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Document Title

Summary of the fate and behaviour in the environment Deltamethrin EW 15 (15 g/L)

Data Requirements

EU Regulation 1107/2009 & EU Regulation 284/2013
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Section 9: Fate and behaviour in the environment

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

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Version history

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

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

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CP 9 FATE AND BEHAVIOUR IN THE ENVIRONMENT

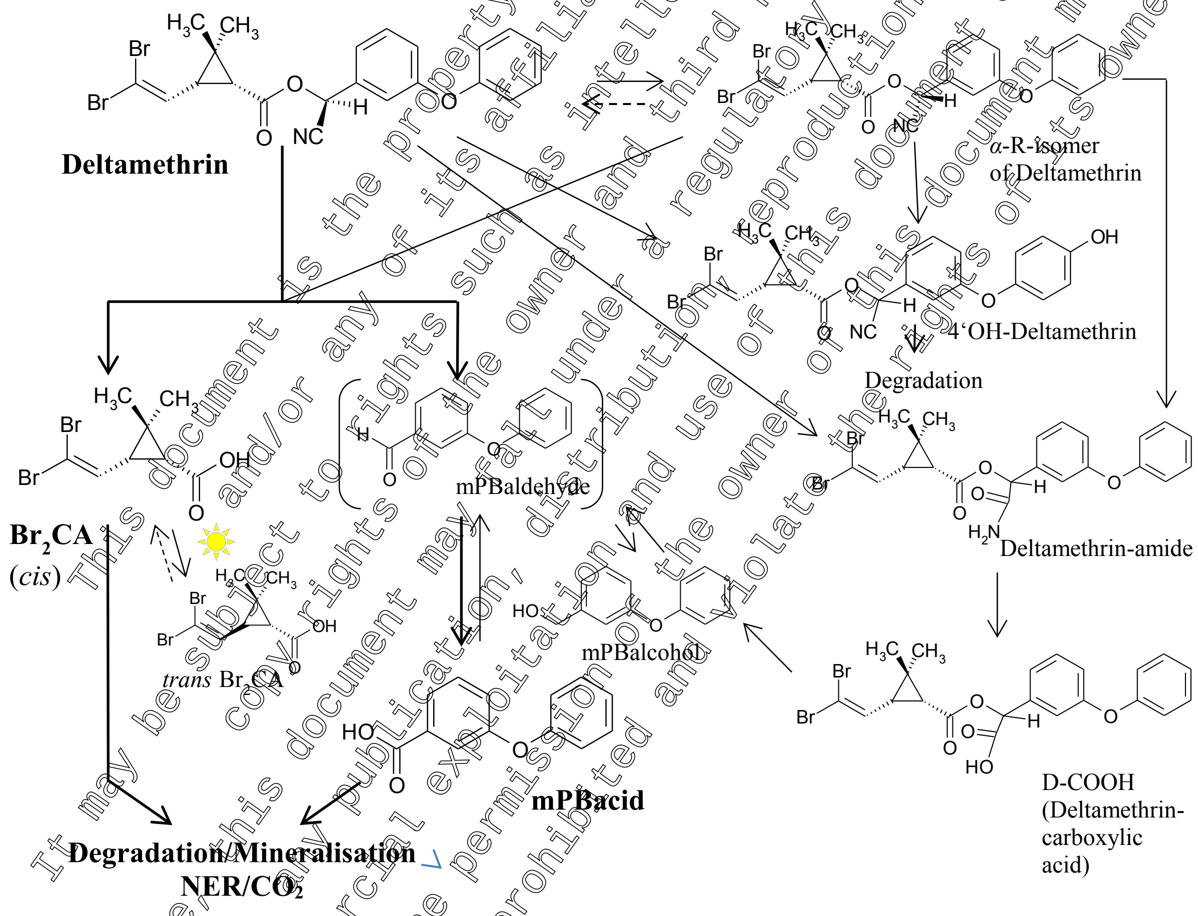
CP 9.1 Fate and behaviour in soil

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

CP 9.1.1 Rate of degradation in soil

The proposed degradation pathway of deltamethrin in soil is shown in Figure 9.1.1- 1.
Major metabolites are highlighted in bold writing.
For further information on the fate and behaviour in soil please refer to MCA Section 7, data points 7.1.1 and 7.1.2.

Figure 9.1.1- 1: Proposed degradation pathway of deltamethrin in soil



CP 9.1.1.1 Laboratory studies

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

CP 9.1.1.2 Field studies

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

CP 9.1.1.2.1 Soil dissipation studies

For information on field dissipation studies please refer to MCA Section 7, data point 7.1.2.2.1.

CP 9.1.1.2.2 Soil accumulation studies

For information on field accumulation studies please refer to MCA Section 7, data point 7.1.2.2.2.

CP 9.1.2 Mobility in the soil

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

CP 9.1.2.1 Laboratory studies

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

CP 9.1.2.2 Lysimeter studies

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

CP 9.1.2.3 Field leaching studies

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

CP 9.1.3 Estimation of concentrations in soil

For the PEC calculations, the following representative uses were considered.

Representative crops	Application Rate per Season [g a.s./ha]	Interval [days]	BBCH Stage
Sugarbeets	1 × 7.5	-	10-49
Cauliflower	2 × 7.5	14	10 -49
Wheat	2 × 6.25	14	10-83

PEC$_{soil}$ modelling approach

The predicted environmental concentrations in soil (PEC$_{soil}$) for the active substance deltamethrin were calculated based on a simple first tier approach (Microsoft® Excel spreadsheet) assuming even distribution of the compound in the upper 0-5 cm soil layer. A standard soil density of 1.5 g/cm^3 was assumed. Crop interception will reduce the amount of a compound reaching the soil and therefore this has been taken into account depending on the growth stage at application. The interception rates follow the recommendations of the FOCUS groundwater guidance paper (FOCUS 2002) for sugarbeet, cauliflower and spring and winter wheat (Table 9.2.4- 1). Derivation of kinetic modelling input values for deltamethrin and its metabolites is presented in MCA Section 7, data point 7.1.2, a summary of modelling input parameters is given in the report M-470168-02-1 (KCP 9.1.3/01).

Predicted environmental concentrations in soil (PECs) of deltamethrin and its metabolites

For deltamethrin, the metabolites Br_2CA and mPBacid were considered.

Report:	**KCP 9.1.3/01, [redacted], [redacted]; 2013**
Title:	Deltamethrin (DLT) and metabolite: PEC_{soil} EUR Use in sugar beets, cauliflower and cereals in Europe
Document No.:	M-470168-02-1 (EnSa-13-0650)
Guidelines:	- EU Commission, 1995, Directive 95/36/EC of 14 July 1995, amending Council Directive 91/414/EEC concerning the placing of plant protection products on the market - EU Commission, 2000, Guidance Document on Persistence in Soil (Working Document), 9188/VI/97 rev.8 - FOCUS, 1997, Soil persistence models and EU registration - FOCUS, 2002, Generic Guidance for FOCUS Groundwater Scenarios, Version 1.1
GLP:	No (calculation)

Methods and Materials: The predicted environmental concentrations in soil (PEC_{soil}) of deltamethrin and its metabolites Br_2CA and mPBacid were calculated based on a first tier approach using a Microsoft® Excel spreadsheet. The use of deltamethrin in sugar beets, cauliflower and spring and winter cereals was assessed according to Good Agricultural Practice (GAP) under European cropping conditions. Detailed application data used for simulation of PEC_{soil} were compiled in Table 9.1.3- 1.

Substance Specific Parameters: PEC_{soil} calculations were based on the DT_{50} of 231 days (worst case of laboratory studies) for the parent compound deltamethrin.

Table 9.1.3- 1: Application pattern used for PEC_{soil} calculations of deltamethrin

Individual Crop	FOCUS crop used for Interception	Application				Amount reaching the soil per application [g a.s./ha]
		Rate per Season [g a.s./ha]	Interval [days]	Plant Interception [%]	BBCH Stage	
Sugarbeets	Sugarbeets	1 × 7.5	-	20	10-49	1 × 6.0
Cauliflower	Cabbage	2 × 7.5	14	2 × 25	2 × 10-69*	2 × 5.63
Spring wheat	Spring cereals	2 × 6.25	14	25 + 50	10-19 20-83	4.69 3.13
Winter wheat	Winter cereals	2 × 6.25	14	2 × 50	2 × March-BBCH 83	2 × 3.13

(*) PEC soil applicable to BBCH 10-49.

Findings: The maximum PEC_{soil} values for deltamethrin and its metabolites Br_2CA and mPBacid are summarised in Table 9.1.3- 2.

Table 9.1.3- 2: Maximum PEC_{soil} of deltamethrin and its metabolites for the uses assessed

Use pattern	Deltamethrin	Br_2CA	mPBacid
	PEC_{soil} [µg/kg]		
Sugarbeets	8.0	1.085	0.190
Cauliflower	14.69	1.589	0.178
Spring wheat	10.16	1.041	0.148
Winter wheat	8.162	0.883	0.099

The maximum, short-term and long-term PEC_{soil} values and the time weighted average values ($TWAC_{soil}$) of deltamethrin and its metabolites Br_2CA and mPBacid are presented in Table 9.1.3- 3 to Table 9.1.3- 6.

