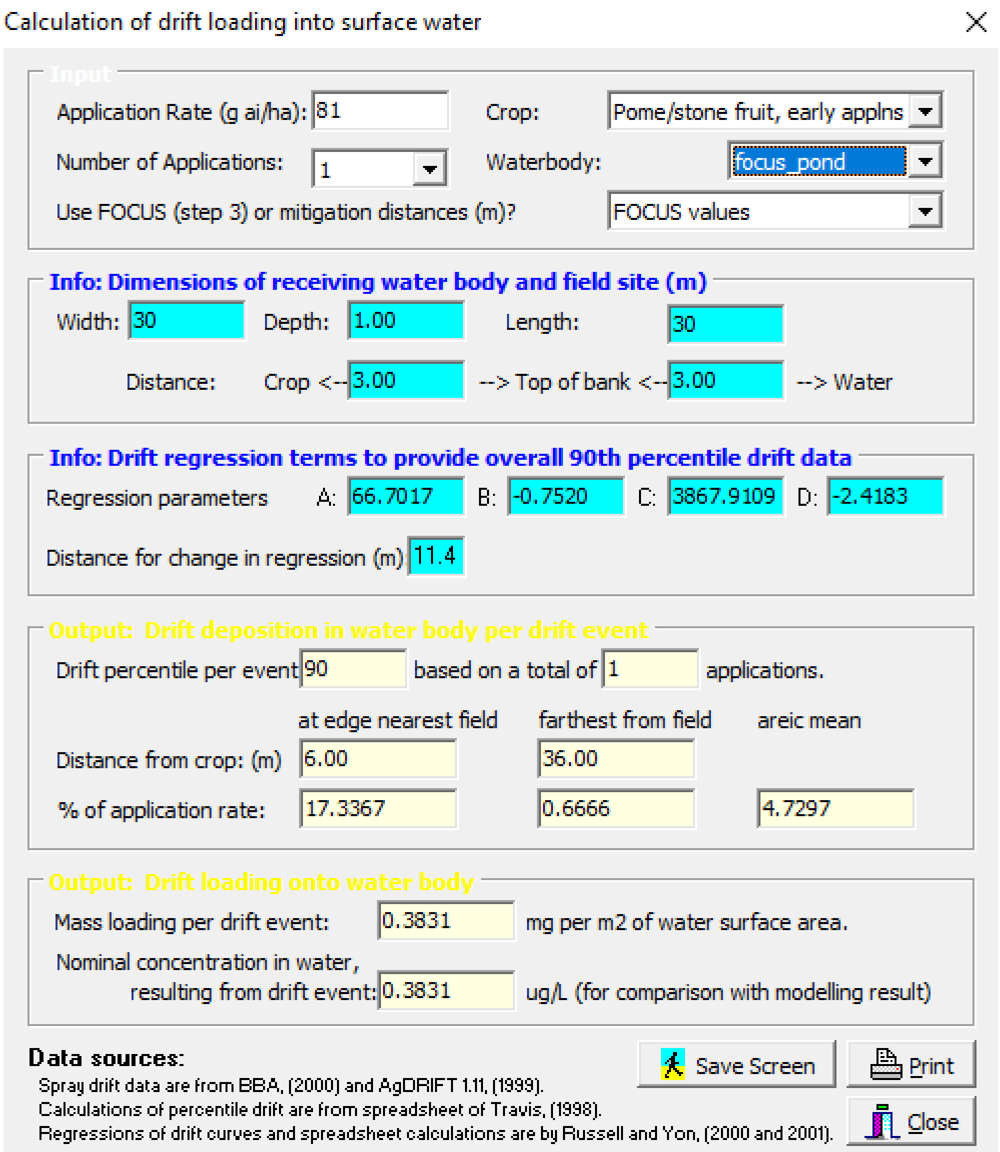

Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 108
Crop: Oil seed rape, winter
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 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: 0.0155 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0518 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 3.00 --> Top of bank <-- 0.50 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 3.50 4.50
% of application rate: 26.0015 21.5239 23.5987
Output: Drift loading onto water body
Mass loading per drift event: 1.9115 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 6.3716 ug/L (for comparison with modelling result)
Data sources:
Spray drift data are from BBA, (2000) and AgDRIFT 1.11, (1999).
Calculations of percentile drift are from spreadsheet of Travis, (1998).
Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
Number of Applications: 1
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 30 Depth: 1.00 Length: 30
Distance: Crop <-- 3.00 --> Top of bank <-- 3.00 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 6.00 36.00
% of application rate: 17.3367 0.6666 4.7297
Output: Drift loading onto water body
Mass loading per drift event: 0.3831 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.3831 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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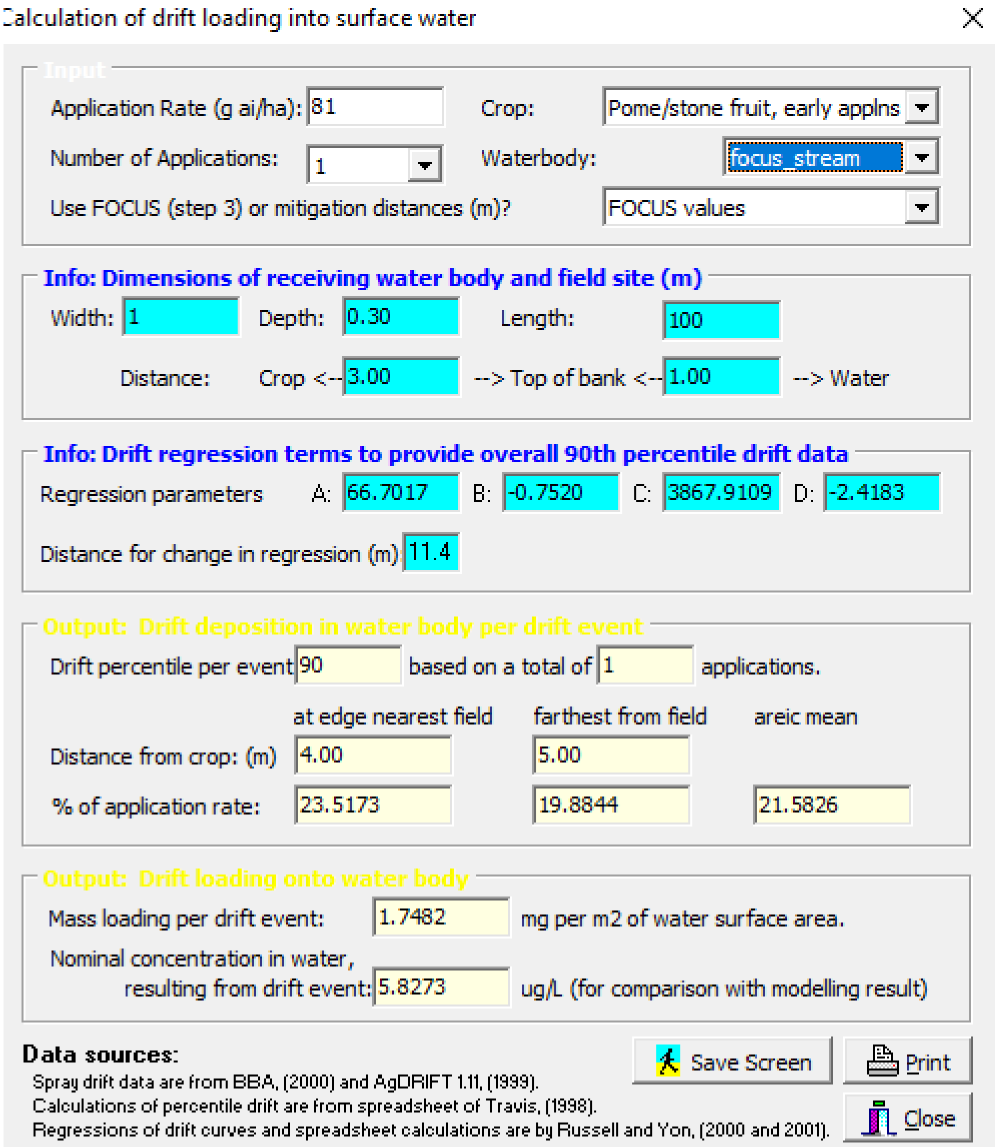
Close


Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
Number of Applications: 1
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values

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

Width: 1 Depth: 0.30 Length: 100
Distance: Crop <-- 3.00 --> Top of bank <-- 1.00 --> Water

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

Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	4.00	5.00	
% of application rate:	23.5173	19.8844	21.5826

Output: Drift loading onto water body

Mass loading per drift event: 1.7482 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.8273 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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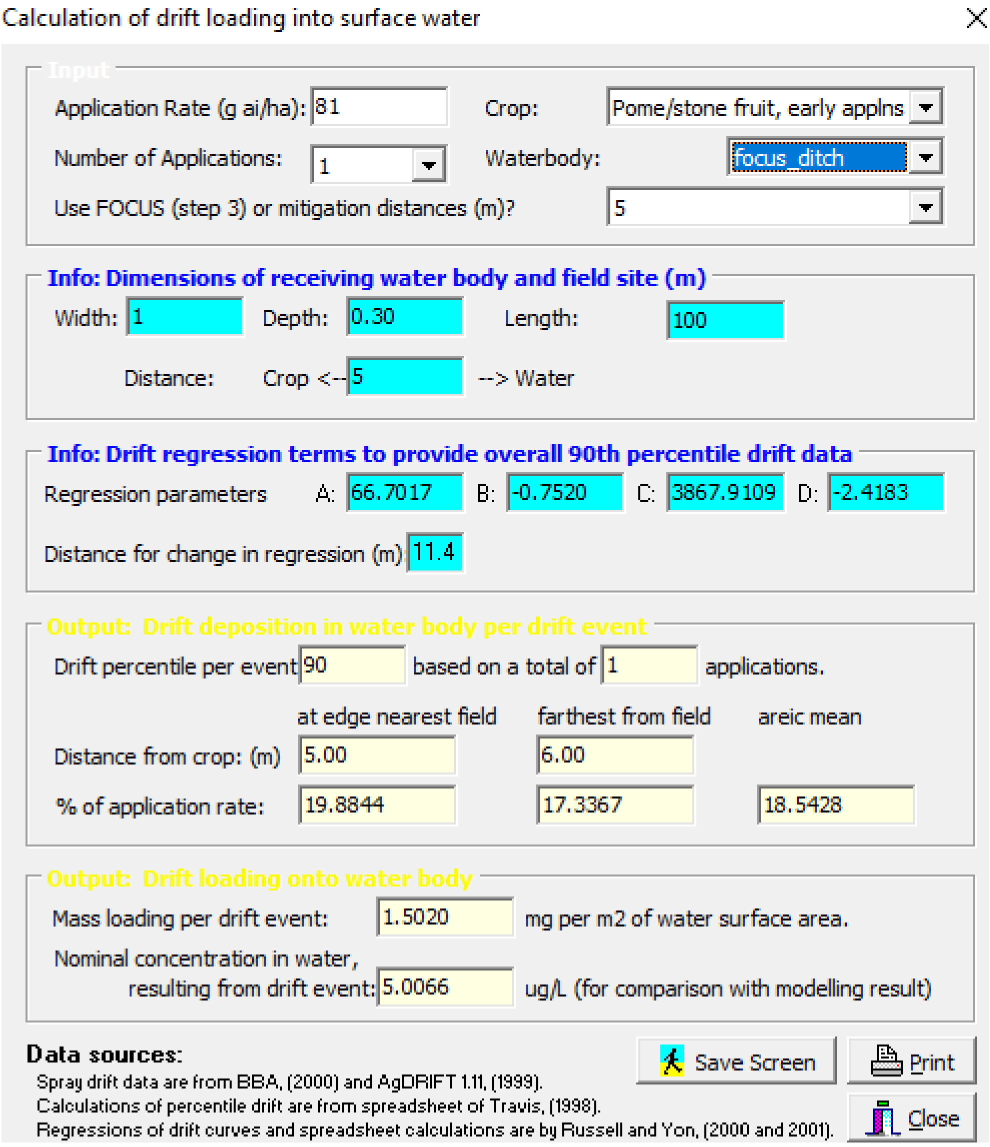