Sugar beets, 1 × 7.5 g a.s./ha, 20% interception

Table 9.1.3- 3: PEC_{soil} and $TWAC_{soil}$ of deltamethrin and its metabolite

Days after maximum		Deltamethrin PEC soil [µg/kg]	Deltamethrin TWAC soil [µg/kg]	Br_2CA PEC soil [µg/kg]	Br_2CA TWAC soil [µg/kg]	mPBacid PEC soil [µg/kg]	mPBacid TWAC soil [µg/kg]
Initial	0	8.000	---	1.085	---	0.190	---
Short term	1	7.976	7.988	1.042	1.063	0.031	0.087
	2	7.952	7.976	0.999	1.042	0.005	0.051
	4	7.905	7.952	0.920	1.001	< 0.001	0.026
Long term	7	7.834	7.917	0.813	0.943	< 0.001	0.015
	14	7.671	7.834	0.609	0.824	< 0.001	0.007
	21	7.511	7.753	0.456	0.726	< 0.001	0.005
	28	7.355	7.673	0.342	0.644	< 0.001	0.004
	42	7.053	7.516	0.192	0.516	< 0.001	0.002
	50	6.885	7.429	0.138	0.459	< 0.001	0.002
	100	5.926	6.911	0.018	0.259	< 0.001	0.001

Cauliflower, 2 × 7.5 g a.s./ha, 2 × 25% interception, 14 d app. interval

Table 9.1.3- 4: PEC_{soil} and $TWAC_{soil}$ of deltamethrin and its metabolite

Days after maximum		Deltamethrin		Br_2CA		mPBacid	
		PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]
Initial	0	14.69	---	1.589	---	0.178	---
Short	1	14.65	14.67	1.524	1.556	0.029	0.082
term	2	14.60	14.65	1.463	1.525	0.005	0.048
	4	14.52	14.60	1.347	1.465	<0.001	0.024
Long	7	14.39	14.54	1.190	1.380	<0.001	0.014
term	14	14.09	14.39	0.892	1.207	<0.001	0.007
	21	13.79	14.24	0.668	1.063	<0.001	0.005
	28	13.51	14.09	0.500	0.942	<0.001	0.003
	42	12.95	13.80	0.281	0.755	<0.001	0.002
	50	12.64	13.64	0.202	0.672	<0.001	0.002
	100	10.88	12.69	0.026	0.379	<0.001	<0.001

Spring wheat, 2 × 6.25 g a.s./ha, 25% + 50% interception, 14 d app. interval

Table 9.1.3- 5: PEC_{soil} and $TWAC_{soil}$ of deltamethrin and its metabolite

Days after maximum		Deltamethrin		Br_2CA		mPBacid	
		PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]
Initial	0	10.16	---	1.041	---	0.148	---
Short	1	10.13	10.14	0.999	1.020	0.024	0.068
term	2	10.10	10.13	0.959	0.999	0.004	0.040
	4	10.04	10.10	0.883	0.960	< 0.001	0.020
Long	7	9.948	10.05	0.780	0.904	< 0.001	0.012
term	14	9.742	9.949	0.584	0.791	< 0.001	0.006
	21	9.539	9.846	0.438	0.696	< 0.001	0.004
	28	9.341	9.744	0.328	0.617	< 0.001	0.003
	42	8.957	9.545	0.184	0.495	< 0.001	0.002
	50	8.744	9.434	0.132	0.441	< 0.001	0.002
	100	7.526	8.777	0.017	0.248	< 0.001	< 0.001

Winter wheat, 2 × 6.25 g a.s./ha, 2 × 50% interception, 14 d app. interval

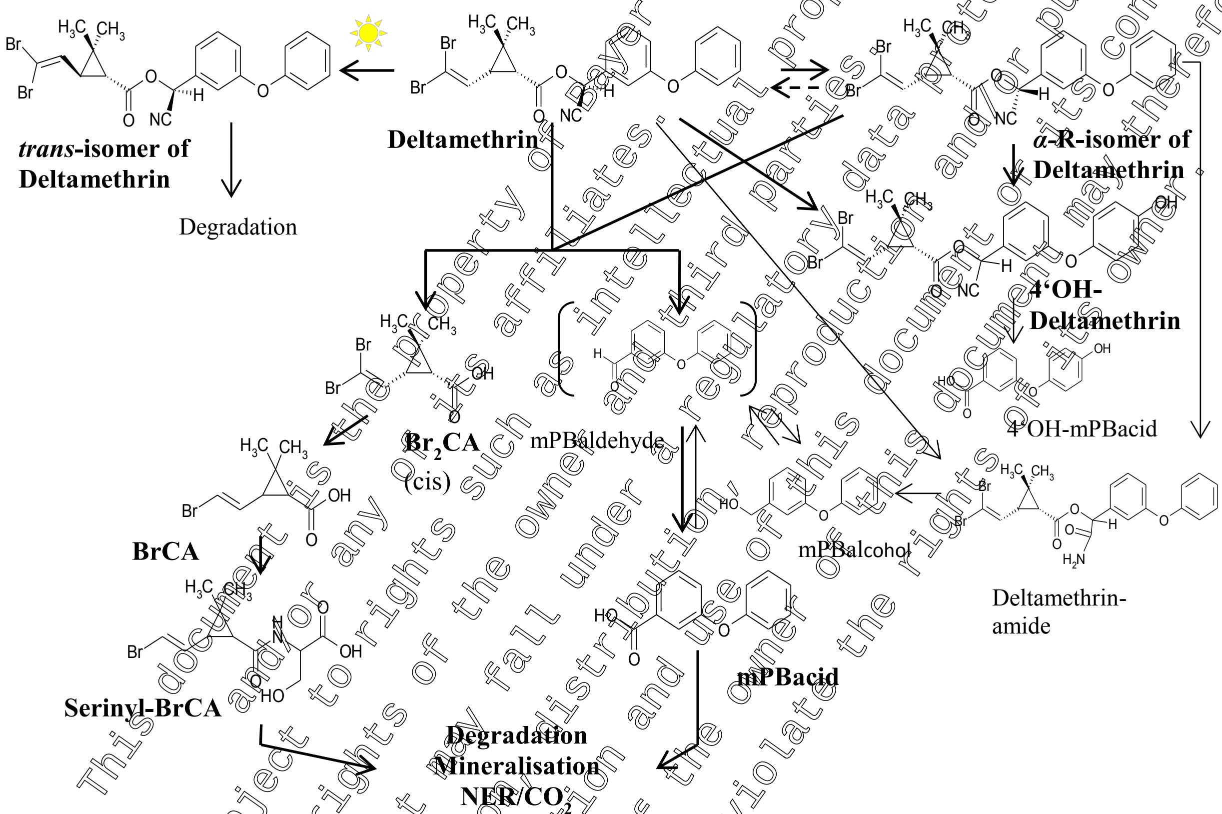
Table 9.1.3- 6: PEC_{soil} and $TWAC_{soil}$ of deltamethrin and its metabolite

Days after maximum		Deltamethrin		Br_2CA		mPBacid	
		PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]	PEC soil [µg/kg]	TWAC soil [µg/kg]
Initial	0	8.162	---	0.883	---	0.099	---
Short term	1	8.137	8.150	0.847	0.865	0.016	0.045
	2	8.113	8.137	0.813	0.847	0.003	0.026
	4	8.065	8.113	0.748	0.814	<0.001	0.014
Long term	7	7.992	8.077	0.661	0.767	<0.001	0.008
	14	7.826	7.993	0.495	0.670	<0.001	0.004
	21	7.663	7.910	0.371	0.590	<0.001	0.003
	28	7.504	7.828	0.278	0.523	<0.001	0.002
	42	7.195	7.669	0.156	0.419	<0.001	0.001
	50	7.025	7.579	0.112	0.373	<0.001	0.001
	100	6.046	7.051	0.014	0.210	<0.001	< 0.001

CP 9.2 Fate and behaviour in water and sediment

The proposed degradation pathway of deltamethrin in water and sediment is shown in Figure 9.2- 1. Major metabolites are highlighted in bold writing.
For information on the fate and behaviour in water and sediment please refer to MCA Section 7, data point 7.2.

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



CP 9.2.1 Aerobic mineralisation in surface water

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

CP 9.2.2 Water/sediment study

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

CP 9.2.3 Irradiated water/sediment study

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

CP 9.2.4 Estimation of concentrations in groundwater

For the PEC calculations, the following representative uses were considered.

Representative crops	Application Rate per Season [g a.s./ha]	Interval [days]	BBCH Stage
Sugarbeets	1 × 7.5	-	10-49
Cauliflower	2 ×7.5	14	10 -49
Wheat	2 × 6.25	14	10-83

PEC_{gw} modelling approach

The predicted environmental concentrations in groundwater (PEC_{gw}) for the active substance deltamethrin were calculated using the simulation models PEARL and PELMO following the recommendations of the FOCUS working group on groundwater scenarios.

The leaching calculations were run over 26 years, as proposed for pesticides which may be applied every year. The simulation length increases to 46 and 66 years for pesticides which are applied only every second and third year, respectively. The first six years are a ‘warm up’ period; only the last 20 years were considered for the assessment of the leaching potential. The 80th percentile of the average annual groundwater concentrations in the percolate at 1 m depth under a treated plantation were evaluated and were taken as the relevant PEC_{gw} values. In respect to the assessment of a potential groundwater contamination this shallow depth reflects a worst case. The effective long-term groundwater concentrations will be even lower due to dilution in the groundwater layer.

According to FOCUS, the calculations were conducted based on mean soil half-lives, referenced to standard temperature and moisture conditions. Crop interception will reduce the amount of a compound reaching the soil and therefore this has been taken into account depending on the growth stage at application. The interception rates follow the FOCUS recommendations (Table 9.2.4- 1).

Table 9.2.4- 1: FOCUS groundwater crop interception values

Crop	Crop stage Interception [%]				
	Bare – emergence	Leaf development	Stem elongation	Flowering	Senescence Ripening
	BBCH				
	00 - 09	10 - 19	20 - 39	40 - 89	90 - 99
Cabbage	0	25	40	70	90
Spring and winter cereals	0	25	50 (tillering) 70 (elong.)	90	90
Sugar beets	0	20	70 (rosette)	90	90

Derivation of kinetic modelling input values is presented in MCA Section 7, data point 7.1.2, a summary of modelling input parameters is given in the report M-470172-01-1 (KCP 9.2.4.1/01).

CP 9.2.4.1 Calculation of concentrations in groundwater

Predicted environmental concentrations in groundwater (PEC_{gw}) of deltamethrin and its metabolites

For deltamethrin, the metabolites Br_2CA and mPBacid were considered.