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	5.00	6.00	
% of application rate:	19.8844	17.3367	18.5428

Output: Drift loading onto water body

Mass loading per drift event: 1.5020 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.0066 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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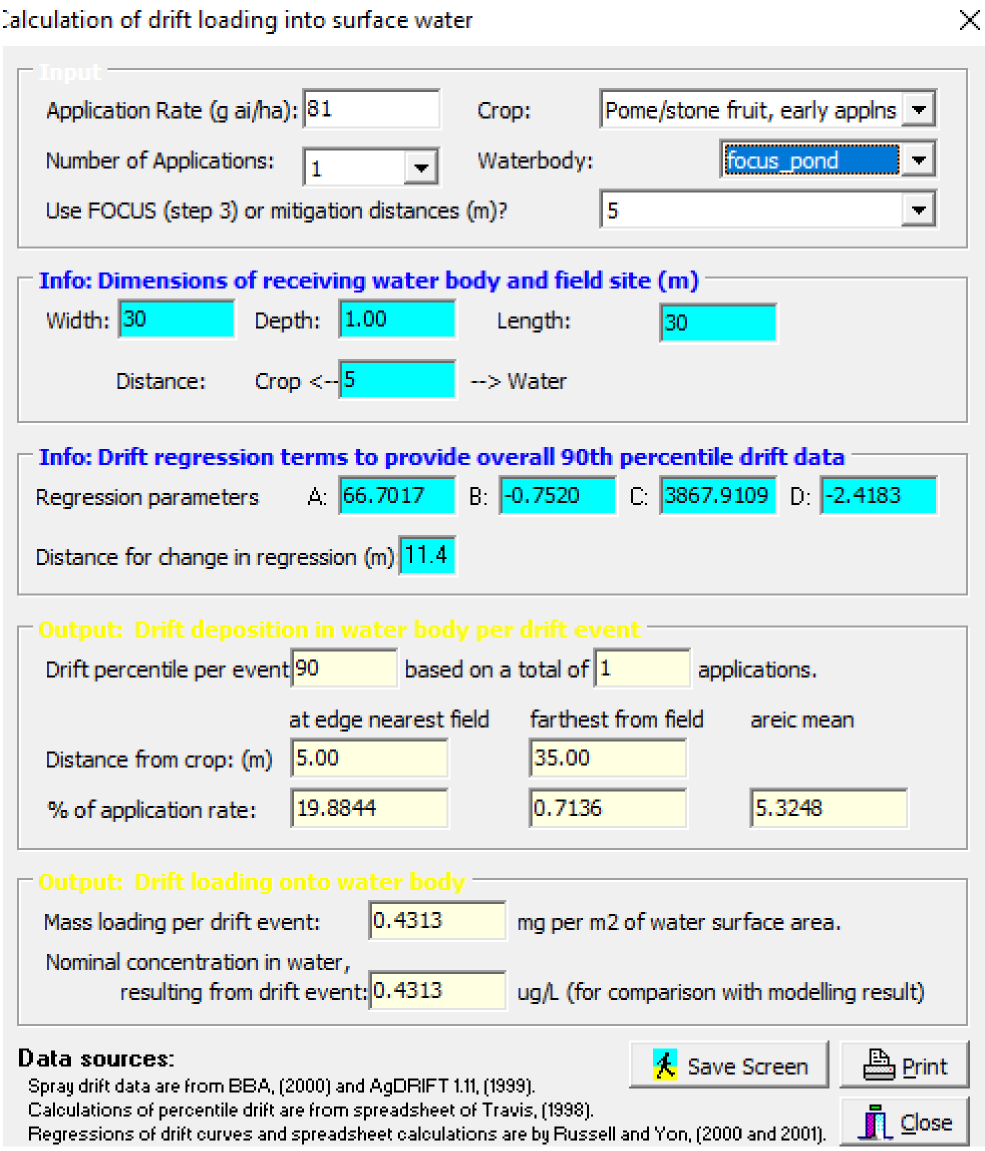

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81 Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

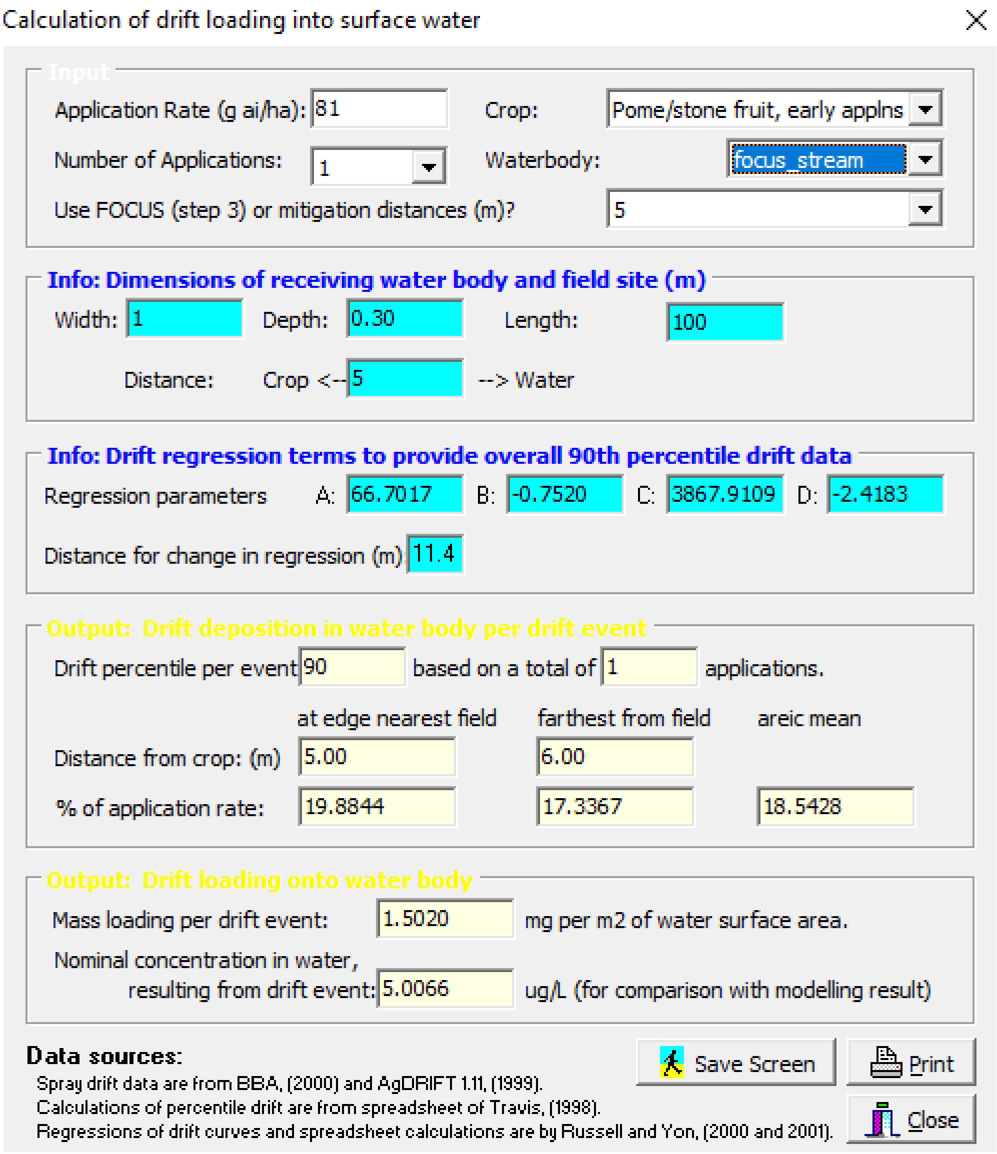
	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	5.00	35.00	
% of application rate:	19.8844	0.7136	5.3248

Output: Drift loading onto water body

Mass loading per drift event: 0.4313 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.4313 ug/L (for comparison with modelling result)

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

Save Screen Print Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 19.8844 17.3367 18.5428
Output: Drift loading onto water body
Mass loading per drift event: 1.5020 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.0066 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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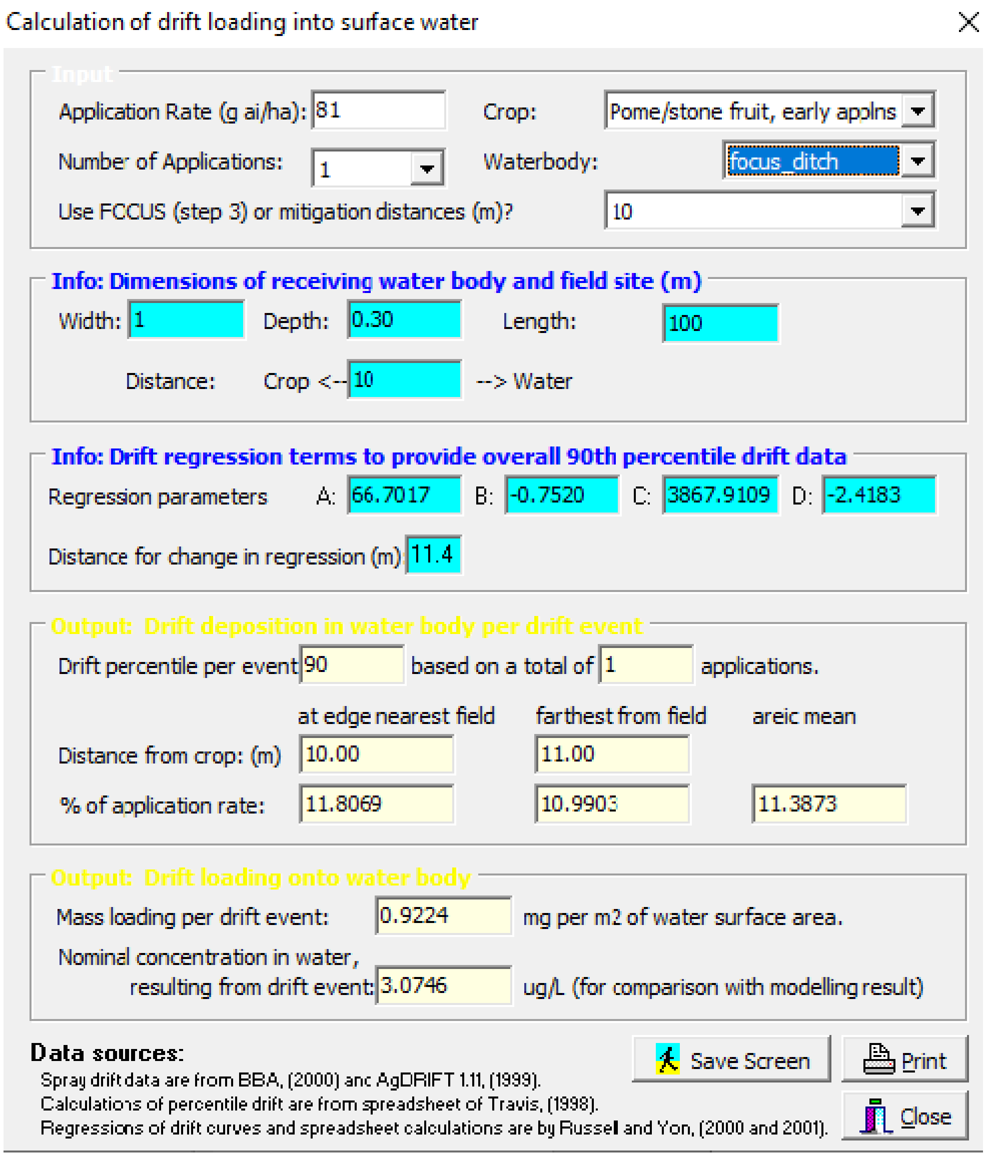
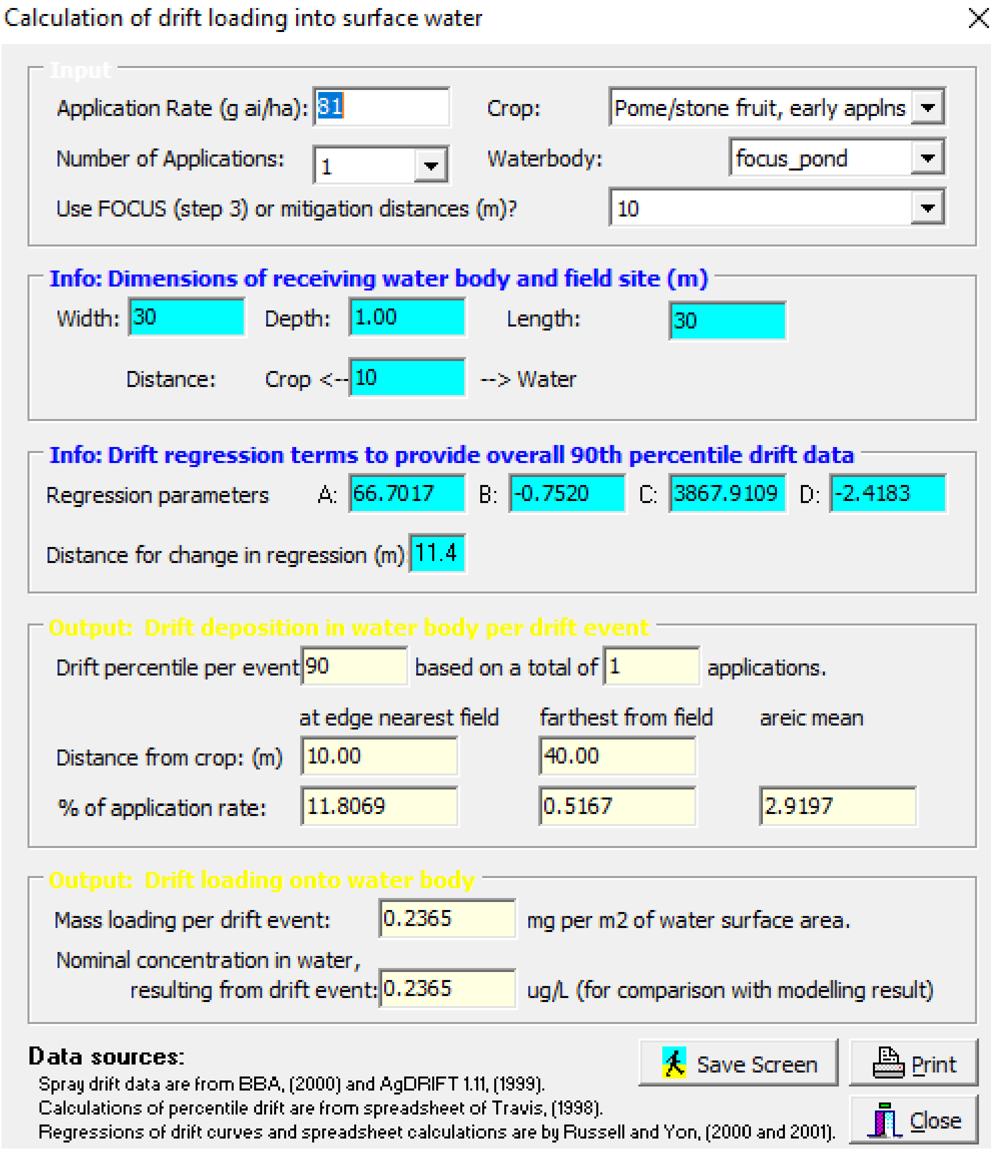

Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 10
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 10 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 11.00
% of application rate: 11.8069 10.9903 11.3873
Output: Drift loading onto water body
Mass loading per drift event: 0.9224 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 3.0746 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 Russel and Yon, (2000 and 2001).
Save Screen
Print
Close


Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4
Output: Drift deposition in water body per drift event
Drift percentile per event 90 based on a total of 1 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 40.00
% of application rate: 11.8069 0.5167 2.9197
Output: Drift loading onto water body
Mass loading per drift event: 0.2365 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.2365 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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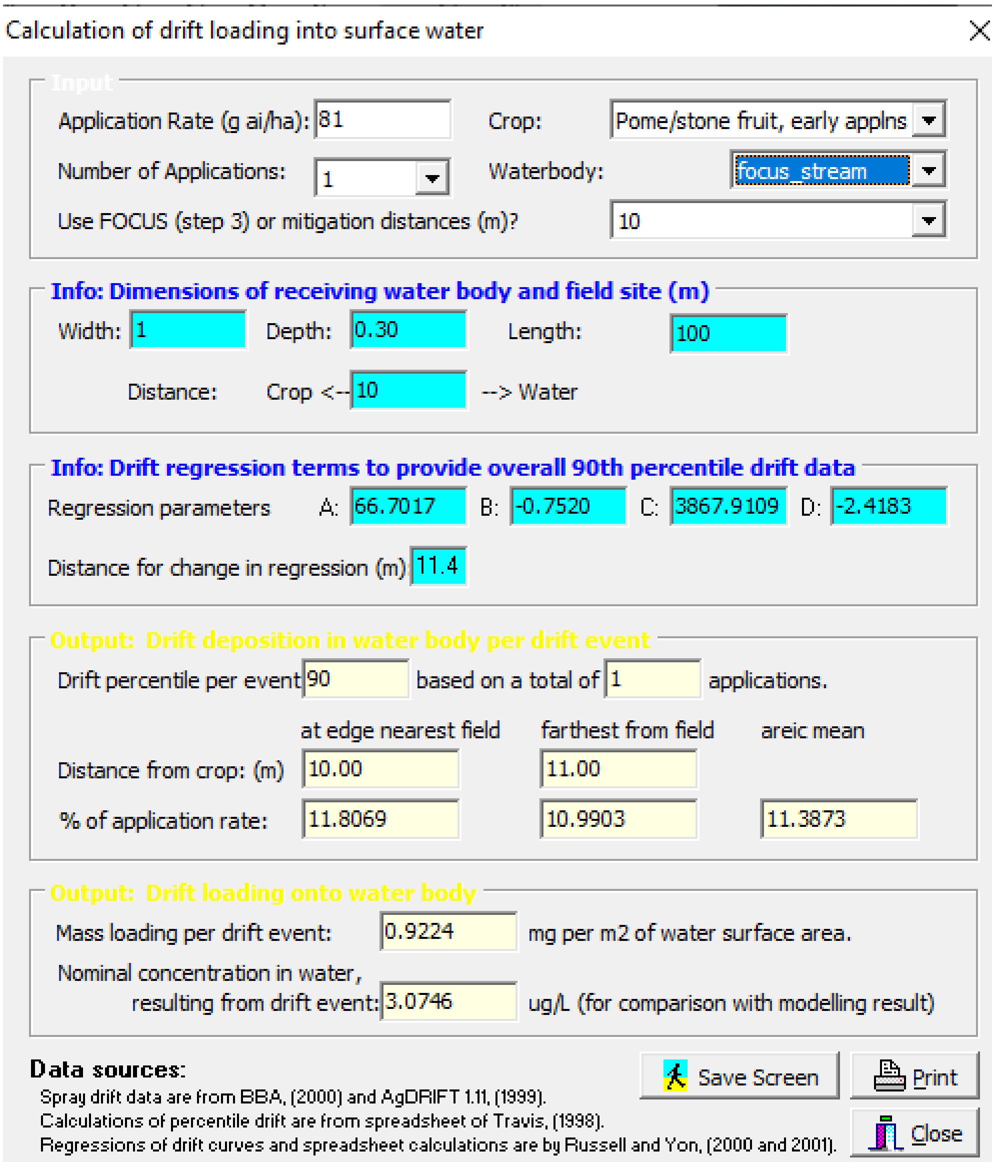
Close



Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	11.00	
% of application rate:	11.8069	10.9903	11.3873