Report:	**KCP 9.2.4.1/01, [redacted], [redacted]; 2013**
Title:	Deltamethrin and metabolites: PECgw FOCUS PEARL, PELMO EUR Use in sugar beets, cauliflower and cereals in Europe
Document No:	M-470172-01-1 (EnSa-13-0651)
Guidelines:	- FOCUS 2000, SANCO/321/2000 v. 2.0 - FOCUS 2009, SANCO/13144/2010 v. 1 - FOCUS 2012, Generic Guidance for FOCUS Groundwater Assessments, v. 2.1
GLP:	No (calculation)

Methods and Materials: Predicted environmental concentrations of the active substance deltamethrin and its metabolites in groundwater recharge (PEC_{gw}) were calculated for the use in Europe, using the simulation models FOCUS PEARL 4.4.4 (Leistra et al. 2001) and FOCUS PELMO 5.5.3 (Jene 1998; Klein 1995, 1999, 2011). PEC_{gw} were evaluated as the 80th percentile of the mean annual leachate concentration at 1 m soil depth. Model parameters and scenarios consisting of weather, soil, and crop data were used as proposed by FOCUS (2009).

The use of deltamethrin in sugar beets, cauliflower and wheat was assessed according to Good Agricultural Practice (GAP) under European cropping conditions. Detailed application data used for simulation of PEC_{gw} were compiled in Table 9.2.4.1- 1.

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

Individual Crop	FOCUS crop used for Interception	Application				Amount reaching the soil per application
		Rate per Season [g a.s./ha]	Interval [days]	Plant Interception [%]	BBCH Stage	[g a.s./ha]
Sugarbeets	Sugarbeets	1 × 7.5	-	20	10 - 49	1 × 6.0
Cauliflower (1st and 2nd season)	Cabbage	2 × 75	14	2 × 25	2 × 10 – 69*	2 × 5.63
Spring wheat	Spring cereals	2 × 6.25	14	25 + 50	10-19 20-83	4.69 + 3.13
Winter wheat	Winter cereals	2 × 6.25	14	2 × 50	2 × March-BBCH 83	2 × 3.13

(*) PEC soil applicable to BBCH 10-49.

Application dates for the simulation runs were defined following the crop event dates of the respective crop and scenario **Error! Reference source not found.** as given by FOCUS (2009). Crop interception was taken into account according to the BBCH growth stage, as recommended by FOCUS (2012).

Table 9.2.4.1- 2: First application dates and related information for deltamethrin as used for the simulation runs; offset is relevant only for relative application dates, two sets of data are provided for crops with two seasons

Individual crop	Sugar Beets	Cauliflower 1st Season	Cauliflower 2nd Season	Spring Wheat	Winter Wheat
Repeat Interval for App. Events	Every Year	Every Year	Every Year	Every Year	Every Year
Application Technique	Spray	Spray	Spray	Spray	Spray
Absolute / Relative to	Emergence	Emergence	Emergence	Emergence	Absolute
Scenario	1st App. Date (Julian day) Offset	1st App. Date (Julian day) Offset	1st App. Date (Julian day) Offset	1st App. Date (Julian day) Offset	1st App. Date (Julian day) Offset
[redacted]	17 Apr (107) 1	21 Apr (111) 1	01 Aug (213) 1	10 Mar (69) 0	11 Mar (70) -[a)]
[redacted]	16 Apr (106) 1	21 Apr (111) 1	01 Aug (213) 1	01 Apr (91) 0	04 Apr (94) -[a)]
[redacted]	26 May (146) 1	21 May (141) 1	- - -	18 May (138) 0	11 Mar (70) -[a)]
[redacted]	16 Apr (106) 1	21 Apr (111) 1	01 Aug (213) 1	01 Apr (91) 0	31 Mar (90) -[a)]
[redacted]	26 Apr (116) 1	- - -	- - -	01 Apr (91) 0	17 Mar (76) -[a)]
[redacted]	21 Mar (80) 1	- - -	- - -	- - -	21 Mar (80) -[a)]
[redacted]	16 Mar (75) 1	01 Mar (60) 1	01 Aug (213) 1	10 Mar (69) 0	25 Mar (84) -[a)]
[redacted]	05 Mar (64) -[a)]	02 Mar (61) 1	16 Jun 167) 1	- - -	10 Mar (69) -[a)]
[redacted]	02 May (122) 1	16 Aug (228) 1	- - -	- - -	25 Mar (84) -[a)]

Findings: PEC_{gw} was evaluated as the 80th percentile of the mean annual leachate concentration at 1 m soil depth. PEC_{gw} values for deltamethrin and its metabolites are given in the following tables.

Overview of the maximum PEC_{gw} values for all uses obtained with FOCUS PEARL and FOCUS PELMO is given in Table 9.2.4.1- 3.

Table 9.2.4.1- 3: Maximum FOCUS PEARL PEC_{gw} results of deltamethrin and its metabolites in µg/L for the uses assessed

Use Pattern	Deltamethrin	Br_2CA	mPBacid
Sugar beets, 1×7.5 g a.s./ha	< 0.001	< 0.001	< 0.001
Cauliflower 1st season, 2×7.5 g a.s./ha	< 0.001	< 0.001	< 0.001
Cauliflower 2nd season, 2×7.5 g a.s./ha	< 0.001	< 0.001	< 0.001
Spring wheat, 2×6.25 g a.s./ha	< 0.001	< 0.001	< 0.001
Winter wheat, 2×6.25 g a.s./ha	< 0.001	< 0.001	< 0.001

Overview of the maximum PEC_{gw} values for all uses obtained with FOCUS PELMO is given in Table 9.2.4.1- 4.

Table 9.2.4.1- 4: Maximum FOCUS PELMO PEC_{gw} results of deltamethrin and metabolites in µg/L for the uses assessed

Use Pattern	Deltamethrin	Br_2CA	mPBacid
Sugar beets, 1×7.5 g a.s./ha	<0.001	<0.001	<0.001
Cauliflower 1st season, 2×7.5 g a.s./ha	<0.001	<0.001	<0.001
Cauliflower 2nd season, 2×7.5 g a.s./ha	<0.001	<0.001	<0.001
Spring wheat, 2×6.25 g a.s./ha	<0.001	<0.001	<0.001
Winter wheat, 2×6.25 g a.s./ha	<0.001	<0.001	<0.001

Sugar beets, 1 × 7.5 g a.s./ha

Table 9.2.4.1- 5: FOCUS PEARL PEC_{gw} results of deltamethrin and its metabolites in µg/L (Sugar beets, 1 × 7.5 g a.s./ha, 20% interception)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Table 9.2.4.1- 6: FOCUS PELMO PEC_{gw} results of deltamethrin and its metabolites in µg/L (Sugar beets, 1 × 7.5 g a.s./ha, 20% interception)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Cauliflower 1st and 2nd season, 2 × 7.5 g a.s./ha

Table 9.2.4.1- 7: FOCUS PEARL PEC_{gw} results of deltamethrin and its metabolites in µg/L (Cauliflower 1st season, 2×7.5 g a.s./ha, 2×25% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Table 9.2.4.1- 8: FOCUS PELMO PEC_{gw} results of deltamethrin and its metabolites in µg/L (Cauliflower 1st season, 2×7.5 g a.s./ha, 2×25% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Spring wheat, 2 × 6.25 g a.s./ha

Table 9.2.4.1- 9: FOCUS PEARL PEC_{gw} results of deltamethrin and its metabolites in µg/L (Spring wheat, 2×6.25 g a.s./ha, 25/50% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Table 9.2.4.1- 10: FOCUS PELMO PEC_{gw} results of deltamethrin and its metabolites in µg/L (Spring wheat, 2×6.25 g a.s./ha, 25/50% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Winter wheat, 2 × 6.25 g a.s./ha

Table 9.2.4.1- 11: FOCUS PEARL PEC_{gw} results of deltamethrin and its metabolites in µg/L (Winter wheat, 2×6.25 g a.s./ha, 2 × 50% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

Table 9.2.4.1- 12: FOCUS PELMO PEC_{gw} results of deltamethrin and its metabolites in µg/L (Winter wheat, 2×6.25 g a.s./ha, 2 × 50% interception, 14 d app. interval)

Scenario	Deltamethrin	Br_2CA	mPBacid
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001
[redacted]	<0.001	<0.001	<0.001

CP 9.2.4.2 Additional field tests

No additional field studies were performed.

CP 9.2.5 Estimation of concentrations in surface water and sediment

For the PEC calculations, the following representative uses were considered.

Representative crops	Application Rate per Season [g a.s./ha]	Interval [days]	BBCH Stage
Sugarbeets	1 × 7.5	-	10-49
Cauliflower	2 ×7.5	14	10 -49
Wheat	2 × 6.25	14	10-83

PEC_{sw} modelling approach

Calculation of PEC values for the active substance according to FOCUS

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

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

Derivation of kinetic modelling input values is presented in MCA Section 7, data point 7.1.2, a summary of modelling input parameters is given in the report M-470176-03-1 (KCP 9.2.5/01).

Predicted environmental concentrations in surface water (PEC_{sw}) and sediment (PEC_{sed}) of deltamethrin and its metabolites

For deltamethrin, the metabolites, alpha-R-isomer of deltamethrin, trans-isomer of deltamethrin, Br_2CA, BrCA isomer 1, BrCA isomer 2, Serinyl-BrCA, 4'OH-Deltamethrin and mPBacid were considered.

Report:	**KCP 9.2.5/01, [redacted], [redacted]; 2013**
Title:	Deltamethrin (DLT) and metabolites: PECsw,sed FOCUS EUR Use in sugar beets, cauliflower and cereals in Europe
Document No:	M-470176-03-1 (EnSa-13-0649)
Guidelines:	FOCUS 2003, SANCO/4802/2001 rev 2 FOCUS 2006, SANCO/10058/2005 v. 2.0 FOCUS 2007, SANCO/10422/2005 v. 2.0
GLP:	No (calculation)

Methods and Materials: Predicted environmental concentrations of the active substance deltamethrin and its metabolites alpha-R-isomer of deltamethrin, trans-isomer of deltamethrin, Br_2CA, BrCA isomer 1, BrCA isomer 2, Serinyl-BrCA, 4'OH-Deltamethrin and mPBacid in surface water (PEC_{sw}) and sediment (PEC_{sed}) were calculated for the use in Europe, employing the tiered FOCUS Surface Water (SW) approach (FOCUS, 2003). All relevant entry routes of a compound into surface water (principally a combination of spray drift and runoff/erosion or drain flow) were considered in these calculations.

The use of the insecticide deltamethrin in sugar beets, cauliflower, spring wheat and winter wheat was assessed according to the Good Agricultural Practice (GAP) in Europe. Detailed application parameters are presented in Table 9.2.5- 1.

Table 9.2.5- 1: General and FOCUS-specific data on the use pattern of deltamethrin in Europe (for FOCUS Step 1&2)

Individual Crop	FOCUS crop used for interception	Application			
		Rate per season [g a.s./ha]	Interval [days]	Plant Interception [%]	BBCH stage
Sugar beets	Sugar beets (Arable crops)	1 × 7.5	-	Minimal crop cover (40%)	10-49
Cauliflower	Leafy vegetables (Arable crops)	2 × 7.5	14	Minimal crop cover (40%)	10-69
Spring wheat	Spring cereals (Arable crops)	2 × 6.25	14	Minimal crop cover (40%)	10-83
Winter wheat	Winter cereals (Arable crops)	2 × 6.25	14	Average crop cover (40%)	March – BBCH 83

For the use in sugar beets, cauliflower, spring wheat and winter wheat, in addition to FOCUS Step 1 & 2 values, FOCUS Step 3 and Step 4 values were conducted.
In FOCUS Step 3, the application date for each scenario is determined by the Pesticide Application Timer (PAT), which is part of the FOCUS SW Scenarios. The user may only define an application time window. The actual application date is then set by the PAT in such a way that there are at least 10 mm of rainfall in the first 10 days after application, and at the same time less than 2 mm of rain per day in a five day period around the date of application. If no such date can be found within the application time window, the above rules are step-wise relaxed. Information on application dates can be found in Table 9.2.5- 2.

Table 9.2.5- 2: Application dates of deltamethrin for the FOCUS Step 3 calculations

Parameter	Sugar beets		Cauliflower		Spring wheat (1)	
PAT start date rel./absolute Appl. method (appl. type) No of appl. PAT window range Appl. interval Crop	Emg., +4 days ground spray (CAM 2) 1 30 1 Sugar beets		Emg., +1 days ground spray (CAM 2) 2 44 14 Cauliflower		Emg., 0 days ground spray (CAM 2) 2 44 14 Spring cereals	
Application Details	**PAT Start Date (Julian Day)**	**Appl. Date**	**PAT Start Date (Julian Day)**	**Appl. Date**	**PAT Start Date (Julian Day)**	**Appl. Date**
D1 (1st)	- -	-	- -	-	05-May (125)	14-May 17-Jun
D2 (1st)	- -	-	- -	-	- -	-
D3 (1st)	29-Apr (119)	04-May	26-Apr (116)	04-May 22-May	01-Apr (91)	04-Apr 20-Apr
D3 (2nd)	- -	-	06-Aug (218)	18-Aug 17-Sep	- -	-
D4 (1st)	08-May (128)	14-May	11-May (131)	16-May 30-May	26-Apr (116)	26-Apr 30-May
D5 (1st)	- -	-	- -	-	15-Mar (74)	08-Apr 22-Apr
D6 (1st)	- -	-	16-Aug (228)	19-Aug 07-Sep	- -	-
D6 (2nd)	- -	-	- -	-	- -	-
R1 (1st)	20-Apr (110)	26-Apr	21-Apr (111)	26-Apr 10-May	- -	-
R1 (2nd)	- -	-	01-Aug (213)	04-Aug 20-Aug	- -	-
R2 (1st)	- -	-	01-Mar (60)	01-Mar 22-Mar	- -	-
R2 (2nd)	- -	-	01-Aug (213)	01-Aug 14-Sep	- -	-
R3 (1st)	24-Mar (83)	28-Mar	02-Mar (61)	02-Mar 28-Mar	- -	-
R3 (2nd)	- -	-	16-Jun (167)	16-Jun 06-Jul	- -	-
R4 (1st)	- -	-	02-Mar (61)	05-Mar 03-Apr	15-Mar (74)	21-Mar 24-Apr
R4 (2nd)	- -	-	16-Jun (167)	23-Jun 12-Jul	- -	-

Findings:

FOCUS Step 1 and 2: The maximum PEC_{sw} and 21 d TWA_{sw} values for FOCUS Step 2 are given in the Table 9.2.5- 3 below for deltamethrin and its metabolites. Detailed results at the Steps 1-2 are given in the Table 9.2.5- 4.

Table 9.2.5- 3: Maximum PEC_{sw} and 21 d TWA values of deltamethrin and its metabolites according to FOCUS SW Step 2 calculations

Crop	Deltamethrin		alpha-R-isomer of deltamethrin		trans-isomer of deltamethrin		Br_2CA	
	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]
Sugar beets	0.0690	0.0033	0.0080	0.0065	0.0114	0.0114	0.0702	0.0383
Cauliflower	0.0690	0.0033	0.0124	0.0101	0.0201	0.0200	0.0769	0.0420
Spring wheat	0.0575	0.0027	0.0103	0.0084	0.0168	0.0167	0.0641	0.0350
Winter wheat	0.0575	0.0027	0.0103	0.0084	0.0168	0.0167	0.0461	0.0252
Maximum	0.0690	0.0033	0.0124	0.0201	0.0201	0.0200	0.0769	0.0420

Table 9.2.5- 3 (contd.): Maximum PEC_{sw} and 21 d TWA values of deltamethrin and its metabolites according to FOCUS SW Step 2 calculations

Crop	BrCA isomer 1		BrCA isomer 2		Serinyl-BrCA		4-OH-Deltamethrin	
	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]	PEC_{sw} [µg/L]	21 d TWA_{sw} [µg/L]
Sugar beets	0.0061	0.0061	0.0023	0.0023	0.0033	0.0032	0.0007	0.0007
Cauliflower	0.0107	0.0107	0.0041	0.0040	0.0057	0.0057	0.0013	0.0013
Spring wheat	0.0089	0.0089	0.0034	0.0034	0.0048	0.0047	0.0011	0.0010
Winter wheat	0.0089	0.0089	0.0034	0.0034	0.0048	0.0047	0.0010	0.0010
Maximum	0.0107	0.0107	0.0041	0.0040	0.0057	0.0057	0.0013	0.0013

Table 9.2.5- 4: Summary of the maximum PEC_{sw} and PEC_{sed} values in µg/L of deltamethrin and its metabolites (FOCUS Steps 1-2)

Crop	Scenario	Deltamethrin		alpha-R-isomer of deltamethrin		trans-isomer of deltamethrin	
		PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]
Sugar beets 1 × 7.5 g a.s./ha	Step 1	0.0692	19.01	0.0080	0.1852	0.0115	0.0860
	Step 2						
	N-EU Single	0.0690	3.336	0.0080	0.1719	0.0114	0.0856
	S-EU Single	0.0690	6.188	0.0080	0.1719	0.0114	0.0856
Cauliflower 2 × 7.5 g a.s./ha	Step 1	0.1383	38.02	0.0161	0.3704	0.0229	0.1720
	Step 2						
	N-EU Multi	0.0610	5.701	0.0124	0.2691	0.0201	0.1506
	S-EU Multi	0.0610	10.61	0.0124	0.2691	0.0201	0.1506
	N-EU Single	0.0690	3.158	0.0080	0.1719	0.0114	0.0856
	S-EU Single	0.0690	5.832	0.0080	0.1719	0.0114	0.0856
Spring wheat 2 × 6.25 g a.s./ha	Step 1	0.1153	31.69	0.0134	0.3086	0.0191	0.1433
	Step 2						
	N-EU Multi	0.0508	4.751	0.0103	0.2242	0.0168	0.1255
	S-EU Multi	0.0508	8.845	0.0103	0.2242	0.0168	0.1255
	N-EU Single	0.0575	2.632	0.0067	0.1432	0.0095	0.0713
	S-EU Single	0.0575	4.860	0.0067	0.1433	0.0095	0.0714
Winter wheat 2 × 6.25 g a.s./ha	Step 1	0.1153	31.69	0.0134	0.3086	0.0191	0.1433
	Step 2						
	N-EU Multi	0.0508	3.386	0.0103	0.2242	0.0168	0.1254
	S-EU Multi	0.0508	6.116	0.0103	0.2242	0.0168	0.1255
	N-EU Single	0.0575	1.889	0.0067	0.1432	0.0095	0.0713
	S-EU Single	0.0575	3.374	0.0067	0.1433	0.0095	0.0713

Table 9.2.5- 4 (contd.): Summary of the maximum PEC_{sw} and PEC_{sed} values in µg/L of deltamethrin and its metabolites (FOCUS Steps 1-2)

Crop	Scenario	Br_2CA		BrCA isomer 1		BrCA isomer 2	
		PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]
Sugar beets 1 × 7.5 g a.s./ha	Step 1	0.3411	0.0840	0.0061	0.0416	0.0023	0.0127
	Step 2						
	N-EU Single	0.0400	0.0104	0.0061	0.0414	0.0023	0.0127
	S-EU Single	0.0702	0.0177	0.0061	0.0414	0.0023	0.0127
Cauliflower 2 × 7.5 g a.s./ha	Step 1	0.6822	0.1679	0.0122	0.0831	0.0046	0.0255
	Step 2						
	N-EU Multi	0.0446	0.0117	0.0107	0.0728	0.0041	0.0223
	S-EU Multi	0.0769	0.0195	0.0107	0.0728	0.0041	0.0223
	N-EU Single	0.0381	0.0100	0.0061	0.0414	0.0023	0.0127
	S-EU Single	0.0664	0.0168	0.0061	0.0414	0.0023	0.0127
Spring wheat 2 × 6.25 g a.s./ha	Step 1	0.5685	0.1399	0.0102	0.0693	0.0039	0.0212
	Step 2						
	N-EU Multi	0.0371	0.0098	0.0089	0.0607	0.0034	0.0185
	S-EU Multi	0.0641	0.0162	0.0089	0.0607	0.0034	0.0186
	N-EU Single	0.0318	0.0083	0.0051	0.0345	0.0019	0.0105
	S-EU Single	0.0553	0.0140	0.0051	0.0345	0.0019	0.0106
Winter wheat 2 × 6.25 g a.s./ha	Step 1	0.5685	0.1399	0.0102	0.0693	0.0039	0.0212
	Step 2						
	N-EU Multi	0.0282	0.0076	0.0089	0.0607	0.0034	0.0185
	S-EU Multi	0.0461	0.0119	0.0089	0.0607	0.0034	0.0186
	N-EU Single	0.0239	0.0064	0.0051	0.0345	0.0019	0.0105
	S-EU Single	0.0396	0.0102	0.0051	0.0345	0.0019	0.0105