Output: Drift loading onto water body

Mass loading per drift event: 0.9224 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 3.0746 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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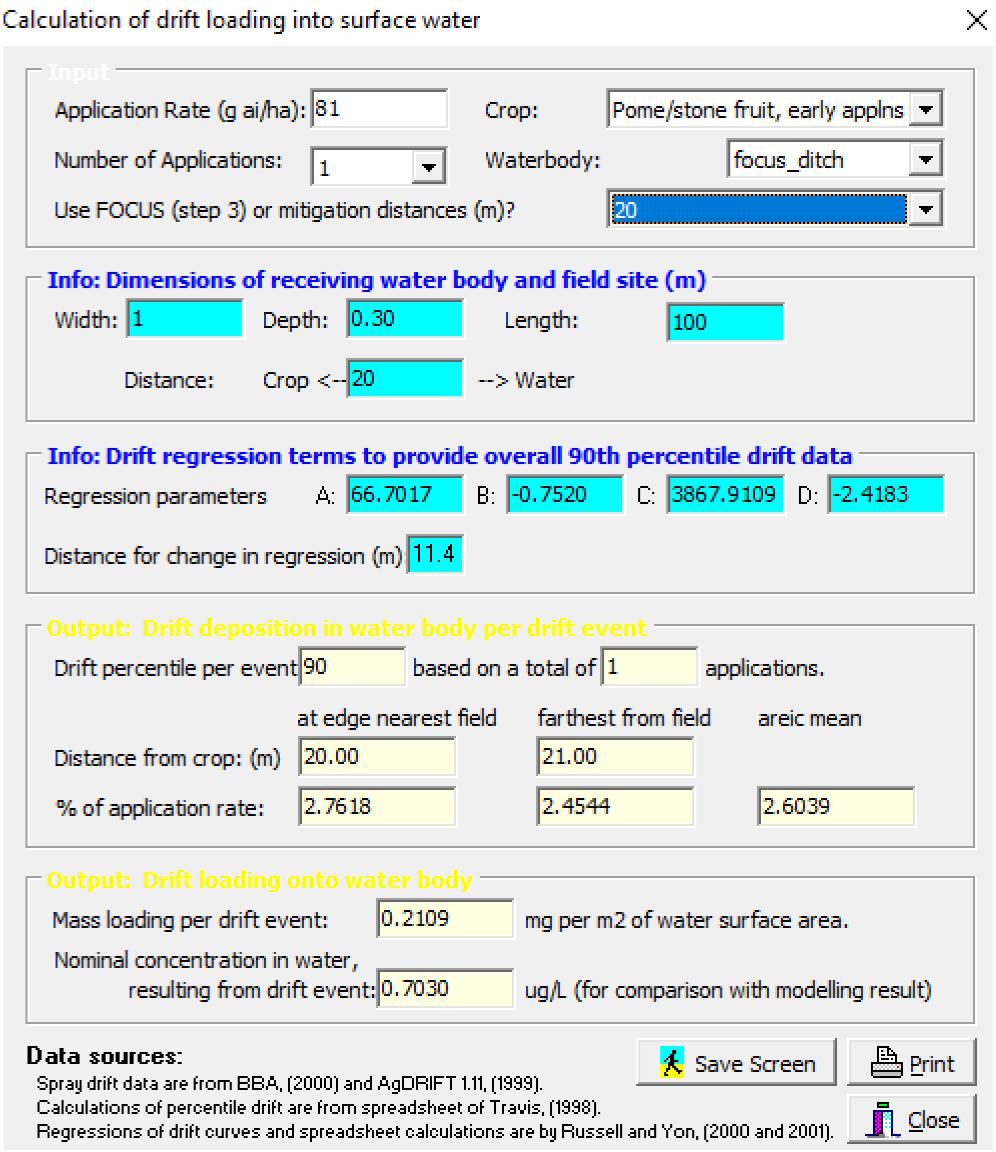

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
Number of Applications: 1
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 20

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

Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 20 --> Water

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

Regression parameters A: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

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

Output: Drift loading onto water body

Mass loading per drift event: 0.2109 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.7030 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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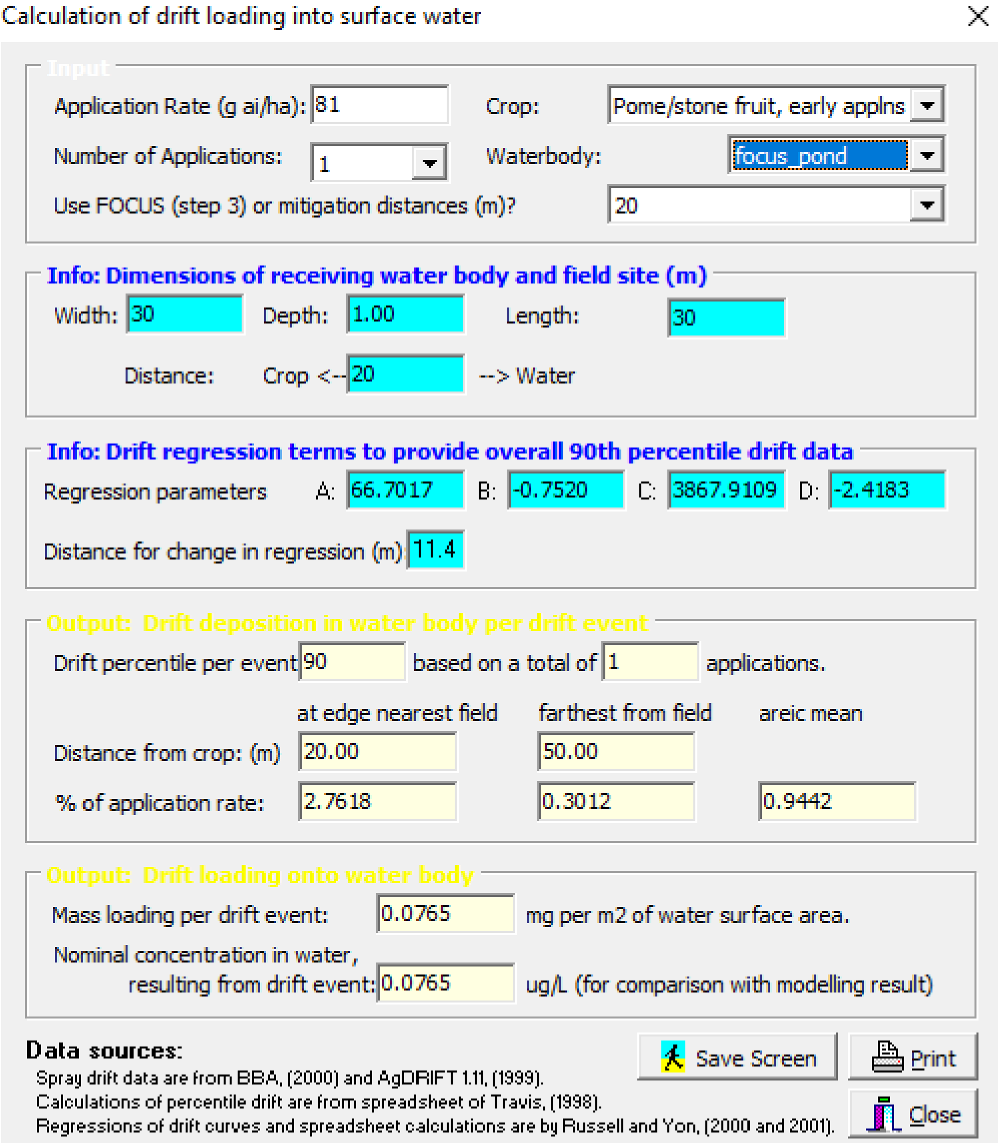

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	20.00	50.00	
% of application rate:	2.7618	0.3012	0.9442

Output: Drift loading onto water body

Mass loading per drift event: 0.0765 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0765 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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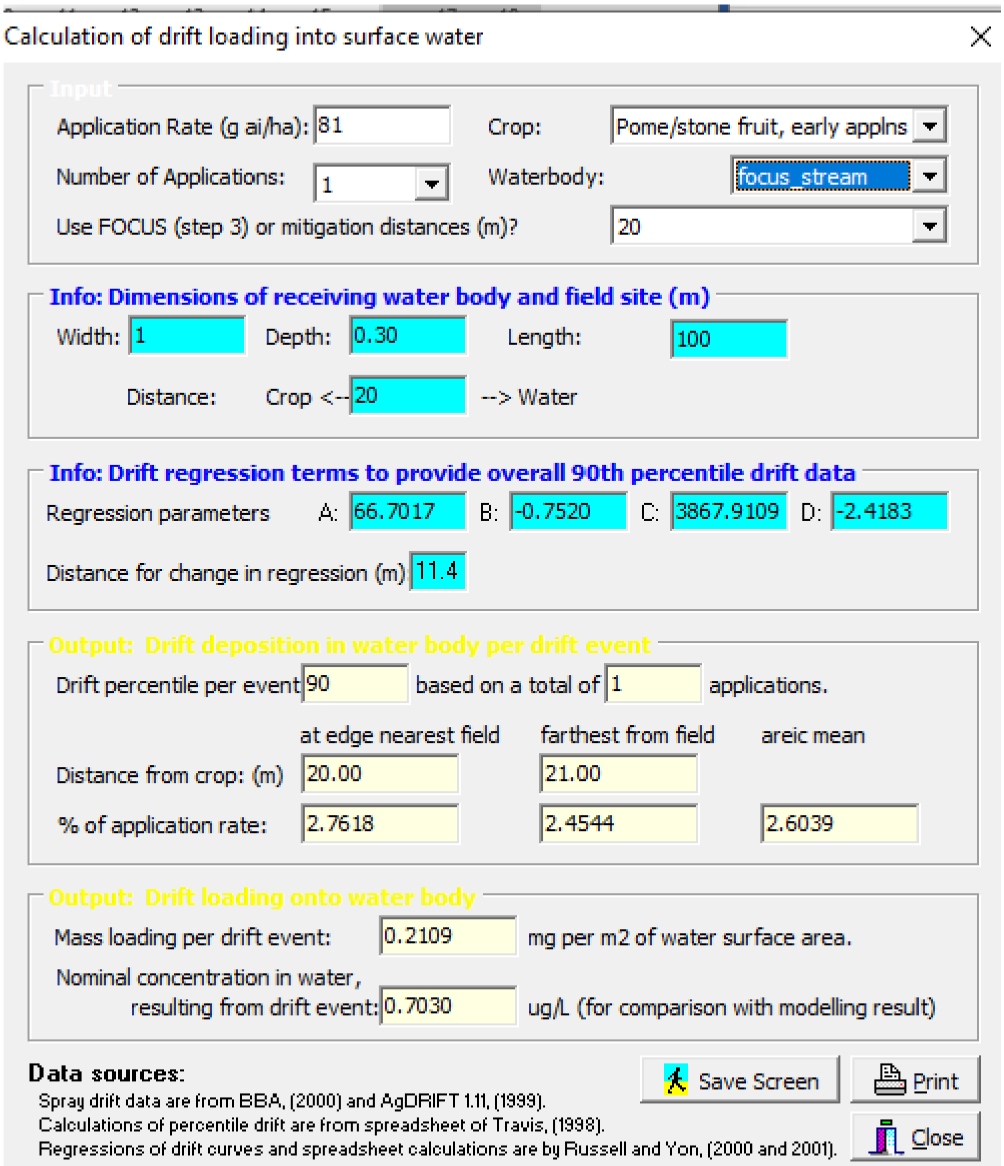

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 81
Crop: Pome/stone fruit, early applns
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: 66.7017 B: -0.7520 C: 3867.9109 D: -2.4183
Distance for change in regression (m) 11.4