Table 9.2.5- 4 (contd.): Summary of the maximum PEC_{sw} and PEC_{sed} values in µg/L of deltamethrin and its metabolites (FOCUS Steps 1-2)

Crop	Scenario	Serinyl-BrCa		4'-OH-Deltamethrin		mPBacid	
		PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]	PECsw [µg/L]	PECsed [µg/kg]
Sugar beets 1 × 7.5 g a.s./ha	Step 1	0.0033	0.0180	0.0007	0.0260	0.0522	0.0817
	Step 2						
	N-EU Single	0.0033	0.0179	0.0007	0.0259	0.0032	0.0042
	S-EU Single	0.0033	0.0179	0.0007	0.0259	0.0032	0.0042
Cauliflower 2 × 7.5 g a.s./ha	Step 1	0.0066	0.0359	0.0015	0.0520	0.1045	0.1635
	Step 2						
	N-EU Multi	0.0057	0.0314	0.0013	0.0455	0.0053	0.0074
	S-EU Multi	0.0057	0.0314	0.0013	0.0455	0.0053	0.0074
	N-EU Single	0.0033	0.0179	0.0007	0.0258	0.0032	0.0042
	S-EU Single	0.0033	0.0179	0.0007	0.0259	0.0032	0.0042
Spring wheat 2 × 6.25 g a.s./ha	Step 1	0.0055	0.0299	0.0012	0.0434	0.0871	0.1362
	Step 2						
	N-EU Multi	0.0048	0.0262	0.0010	0.0379	0.0044	0.0061
	S-EU Multi	0.0048	0.0262	0.0011	0.0379	0.0044	0.0061
	N-EU Single	0.0027	0.0149	0.0006	0.0215	0.0027	0.0035
	S-EU Single	0.0027	0.0149	0.0006	0.0216	0.0027	0.0035

Winter wheat 2 × 6.25 g a.s./ha	Step 1	0.0055	0.0299	0.0012	0.0434	0.0871	0.1362
	Step 2						
	N-EU Multi	0.0048	0.0262	0.0010	0.0379	0.0044	0.0061
	S-EU Multi	0.0048	0.0262	0.0010	0.0379	0.0044	0.0061
	N-EU Single	0.0027	0.0149	0.0006	0.0215	0.0027	0.0035
	S-EU Single	0.0027	0.0149	0.0006	0.0215	0.0027	0.0035

FOCUS Step 3 and 4: The maximum PEC values for FOCUS Step 3 and 4 are given in the tables below for deltamethrin considering the application in sugar beets, cauliflower, spring and winter wheat.

Sugar beets, 1×7.5 g a.s./ha

FOCUS SW Step 3 values for the application in sugar beets are presented in Table 9.2.5- 5.

Table 9.2.5- 5: PEC_{sw} and PEC_{sed} values of deltamethrin in sugar beets for all calculated scenarios according to FOCUS SW Step 3; letters S, D, and R before correspond to the dominant entry path – spray drift, drainage, and runoff

Scenario	Single Application			
	Entry route	PEC_{sw} [µg/L] a)	PEC_{sw} [µg/L] b)	PEC_{sed} [µg/kg]
D3 (ditch, 1st)	S	0.0393	0.0125	0.1460
D4 (pond, 1st)	S	0.0016	0.0004	0.0245
D4 (stream, 1st)	S	0.0325	0.0103	0.0151
R1 (pond, 1st)	S	0.0016	0.0004	0.0432
R1 (stream, 1st)	S	0.0272	0.0085	0.8290
R3 (stream, 1st)	S	0.0382	0.0122	0.3970

a) maximum PEC_{sw} values including the amount of deltamethrin sorbed to suspended solids
b) maximum PEC_{sw} values not including the amount of deltamethrin sorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

FOCUS SW Step 4 values for the application in sugar beets are presented in Table 9.2.5- 6 and Table Table 9.2.5- 7.

Table 9.2.5- 6: Summary of FOCUS Step 4 PEC_{sw} values of deltamethrin after application in sugar beet SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PEC_{sw} [µg/L] a) Drift Reduction				PEC_{sw} [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0128	0.0066	0.0033	0.0013	0.0039	0.0019	0.0009	0.0004
	D4 (pond, 1st)	0.0014	0.0007	0.0004	0.0001	0.0004	0.0002	0.0001	<0.0001
	D4 (stream, 1st)	0.0137	0.0070	0.0035	0.0015	0.0041	0.0020	0.0010	0.0004
	R1 (pond, 1st)	0.0014	0.0007	0.0004	0.0001	0.0004	0.0002	0.0001	<0.0001
	R1 (stream, 1st)	0.0114	0.0058	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	R3 (stream, 1st)	0.0161	0.0082	0.0041	0.0017	0.0049	0.0024	0.0012	0.0005
10m SD & RO	D3 (ditch, 1st)	0.0069	0.0033	0.0016	0.0007	0.0020	0.0009	0.0004	0.0002
	D4 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0073	0.0035	0.0017	0.0006	0.0021	0.0010	0.0005	0.0001
	R1 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0061	0.0029	0.0015	0.0005	0.0018	0.0008	0.0004	0.0001
	R3 (stream, 1st)	0.0086	0.0041	0.0021	0.0007	0.0025	0.0012	0.0006	0.0002

20m SD & RO	D3 (ditch, 1st)	0.0036	0.0016	0.0010	0.0003	0.0010	0.0004	0.0003	<0.0001
	D4 (pond, 1st)	0.0007	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0038	0.0017	0.0009	0.0003	0.0011	0.0005	0.0002	<0.0001
	R1 (pond, 1st)	0.0007	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0032	0.0015	0.0007	0.0002	0.0009	0.0004	0.0002	<0.0001
	R3 (stream, 1st)	0.0045	0.0021	0.0010	0.0003	0.0013	0.0006	0.0003	<0.0001
30m SD & RO	D3 (ditch, 1st)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0005	0.0003	0.0001	0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0026	0.0012	0.0006	0.0003	0.0007	0.0003	0.0001	<0.0001
	R1 (pond, 1st)	0.0005	0.0003	0.0001	0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
	R3 (stream, 1st)	0.0031	0.0014	0.0007	0.0003	0.0009	0.0004	0.0002	<0.0001

a) maximum PEC_{sw} values including the amount of deltamethrin sorbed to suspended solids
b) maximum PEC_{sw} values not including the amount of deltamethrin sorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 7: Summary of FOCUS Step 4 PEC_{sed} values of deltamethrin after application in sugar beet; SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction			
		0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0468	0.0237	0.0117	0.0046
	D4 (pond, 1st)	0.0215	0.0108	0.0061	0.0015
	D4 (stream, 1st)	0.0061	0.0030	0.0015	0.0006
	R1 (pond, 1st)	0.0415	0.0352	0.0325	0.0299
	R1 (stream, 1st)	0.8270	0.8270	0.8270	0.8270
	R3 (stream, 1st)	0.3940	0.3930	0.3930	0.3920
10m SD & RO	D3 (ditch, 1st)	0.0249	0.0117	0.0057	0.0022
	D4 (pond, 1st)	0.0154	0.0077	0.0046	0.0015
	D4 (stream, 1st)	0.0031	0.0015	0.0007	0.0002
	R1 (pond, 1st)	0.0164	0.0090	0.0071	0.0053
	R1 (stream, 1st)	0.1250	0.1240	0.1240	0.1240
	R3 (stream, 1st)	0.0599	0.0594	0.0591	0.0590
20m SD & RO	D3 (ditch, 1st)	0.0128	0.0057	0.0034	0.0011
	D4 (pond, 1st)	0.0108	0.0046	0.0031	0.0015
	D4 (stream, 1st)	0.0016	0.0007	0.0003	0.0001
	R1 (pond, 1st)	0.0111	0.0050	0.0034	0.0024
	R1 (stream, 1st)	0.0416	0.0415	0.0415	0.0414
	R3 (stream, 1st)	0.0201	0.0199	0.0198	0.0197
30m SD & RO	D3 (ditch, 1st)	0.0081	0.0046	0.0022	0.0011
	D4 (pond, 1st)	0.0077	0.0046	0.0015	0.0015
	D4 (stream, 1st)	0.0011	0.0005	0.0002	0.0001
	R1 (pond, 1st)	0.0080	0.0050	0.0024	0.0024
	R1 (stream, 1st)	0.0416	0.0415	0.0414	0.0414
	R3 (stream, 1st)	0.0200	0.0198	0.0197	0.0197

Cauliflower, 2 × 7.5 g/ha

FOCUS SW Step 3 values for the application in cauliflower are presented in Table 9.2.5- 8.