Output: Drift deposition in water body per drift event

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

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

Output: Drift loading onto water body

Mass loading per drift event: 0.2109 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.7030 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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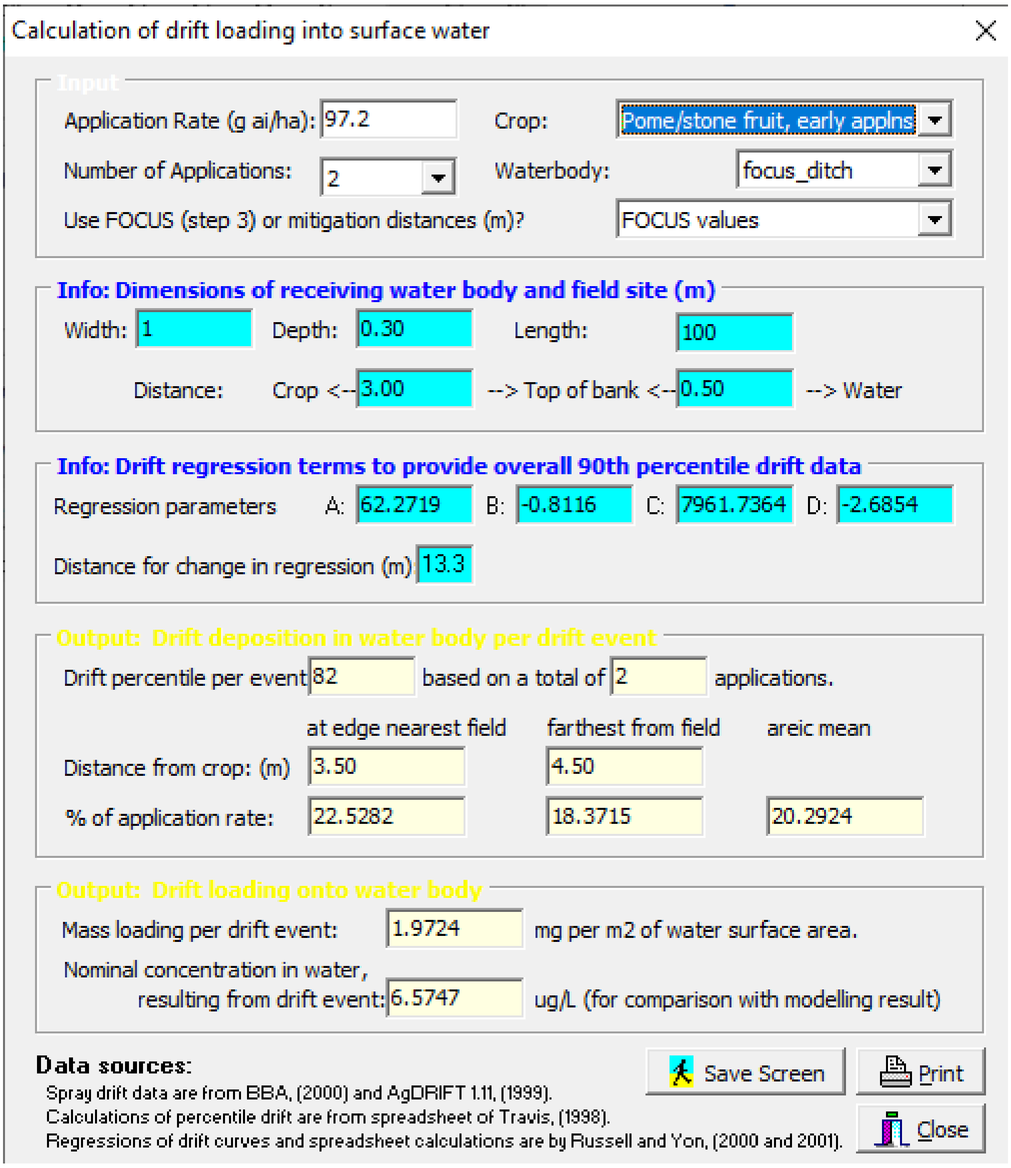
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 3.00 --> Top of bank <-- 0.50 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 3.50 4.50
% of application rate: 22.5282 18.3715 20.2924
Output: Drift loading onto water body
Mass loading per drift event: 1.9724 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 6.5747 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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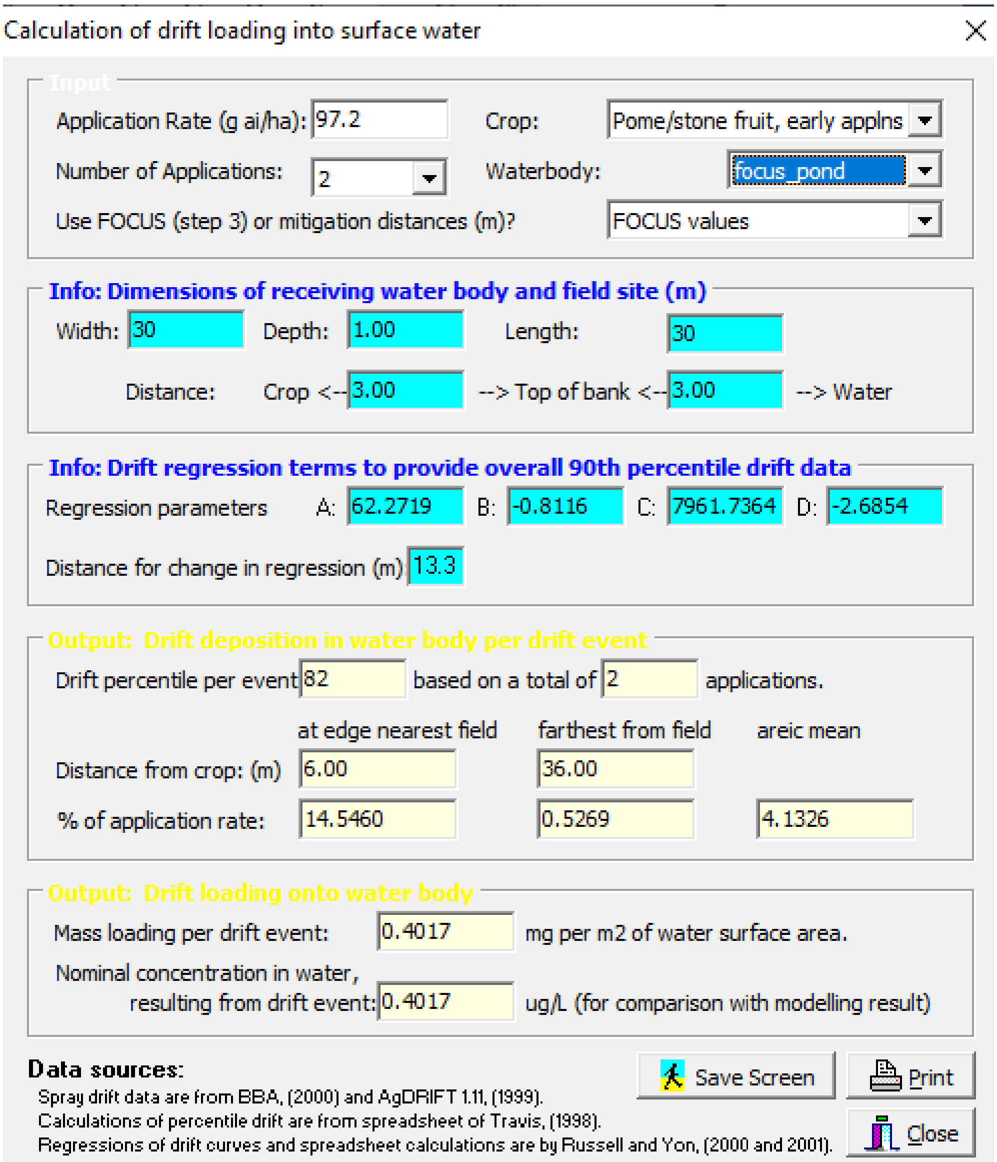
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 3.00 --> Top of bank <-- 3.00 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 6.00 36.00
% of application rate: 14.5460 0.5269 4.1326
Output: Drift loading onto water body
Mass loading per drift event: 0.4017 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.4017 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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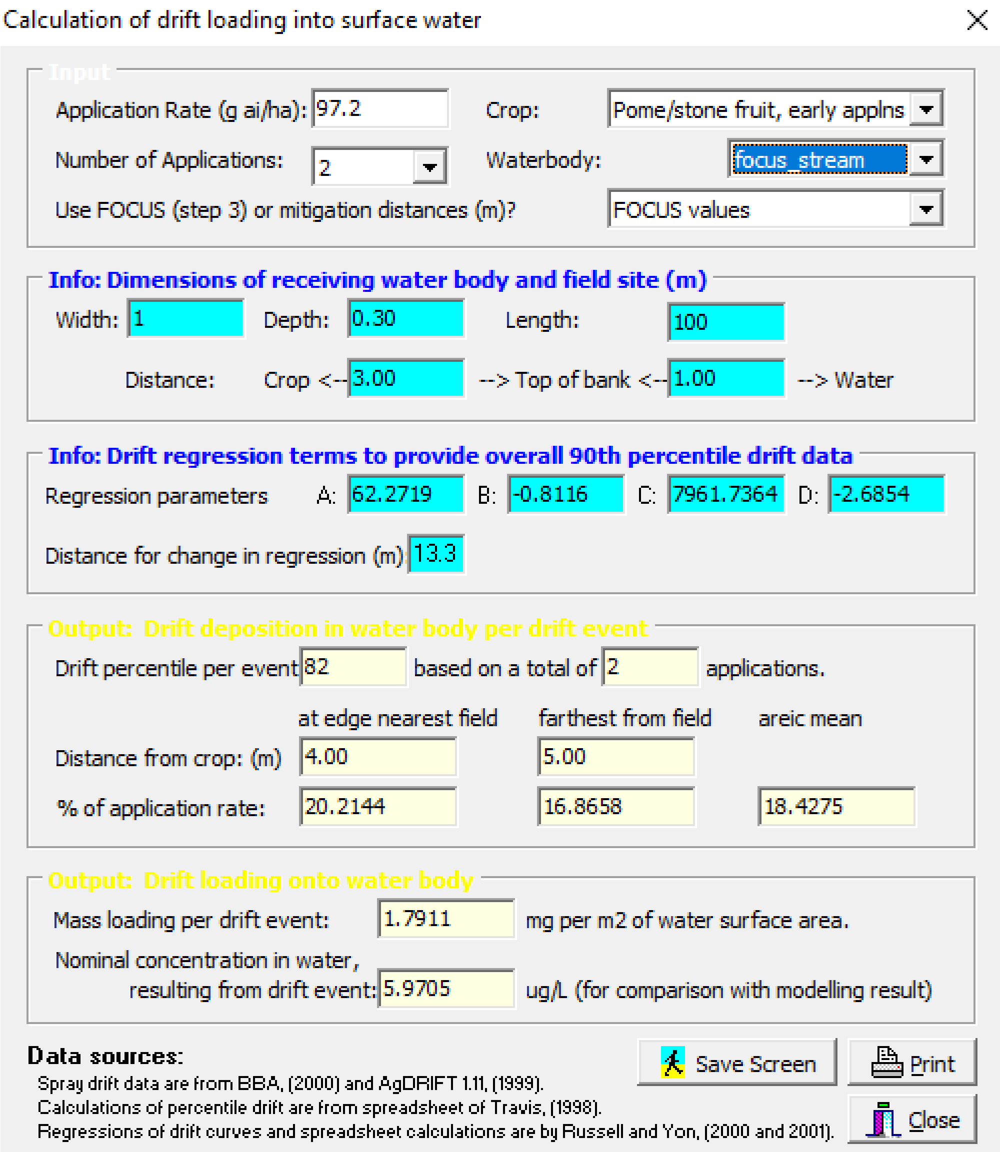
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)?
FOCUS values
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance:
Crop <-- 3.00 --> Top of bank <-- 1.00 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters
A: 62.2719
B: -0.8116
C: 7961.7364
D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 4.00 5.00
% of application rate: 20.2144 16.8658 18.4275
Output: Drift loading onto water body