Table 9.2.5- 8: PEC_{sw} and PEC_{sed} values of deltamethrin in cauliflower for all calculated scenarios according to FOCUS SW Step 3; letters S, D, and R before correspond to the dominant entry path – spray drift, drainage, and runoff

Scenario	Single Application				Multiple Application			
	Entry route	PEC_{sw} [µg/L] a)	PEC_{sw} [µg/L] b)	PEC_{sed} [µg/kg]	Entry route	PEC_{sw} [µg/L] a)	PEC_{sw} [µg/L] b)	PEC_{sed} [µg/kg]
D3 (ditch, 1st)	S	0.0475	0.0153	0.1760	S	0.0417	0.0133	0.2140
D3 (ditch, 2nd)	S	0.0476	0.0153	0.1750	S	0.0415	0.0133	0.1750
D4 (pond, 1st)	S	0.0016	0.0004	0.0252	S	0.0017	0.0005	0.0400
D4 (stream, 1st)	S	0.0378	0.0120	0.0190	S	0.0327	0.0103	0.0163
D6 (ditch, 1st)	S	0.0464	0.0149	0.0701	S	0.0408	0.0130	0.0914
R1 (pond, 1st)	S	0.0016	0.0004	0.1150	S	0.0017	0.0005	0.2320
R1 (stream, 1st)	S	0.0314	0.0099	2.884	S	0.0271	0.0085	5.949
R1 (pond, 2nd)	S	0.0016	0.0004	0.0859	S	0.0016	0.0004	0.1770
R1 (stream, 2nd)	S	0.0315	0.0099	1.970	S	0.0272	0.0085	4.291
R2 (stream, 1st)	S	0.0414	0.0132	1.245	S	0.0358	0.0114	2.507
R2 (stream, 2nd)	S	0.0422	0.0135	3.560	S	0.0365	0.0116	5.196
R3 (stream, 1st)	S	0.0440	0.0141	2.160	S	0.0381	0.0121	4.120
R3 (stream, 2nd)	S	0.0442	0.0142	0.4980	S	0.0384	0.0122	1.060
R4 (stream, 1st)	S	0.0313	0.0099	3.041	S	0.0272	0.0085	5.826
R4 (stream, 2nd)	S	0.0312	0.0098	1.441	S	0.0271	0.0085	3.200

a) maximum PEC_{sw} values including the amount of deltamethrin sorbed to suspended solids
b) maximum PEC_{sw} values not including the amount of deltamethrin sorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

FOCUS SW Step 4 values for the application in cauliflower are presented in Table 9.2.5- 9 to Table 9.2.5- 12.

Single application

Table 9.2.5- 9: Summary of FOCUS Step 4 PEC_{sw} values of deltamethrin after single application in cauliflower SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] [a] Drift Reduction				PECsw [µg/L] [b] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0128	0.0066	0.0033	0.0013	0.0039	0.0019	0.0009	0.0004
	D3 (ditch, 2nd)	0.0128	0.0066	0.0033	0.0013	0.0039	0.0019	0.0009	0.0004
	D4 (pond, 1st)	0.0014	0.0007	0.0004	0.0001	0.0004	0.0002	0.0001	<0.0001
	D4 (stream, 1st)	0.0138	0.0071	0.0035	0.0015	0.0042	0.0021	0.0010	0.0004
	D6 (ditch, 1st)	0.0125	0.0064	0.0032	0.0013	0.0038	0.0019	0.0009	0.0003
	R1 (pond, 1st)	0.0014	0.0007	0.0004	0.0001	0.0004	0.0002	0.0001	<0.0001
	R1 (stream, 1st)	0.0115	0.0059	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	R1 (pond, 2nd)	0.0014	0.0007	0.0004	0.0001	0.0004	0.0002	0.0001	<0.0001
	R1 (stream, 2nd)	0.0115	0.0059	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	R2 (stream, 1st)	0.0151	0.0077	0.0039	0.0016	0.0046	0.0023	0.0011	0.0004
	R2 (stream, 2nd)	0.0154	0.0079	0.0039	0.0016	0.0047	0.0023	0.0011	0.0004
	R3 (stream, 1st)	0.0161	0.0082	0.0041	0.0017	0.0049	0.0024	0.0012	0.0005
	R3 (stream, 2nd)	0.0161	0.0082	0.0041	0.0017	0.0049	0.0024	0.0012	0.0005
	R4 (stream, 1st)	0.0114	0.0058	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	R4 (stream, 2nd)	0.0114	0.0058	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
10m SD & RO	D3 (ditch, 1st)	0.0069	0.0033	0.0016	0.0007	0.0020	0.0009	0.0004	0.0002
	D3 (ditch, 2nd)	0.0069	0.0033	0.0016	0.0007	0.0020	0.0009	0.0004	0.0002
	D4 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0073	0.0035	0.0018	0.0006	0.0022	0.0010	0.0005	0.0002
	D6 (ditch, 1st)	0.0067	0.0032	0.0016	0.0006	0.0020	0.0009	0.0004	0.0002
	R1 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0061	0.0029	0.0015	0.0005	0.0018	0.0008	0.0004	0.0001
	R1 (pond, 2nd)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0061	0.0029	0.0015	0.0005	0.0018	0.0008	0.0004	0.0001
	R2 (stream, 1st)	0.0081	0.0039	0.0019	0.0006	0.0024	0.0011	0.0005	0.0002
	R2 (stream, 2nd)	0.0082	0.0039	0.0020	0.0007	0.0024	0.0011	0.0005	0.0002
	R3 (stream, 1st)	0.0086	0.0041	0.0021	0.0007	0.0025	0.0012	0.0006	0.0002
	R3 (stream, 2nd)	0.0086	0.0041	0.0021	0.0007	0.0025	0.0012	0.0006	0.0002
	R4 (stream, 1st)	0.0061	0.0029	0.0015	0.0005	0.0018	0.0008	0.0004	0.0001
	R4 (stream, 2nd)	0.0061	0.0029	0.0015	0.0005	0.0018	0.0008	0.0004	0.0001
20m SD & RO	D3 (ditch, 1st)	0.0036	0.0016	0.0010	0.0003	0.0010	0.0004	0.0003	<0.0001
	D3 (ditch, 2nd)	0.0036	0.0016	0.0010	0.0003	0.0010	0.0004	0.0003	<0.0001
	D4 (pond, 1st)	0.0007	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0038	0.0018	0.0009	0.0003	0.0011	0.0005	0.0002	<0.0001
	D6 (ditch, 1st)	0.0035	0.0016	0.0010	0.0003	0.0010	0.0004	0.0003	<0.0001
	R1 (pond, 1st)	0.0007	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0032	0.0015	0.0007	0.0002	0.0009	0.0004	0.0002	<0.0001
	R1 (pond, 2nd)	0.0007	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0032	0.0015	0.0007	0.0002	0.0009	0.0004	0.0002	<0.0001
	R2 (stream, 1st)	0.0042	0.0019	0.0010	0.0003	0.0012	0.0005	0.0003	<0.0001
	R2 (stream, 2nd)	0.0043	0.0020	0.0010	0.0003	0.0012	0.0005	0.0003	<0.0001
	R3 (stream, 1st)	0.0045	0.0021	0.0010	0.0003	0.0013	0.0006	0.0003	<0.0001
	R3 (stream, 2nd)	0.0045	0.0021	0.0010	0.0003	0.0013	0.0006	0.0003	<0.0001
	R4 (stream, 1st)	0.0032	0.0015	0.0007	0.0002	0.0009	0.0004	0.0002	<0.0001
	R4 (stream, 2nd)	0.0031	0.0015	0.0007	0.0002	0.0009	0.0004	0.0002	<0.0001

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
30m SD & RO	D3 (ditch, 1st)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D3 (ditch, 2nd)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0005	0.0003	0.0001	0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0026	0.0012	0.0006	0.0003	0.0007	0.0003	0.0002	<0.0001
	D6 (ditch, 1st)	0.0022	0.0013	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	R1 (pond, 1st)	0.0005	0.0003	0.0001	0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
	R1 (pond, 2nd)	0.0005	0.0003	0.0001	0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
	R2 (stream, 1st)	0.0029	0.0013	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	R2 (stream, 2nd)	0.0029	0.0013	0.0007	0.0003	0.0008	0.0003	0.0002	<0.0001
	R3 (stream, 1st)	0.0031	0.0014	0.0007	0.0003	0.0009	0.0004	0.0002	<0.0001
	R3 (stream, 2nd)	0.0031	0.0014	0.0007	0.0003	0.0009	0.0004	0.0002	<0.0001
	R4 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
	R4 (stream, 2nd)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 10: Summary of PEC_{sed} values of deltamethrin after single application in cauliflower with mitigation options according to FOCUS SW Step 4

Buffer Width & Type	Scenario	PEC_{sed} [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0462	0.0234	0.0115	0.0045
	D3 (ditch, 2nd)	0.0459	0.0232	0.0114	0.0045
	D4 (pond, 1st)	0.0215	0.0107	0.0061	0.0015
	D4 (stream, 1st)	0.0066	0.0033	0.0016	0.0006
	D6 (ditch, 1st)	0.0180	0.0090	0.0044	0.0017
	R1 (pond, 1st)	0.1130	0.1070	0.1040	0.1020
	R1 (stream, 1st)	2.883	2.882	2.882	2.882
	R1 (pond, 2nd)	0.0834	0.0762	0.0731	0.0701
	R1 (stream, 2nd)	1.968	1.968	1.967	1.967
	R2 (stream, 1st)	1.245	1.245	1.244	1.244
	R2 (stream, 2nd)	3.559	3.559	3.559	3.559
	R3 (stream, 1st)	2.156	2.155	2.155	2.154
	R3 (stream, 2nd)	0.4930	0.4920	0.4910	0.4910
	R4 (stream, 1st)	3.039	3.039	3.039	3.039
	R4 (stream, 2nd)	1.440	1.440	1.440	1.440
10m SD & RO	D3 (ditch, 1st)	0.0246	0.0115	0.0057	0.0022
	D3 (ditch, 2nd)	0.0244	0.0114	0.0056	0.0022
	D4 (pond, 1st)	0.0154	0.0077	0.0046	0.0015
	D4 (stream, 1st)	0.0034	0.0016	0.0008	0.0002
	D6 (ditch, 1st)	0.0095	0.0044	0.0021	0.0008
	R1 (pond, 1st)	0.0251	0.0198	0.0179	0.0161
	R1 (stream, 1st)	0.4330	0.4330	0.4330	0.4330
	R1 (pond, 2nd)	0.0209	0.0157	0.0136	0.0115
	R1 (stream, 2nd)	0.2960	0.2960	0.2960	0.2950
	R2 (stream, 1st)	0.1870	0.1870	0.1870	0.1870
	R2 (stream, 2nd)	0.5350	0.5340	0.5340	0.5340
	R3 (stream, 1st)	0.3240	0.3240	0.3240	0.3230
	R3 (stream, 2nd)	0.0751	0.0743	0.0740	0.0738
	R4 (stream, 1st)	0.4570	0.4570	0.4560	0.4560
	R4 (stream, 2nd)	0.2170	0.2160	0.2160	0.2160
20m SD & RO	D3 (ditch, 1st)	0.0127	0.0057	0.0034	0.0011
	D3 (ditch, 2nd)	0.0126	0.0056	0.0033	0.0011
	D4 (pond, 1st)	0.0107	0.0046	0.0031	0.0015
	D4 (stream, 1st)	0.0017	0.0008	0.0004	0.0001
	D6 (ditch, 1st)	0.0048	0.0021	0.0012	0.0004
	R1 (pond, 1st)	0.0125	0.0080	0.0069	0.0060
	R1 (stream, 1st)	0.1440	0.1440	0.1440	0.1440
	R1 (pond, 2nd)	0.0112	0.0067	0.0056	0.0046
	R1 (stream, 2nd)	0.0988	0.0986	0.0986	0.0985
	R2 (stream, 1st)	0.0624	0.0624	0.0623	0.0623
	R2 (stream, 2nd)	0.1780	0.1780	0.1780	0.1780
	R3 (stream, 1st)	0.1080	0.1080	0.1080	0.1080
	R3 (stream, 2nd)	0.0253	0.0249	0.0247	0.0246
	R4 (stream, 1st)	0.1520	0.1520	0.1520	0.1520
	R4 (stream, 2nd)	0.0723	0.0722	0.0722	0.0721

Buffer Width & Type	Scenario	PEC_{sed} [µg/kg] Drift Reduction 0%	50%	75%	90%
30m SD & RO	D3 (ditch, 1st)	0.0080	0.0045	0.0022	0.0011
	D3 (ditch, 2nd)	0.0080	0.0045	0.0022	0.0011
	D4 (pond, 1st)	0.0077	0.0046	0.0015	0.0015
	D4 (stream, 1st)	0.0012	0.0005	0.0002	0.0001
	D6 (ditch, 1st)	0.0030	0.0017	0.0008	0.0004
	R1 (pond, 1st)	0.0102	0.0080	0.0060	0.0060
	R1 (stream, 1st)	0.1440	0.1440	0.1440	0.1440
	R1 (pond, 2nd)	0.0089	0.0067	0.0046	0.0046
	R1 (stream, 2nd)	0.0987	0.0986	0.0986	0.0985
	R2 (stream, 1st)	0.0624	0.0623	0.0623	0.0623
	R2 (stream, 2nd)	0.1780	0.1780	0.1780	0.1780
	R3 (stream, 1st)	0.1080	0.1080	0.1080	0.1080
	R3 (stream, 2nd)	0.0251	0.0248	0.0247	0.0246
	R4 (stream, 1st)	0.1520	0.1520	0.1520	0.1520
	R4 (stream, 2nd)	0.0722	0.0722	0.0721	0.0721

Multiple application

Table 9.2.5- 11: Summary of FOCUS Step 4 PEC$_{sw}$ values of deltamethrin after multiple application in cauliflower SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0109	0.0053	0.0026	0.0010	0.0033	0.0015	0.0007	0.0003
	D3 (ditch, 2nd)	0.0109	0.0053	0.0026	0.0010	0.0032	0.0015	0.0007	0.0003
	D4 (pond, 1st)	0.0015	0.0008	0.0004	0.0001	0.0004	0.0002	<0.0001	<0.0001
	D4 (stream, 1st)	0.0115	0.0059	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	D6 (ditch, 1st)	0.0107	0.0052	0.0026	0.0010	0.0032	0.0015	0.0007	0.0003
	R1 (pond, 1st)	0.0015	0.0008	0.0004	0.0001	0.0004	0.0002	<0.0001	<0.0001
	R1 (stream, 1st)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	R1 (pond, 2nd)	0.0015	0.0007	0.0004	0.0001	0.0004	0.0002	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	R2 (stream, 1st)	0.0126	0.0064	0.0032	0.0013	0.0038	0.0019	0.0009	0.0003
	R2 (stream, 2nd)	0.0128	0.0066	0.0033	0.0013	0.0038	0.0019	0.0009	0.0004
	R3 (stream, 1st)	0.0134	0.0068	0.0034	0.0014	0.0040	0.0020	0.0010	0.0004
	R3 (stream, 2nd)	0.0134	0.0069	0.0034	0.0014	0.0041	0.0020	0.0010	0.0004
	R4 (stream, 1st)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	R4 (stream, 2nd)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
10m SD & RO	D3 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D3 (ditch, 2nd)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D4 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0059	0.0029	0.0015	0.0006	0.0017	0.0008	0.0004	0.0002
	D6 (ditch, 1st)	0.0055	0.0029	0.0013	0.0006	0.0016	0.0008	0.0003	0.0002
	R1 (pond, 1st)	0.0010	0.0005	0.0003	0.0001	0.0003	0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0049	0.0024	0.0012	0.0005	0.0014	0.0007	0.0003	0.0001
	R1 (pond, 2nd)	0.0010	0.0005	0.0002	0.0001	0.0003	0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0049	0.0024	0.0012	0.0005	0.0014	0.0007	0.0003	0.0001
	R2 (stream, 1st)	0.0064	0.0032	0.0016	0.0006	0.0019	0.0009	0.0004	0.0002
	R2 (stream, 2nd)	0.0066	0.0033	0.0016	0.0007	0.0019	0.0009	0.0004	0.0002
	R3 (stream, 1st)	0.0068	0.0034	0.0017	0.0007	0.0020	0.0010	0.0005	0.0002
	R3 (stream, 2nd)	0.0069	0.0034	0.0017	0.0007	0.0020	0.0010	0.0005	0.0002
	R4 (stream, 1st)	0.0049	0.0024	0.0012	0.0005	0.0014	0.0007	0.0003	0.0001
	R4 (stream, 2nd)	0.0049	0.0024	0.0012	0.0005	0.0014	0.0007	0.0003	0.0001
20m SD & RO	D3 (ditch, 1st)	0.0030	0.0013	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D3 (ditch, 2nd)	0.0030	0.0013	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0006	0.0004	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0029	0.0015	0.0009	0.0003	0.0008	0.0004	0.0002	<0.0001
	D6 (ditch, 1st)	0.0029	0.0013	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	R1 (pond, 1st)	0.0006	0.0004	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0024	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
	R1 (pond, 2nd)	0.0006	0.0004	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0024	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
	R2 (stream, 1st)	0.0032	0.0016	0.0010	0.0003	0.0009	0.0004	0.0003	<0.0001
	R2 (stream, 2nd)	0.0033	0.0016	0.0010	0.0003	0.0009	0.0004	0.0003	<0.0001
	R3 (stream, 1st)	0.0034	0.0017	0.0010	0.0003	0.0010	0.0005	0.0003	<0.0001
	R3 (stream, 2nd)	0.0034	0.0017	0.0010	0.0003	0.0010	0.0005	0.0003	<0.0001
	R4 (stream, 1st)	0.0024	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
	R4 (stream, 2nd)	0.0024	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
30m SD & RO	D3 (ditch, 1st)	0.0020	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	D3 (ditch, 2nd)	0.0020	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	D4 (pond, 1st)	0.0005	0.0003	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0021	0.0009	0.0006	0.0003	0.0006	0.0002	0.0002	<0.0001
	D6 (ditch, 1st)	0.0019	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	R1 (pond, 1st)	0.0005	0.0003	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0017	0.0007	0.0005	0.0002	0.0005	0.0002	0.0001	<0.0001
	R1 (pond, 2nd)	0.0005	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 2nd)	0.0017	0.0007	0.0005	0.0002	0.0005	0.0002	0.0001	<0.0001
	R2 (stream, 1st)	0.0023	0.0010	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	R2 (stream, 2nd)	0.0023	0.0010	0.0007	0.0003	0.0006	0.0003	0.0002	<0.0001
	R3 (stream, 1st)	0.0024	0.0010	0.0007	0.0003	0.0007	0.0003	0.0002	<0.0001
	R3 (stream, 2nd)	0.0024	0.0010	0.0007	0.0003	0.0007	0.0003	0.0002	<0.0001
	R4 (stream, 1st)	0.0017	0.0007	0.0005	0.0002	0.0005	0.0002	0.0001	<0.0001
	R4 (stream, 2nd)	0.0017	0.0007	0.0005	0.0002	0.0005	0.0002	0.0001	<0.0001

a) maximum PEC_{sw} values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PEC_{sw} values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 12: Summary of PEC_{sed} values of deltamethrin after multiple application in <u>cauliflower</u> with mitigation options according to <u>FOCUS SW Step 4</u>