Mass loading per drift event: 1.7911 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.9705 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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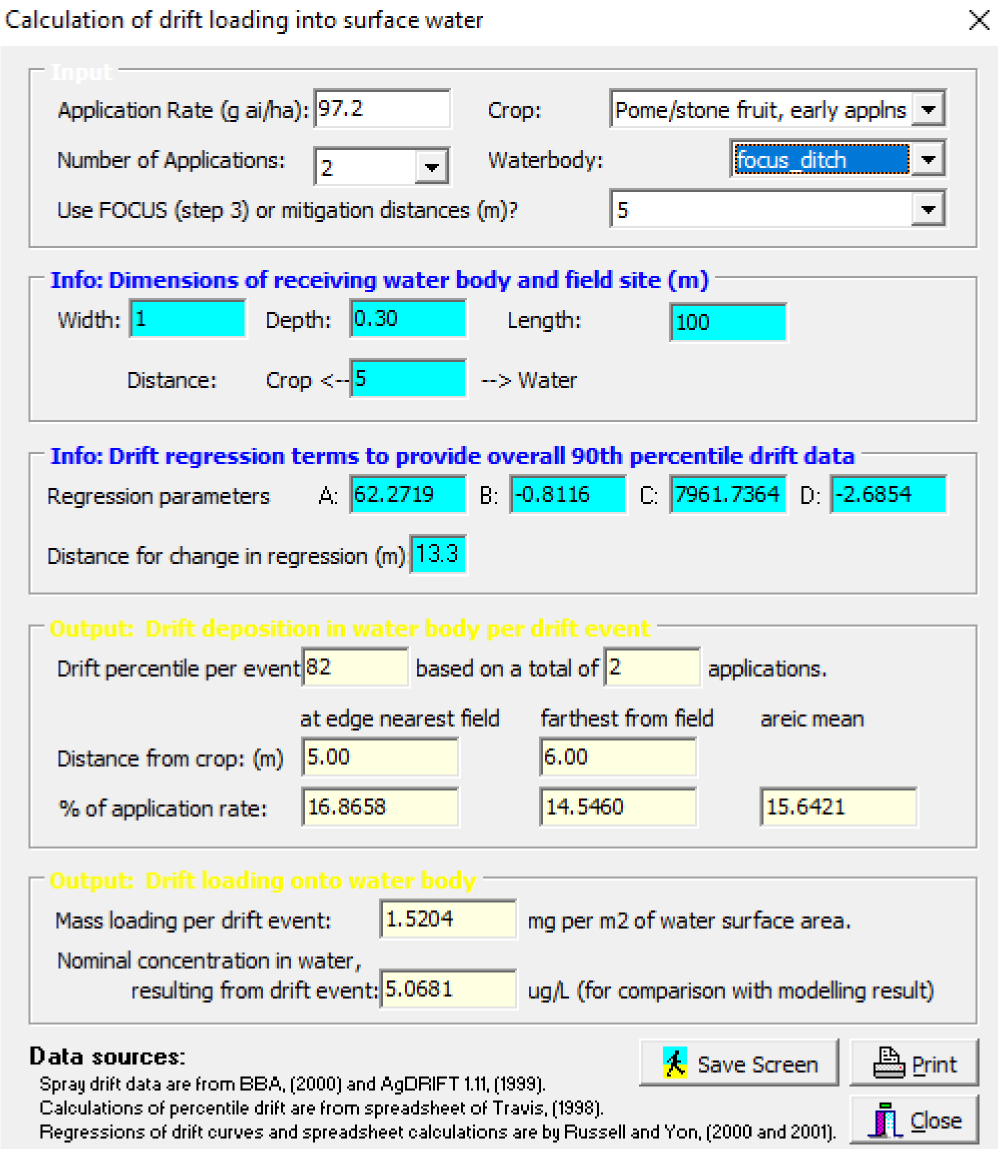
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 16.8658 14.5460 15.6421
Output: Drift loading onto water body
Mass loading per drift event: 1.5204 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.0681 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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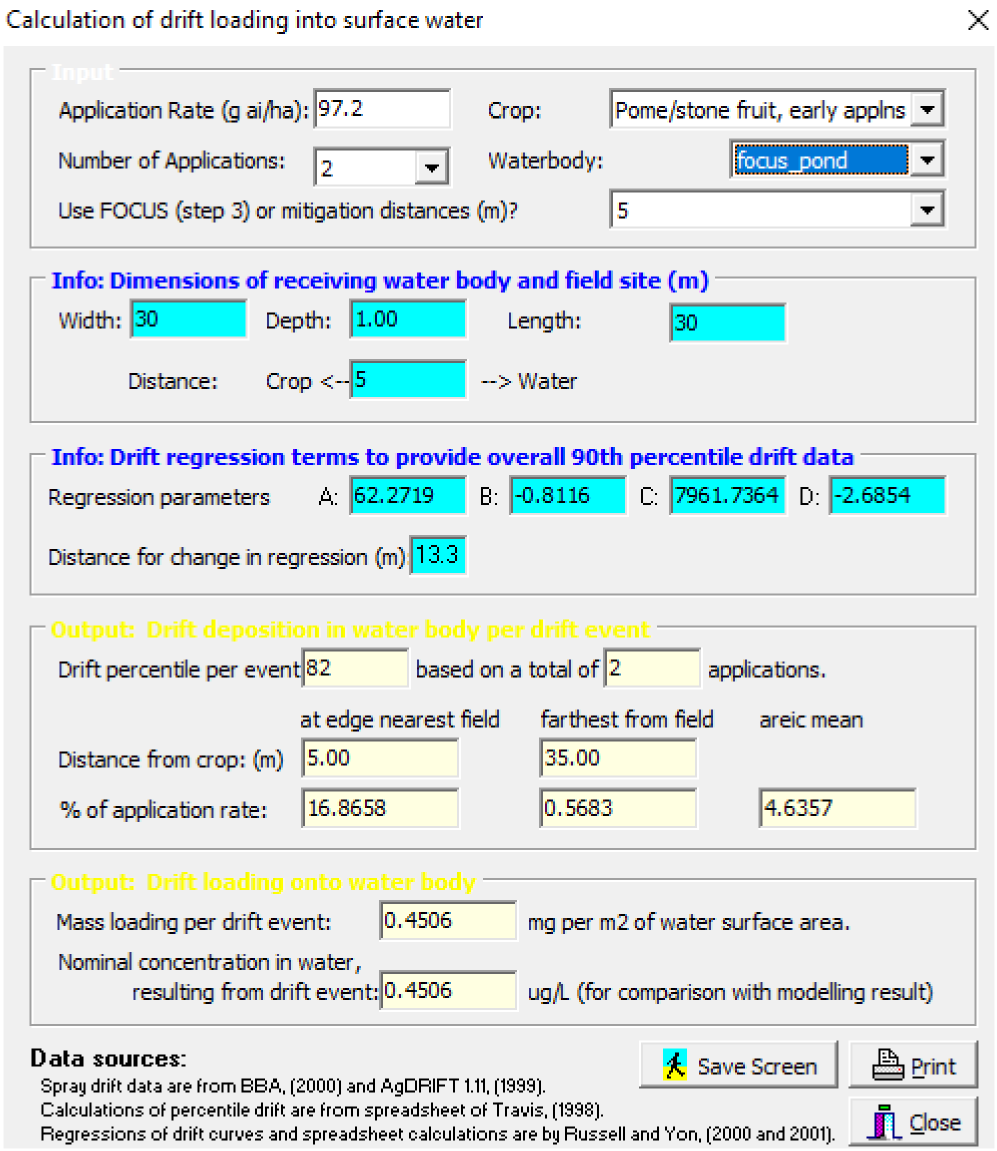
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 30 Depth: 1.00 Length: 30
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 35.00
% of application rate: 16.8658 0.5683 4.6357
Output: Drift loading onto water body
Mass loading per drift event: 0.4506 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.4506 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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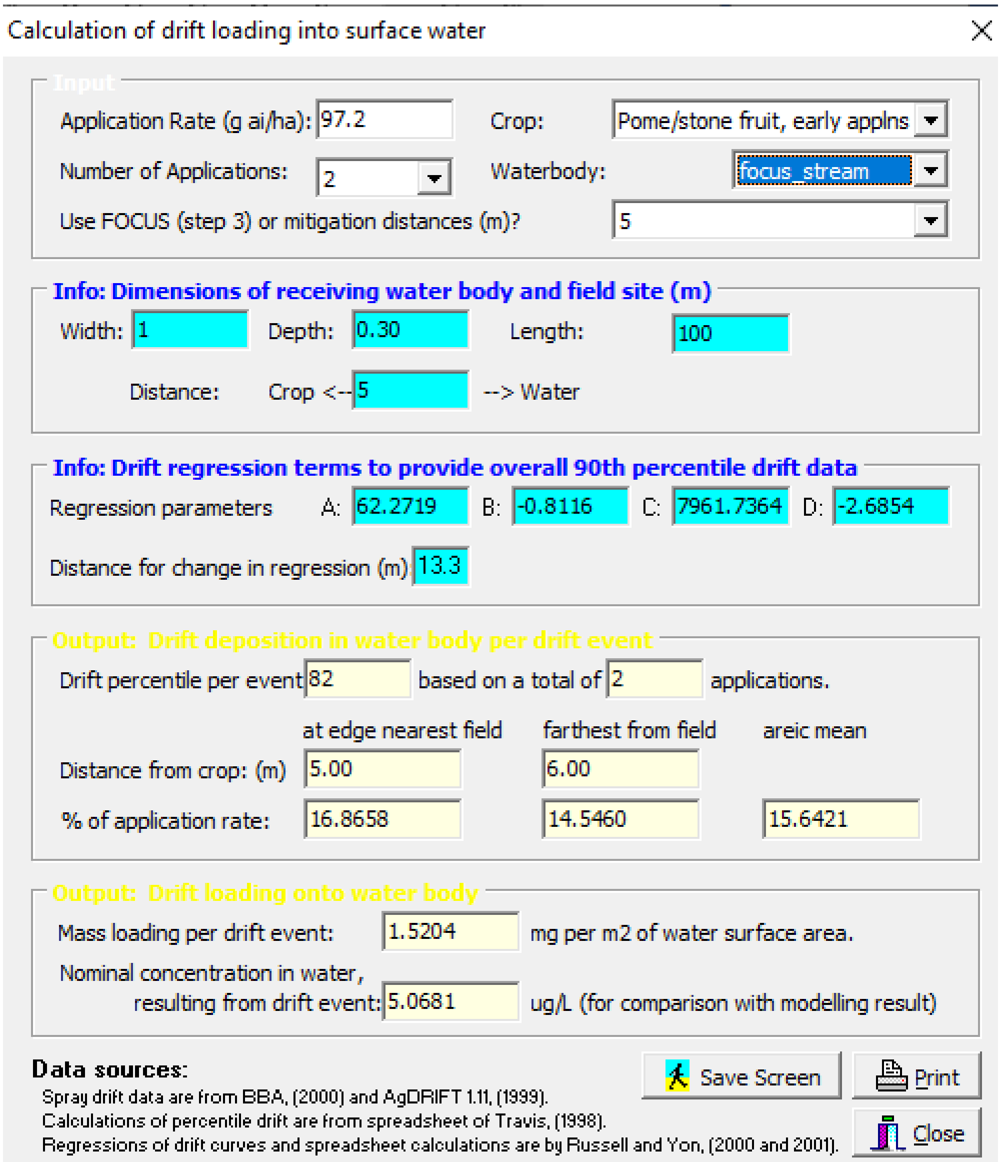
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 5
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 5 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 5.00 6.00
% of application rate: 16.8658 14.5460 15.6421
Output: Drift loading onto water body
Mass loading per drift event: 1.5204 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 5.0681 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): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
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: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854

Distance for change in regression (m) 13.3

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	10.00	11.00	
% of application rate:	9.6093	8.8940	9.2414

Output: Drift loading onto water body

Mass loading per drift event: 0.8983 mg per m2 of water surface area.

Nominal concentration in water, resulting from drift event: 2.9942 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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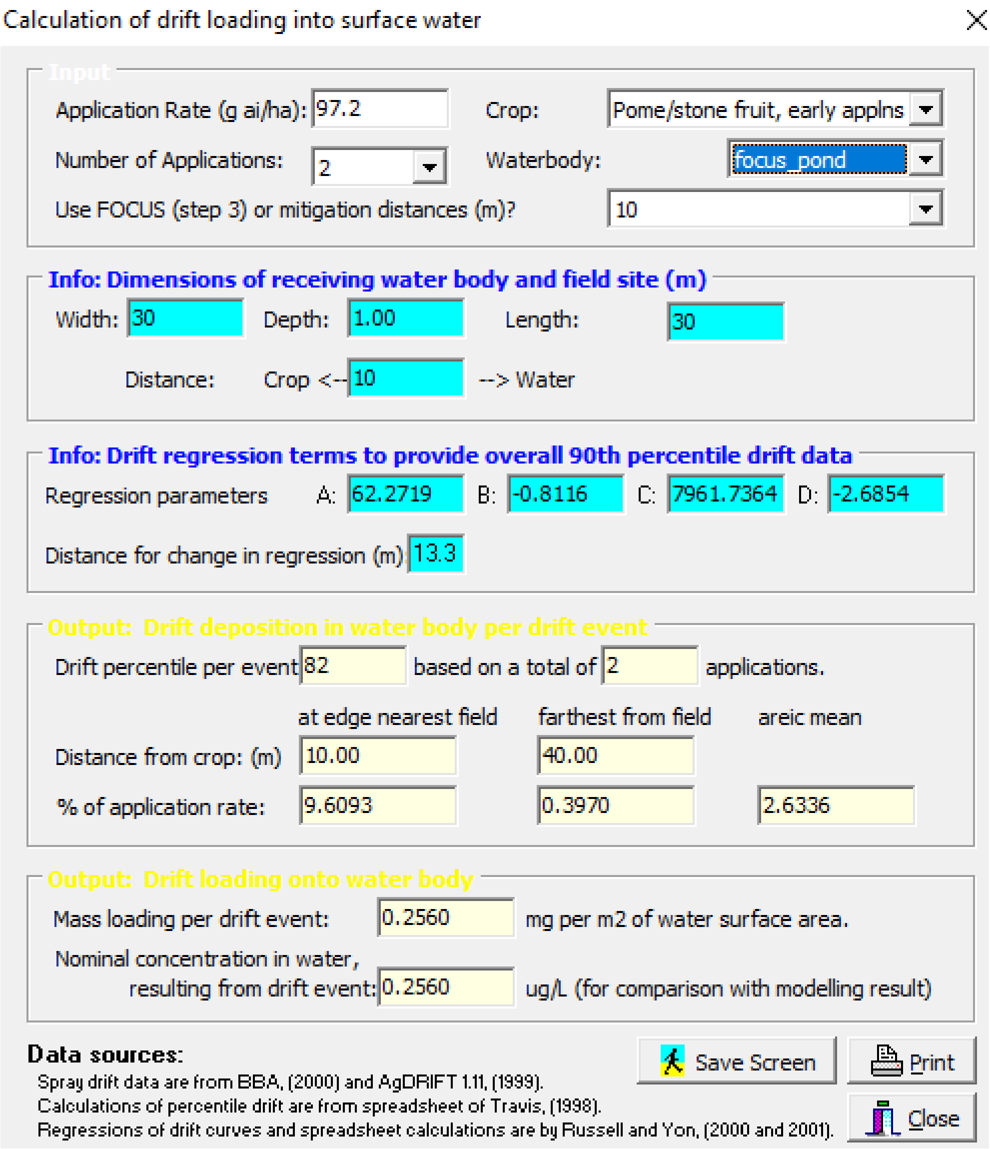
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 10
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 10 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 40.00
% of application rate: 9.6093 0.3970 2.6336
Output: Drift loading onto water body
Mass loading per drift event: 0.2560 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.2560 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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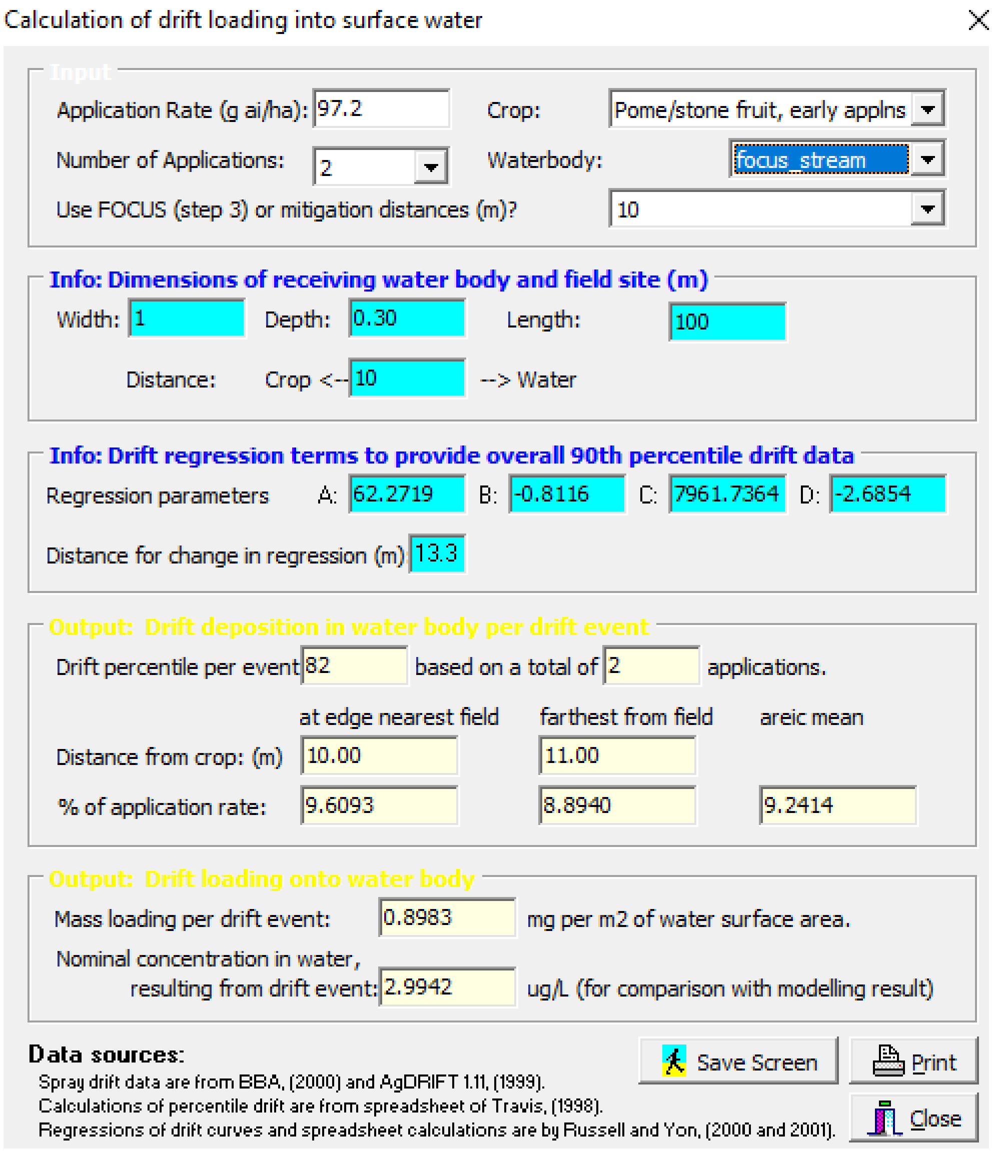
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_stream
Use FOCUS (step 3) or mitigation distances (m)? 10
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 10 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 10.00 11.00
% of application rate: 9.6093 8.8940 9.2414
Output: Drift loading onto water body
Mass loading per drift event: 0.8983 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 2.9942 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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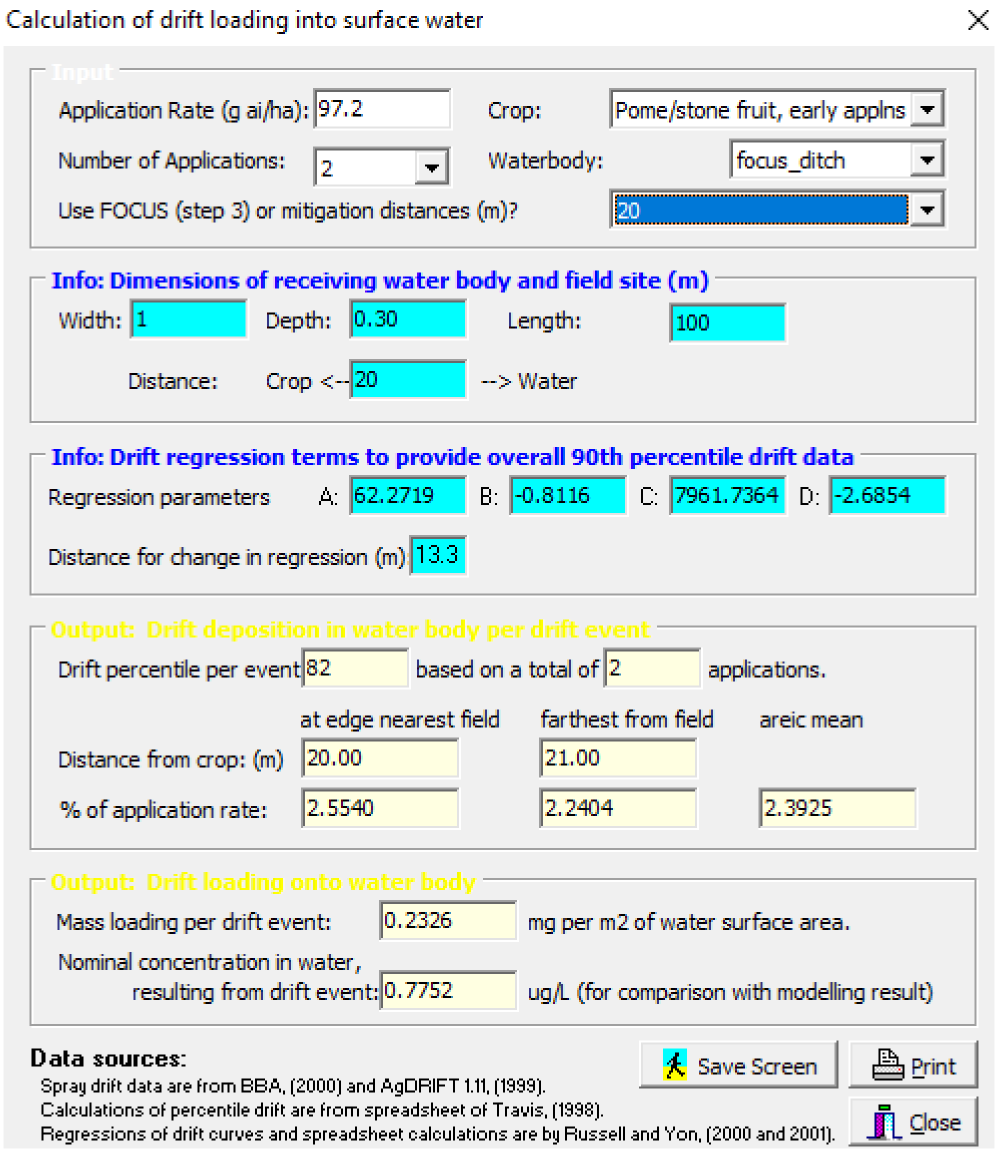
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_ditch
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 1
Depth: 0.30
Length: 100
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 21.00
% of application rate: 2.5540 2.2404 2.3925
Output: Drift loading onto water body
Mass loading per drift event: 0.2326 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.7752 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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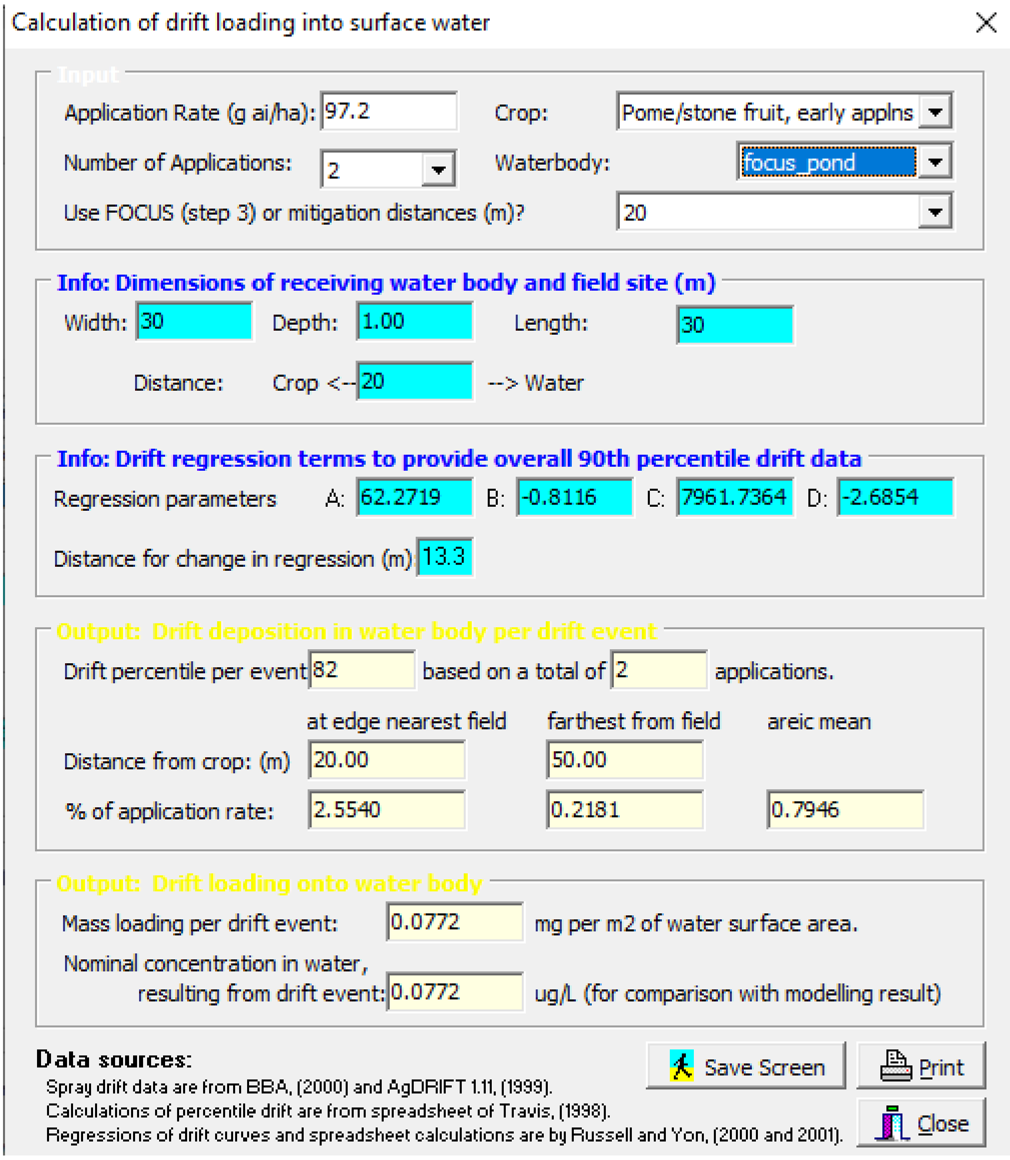
Calculation of drift loading into surface water
Input
Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
Waterbody: focus_pond
Use FOCUS (step 3) or mitigation distances (m)? 20
Info: Dimensions of receiving water body and field site (m)
Width: 30
Depth: 1.00
Length: 30
Distance: Crop <-- 20 --> Water
Info: Drift regression terms to provide overall 90th percentile drift data
Regression parameters A: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3
Output: Drift deposition in water body per drift event
Drift percentile per event 82 based on a total of 2 applications.
at edge nearest field
farthest from field
areic mean
Distance from crop: (m) 20.00 50.00
% of application rate: 2.5540 0.2181 0.7946
Output: Drift loading onto water body
Mass loading per drift event: 0.0772 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.0772 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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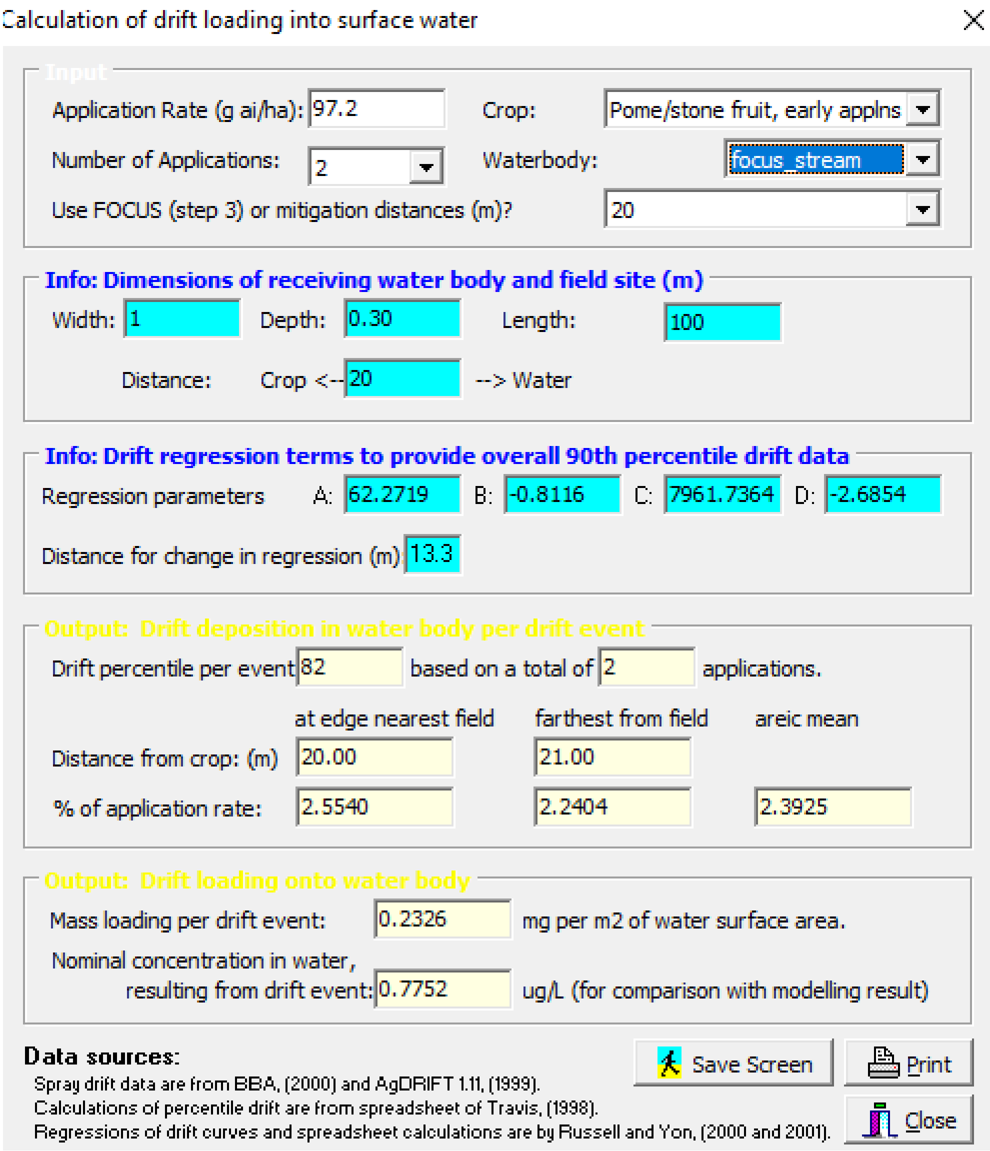

Calculation of drift loading into surface water

Input

Application Rate (g ai/ha): 97.2
Crop: Pome/stone fruit, early applns
Number of Applications: 2
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: 62.2719 B: -0.8116 C: 7961.7364 D: -2.6854
Distance for change in regression (m) 13.3

Output: Drift deposition in water body per drift event

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

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	20.00	21.00	
% of application rate:	2.5540	2.2404	2.3925

Output: Drift loading onto water body

Mass loading per drift event: 0.2326 mg per m2 of water surface area.
Nominal concentration in water, resulting from drift event: 0.7752 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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