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D3 (ditch, 1st)	0.0546	0.0261	0.0129	0.0047
	D3 (ditch, 2nd)	0.0445	0.0212	0.0104	0.0038
	D4 (pond, 1st)	0.0357	0.0178	0.0089	0.0030
	D4 (stream, 1st)	0.0054	0.0027	0.0013	0.0005
	D6 (ditch, 1st)	0.0229	0.0108	0.0053	0.0019
	R1 (pond, 1st)	0.2290	0.2190	0.2130	0.2100
	R1 (stream, 1st)	5.947	5.947	5.946	5.946
	R1 (pond, 2nd)	0.1740	0.1620	0.1560	0.1520
	R1 (stream, 2nd)	4.288	4.287	4.287	4.286
	R2 (stream, 1st)	2.505	2.505	2.505	2.505
	R2 (stream, 2nd)	5.193	5.193	5.193	5.192
	R3 (stream, 1st)	4.112	4.110	4.109	4.109
	R3 (stream, 2nd)	1.053	1.052	1.051	1.050
	R4 (stream, 1st)	5.824	5.823	5.823	5.823
	R4 (stream, 2nd)	3.198	3.197	3.197	3.197
10m SD & RO	D3 (ditch, 1st)	0.0278	0.0145	0.0064	0.0031
	D3 (ditch, 2nd)	0.0226	0.0118	0.0051	0.0025
	D4 (pond, 1st)	0.0238	0.0119	0.0059	0.0030
	D4 (stream, 1st)	0.0027	0.0013	0.0006	0.0002
	D6 (ditch, 1st)	0.0115	0.0060	0.0026	0.0013
	R1 (pond, 1st)	0.0466	0.0386	0.0350	0.0332
	R1 (stream, 1st)	0.8930	0.8930	0.8930	0.8930
	R1 (pond, 2nd)	0.0389	0.0309	0.0269	0.0249
	R1 (stream, 2nd)	0.6440	0.6440	0.6440	0.6440
	R2 (stream, 1st)	0.3760	0.3760	0.3760	0.3760
	R2 (stream, 2nd)	0.7800	0.7800	0.7800	0.7800
	R3 (stream, 1st)	0.6190	0.6180	0.6170	0.6170
	R3 (stream, 2nd)	0.1590	0.1590	0.1580	0.1580
	R4 (stream, 1st)	0.8750	0.8750	0.8750	0.8740
	R4 (stream, 2nd)	0.4810	0.4800	0.4800	0.4800
20m SD & RO	D3 (ditch, 1st)	0.0145	0.0064	0.0031	0.0015
	D3 (ditch, 2nd)	0.0118	0.0051	0.0025	0.0012
	D4 (pond, 1st)	0.0149	0.0089	0.0030	0.0030
	D4 (stream, 1st)	0.0013	0.0006	0.0004	0.0001
	D6 (ditch, 1st)	0.0060	0.0026	0.0013	0.0006
	R1 (pond, 1st)	0.0207	0.0164	0.0123	0.0123
	R1 (stream, 1st)	0.2980	0.2980	0.2980	0.2980
	R1 (pond, 2nd)	0.0179	0.0138	0.0097	0.0097
	R1 (stream, 2nd)	0.2150	0.2150	0.2150	0.2150
	R2 (stream, 1st)	0.1260	0.1250	0.1250	0.1250
	R2 (stream, 2nd)	0.2600	0.2600	0.2600	0.2600
	R3 (stream, 1st)	0.2070	0.2060	0.2060	0.2060
	R3 (stream, 2nd)	0.0535	0.0530	0.0528	0.0527
	R4 (stream, 1st)	0.2920	0.2920	0.2920	0.2920
	R4 (stream, 2nd)	0.1600	0.1600	0.1600	0.1600

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction			
		0%	50%	75%	90%
30m SD & RO	D3 (ditch, 1st)	0.0096	0.0047	0.0015	0.0015
	D3 (ditch, 2nd)	0.0078	0.0038	0.0012	0.0012
	D4 (pond, 1st)	0.0119	0.0059	0.0030	<0.0001
	D4 (stream, 1st)	0.0009	0.0004	0.0002	0.0001
	D6 (ditch, 1st)	0.0039	0.0019	0.0006	0.0006
	R1 (pond, 1st)	0.0185	0.0142	0.0123	0.0105
	R1 (stream, 1st)	0.2980	0.2980	0.2980	0.2980
	R1 (pond, 2nd)	0.0158	0.0117	0.0097	0.0077
	R1 (stream, 2nd)	0.2150	0.2150	0.2150	0.2150
	R2 (stream, 1st)	0.1260	0.1250	0.1250	0.1250
	R2 (stream, 2nd)	0.2600	0.2600	0.2600	0.2600
	R3 (stream, 1st)	0.2060	0.2060	0.2060	0.2060
	R3 (stream, 2nd)	0.0532	0.0528	0.0528	0.0527
	R4 (stream, 1st)	0.2920	0.2920	0.2920	0.2920
	R4 (stream, 2nd)	0.1600	0.1600	0.1600	0.1600

Spring wheat, 2 × 6.25 g/ha

FOCUS SW Step 3 values for the application in spring wheat are presented in Table 9.2.5- 13.

Table 9.2.5- 13: PEC_{sw} and PEC_{sed} values of deltamethrin in spring wheat for all calculated scenarios according to FOCUS SW Step 3; letters S, D, and R before correspond to the dominant entry path – spray drift, drainage, and runoff

Scenario	Single Application				Multiple Application			
	Entry route	PEC_{sw} [µg/L] a)	PEC_{sw} [µg/L] b)	PEC_{sed} [µg/kg]	Entry route	PEC_{sw} [µg/L] a)	PEC_{sw} [µg/L] b)	PEC_{sed} [µg/kg]
D1 (ditch, 1st)	S	0.0401	0.0128	0.1890	S	0.0359	0.0114	0.2860
D1 (stream, 1st)	S	0.0316	0.0100	0.0150	S	0.0306	0.0096	0.1160
D3 (ditch, 1st)	S	0.0399	0.0127	0.1460	S	0.0351	0.0111	0.1810
D4 (pond, 1st)	S	0.0014	0.0004	0.0218	S	0.0013	0.0003	0.0340
D4 (stream, 1st)	S	0.0321	0.0101	0.0177	S	0.0286	0.0090	0.0252
D5 (pond, 1st)	S	0.0014	0.0004	0.0219	S	0.0014	0.0004	0.0353
D5 (stream, 1st)	S	0.0313	0.0098	0.0082	S	0.0296	0.0093	0.0170
R4 (stream, 1st)	S	0.0263	0.0082	0.9980	S	0.0228	0.0071	1.760

a) maximum PEC_{sw} values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PEC_{sw} values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

FOCUS SW Step 4 values for the application in spring wheat are presented in Table 9.2.5- 14 and Table 9.2.5- 16.

Single application

Table 9.2.5- 14: Summary of FOCUS Step 4 PEC$_{sw}$ values of deltamethrin after single application in spring wheat SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction 0%	50%	75%	90%	PECsw [µg/L] b) Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0109	0.0053	0.0026	0.0010	0.0033	0.0015	0.0007	0.0003
	D1 (stream, 1st)	0.0114	0.0059	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	D3 (ditch, 1st)	0.0109	0.0053	0.0026	0.0010	0.0032	0.0015	0.0007	0.0003
	D4 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D4 (stream, 1st)	0.0116	0.0059	0.0030	0.0012	0.0035	0.0017	0.0008	0.0003
	D5 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D5 (stream, 1st)	0.0113	0.0058	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	R4 (stream, 1st)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
10m SD & RO	D1 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D1 (stream, 1st)	0.0061	0.0029	0.0015	0.0006	0.0018	0.0008	0.0004	0.0001
	D3 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D4 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0062	0.0030	0.0015	0.0006	0.0018	0.0008	0.0004	0.0002
	D5 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0061	0.0029	0.0014	0.0006	0.0018	0.0008	0.0004	0.0001
	R4 (stream, 1st)	0.0051	0.0024	0.0012	0.0005	0.0015	0.0007	0.0003	0.0001
20m SD & RO	D1 (ditch, 1st)	0.0030	0.0017	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D1 (stream, 1st)	0.0032	0.0015	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D3 (ditch, 1st)	0.0030	0.0016	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0006	0.0003	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0033	0.0015	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D5 (pond, 1st)	0.0006	0.0003	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0032	0.0014	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	R4 (stream, 1st)	0.0027	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
30m SD & RO	D1 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	D1 (stream, 1st)	0.0020	0.0012	0.0006	0.0003	0.0006	0.0003	0.0001	<0.0001
	D3 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	D4 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0021	0.0012	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	D5 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0020	0.0012	0.0006	0.0003	0.0006	0.0003	0.0001	<0.0001
	R4 (stream, 1st)	0.0017	0.0010	0.0005	0.0002	0.0005	0.0003	0.0001	<0.0001

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 15: Summary of PEC_{sed} values of deltamethrin after single application in <u>spring wheat</u> with mitigation options according to <u>FOCUS SW Step 4</u>

Buffer Width & Type	Scenario	PEC_{sed} [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0508	0.0244	0.0121	0.0045
	D1 (stream, 1st)	0.0052	0.0026	0.0012	0.0005
	D3 (ditch, 1st)	0.0386	0.0184	0.0090	0.0033
	D4 (pond, 1st)	0.0190	0.0095	0.0047	0.0016
	D4 (stream, 1st)	0.0061	0.0030	0.0015	0.0006
	D5 (pond, 1st)	0.0190	0.0095	0.0047	0.0016
	D5 (stream, 1st)	0.0028	0.0014	0.0007	0.0003
	R4 (stream, 1st)	0.9970	0.9960	0.9960	0.9960
10m SD & RO	D1 (ditch, 1st)	0.0260	0.0137	0.0060	0.0030
	D1 (stream, 1st)	0.0027	0.0012	0.0006	0.0002
	D3 (ditch, 1st)	0.0196	0.0102	0.0045	0.0022
	D4 (pond, 1st)	0.0142	0.0063	0.0031	0.0016
	D4 (stream, 1st)	0.0032	0.0015	0.0007	0.0003
	D5 (pond, 1st)	0.0143	0.0063	0.0032	0.0016
	D5 (stream, 1st)	0.0015	0.0007	0.0003	0.0001
	R4 (stream, 1st)	0.1500	0.1500	0.1500	0.1500
20m SD & RO	D1 (ditch, 1st)	0.0137	0.0075	0.0030	0.0015
	D1 (stream, 1st)	0.0014	0.0006	0.0003	0.0001
	D3 (ditch, 1st)	0.0102	0.0056	0.0022	0.0011
	D4 (pond, 1st)	0.0095	0.0047	0.0016	0.0016
	D4 (stream, 1st)	0.0016	0.0007	0.0004	0.0001
	D5 (pond, 1st)	0.0095	0.0047	0.0016	0.0016
	D5 (stream, 1st)	0.0007	0.0003	0.0002	<0.0001
	R4 (stream, 1st)	0.0500	0.0499	0.0499	0.0499
30m SD & RO	D1 (ditch, 1st)	0.0091	0.0045	0.0030	0.0015
	D1 (stream, 1st)	0.0009	0.0005	0.0002	0.0001
	D3 (ditch, 1st)	0.0067	0.0033	0.0022	0.0011
	D4 (pond, 1st)	0.0063	0.0031	0.0016	<0.0001
	D4 (stream, 1st)	0.0010	0.0006	0.0003	0.0001
	D5 (pond, 1st)	0.0063	0.0032	0.0016	<0.0001
	D5 (stream, 1st)	0.0005	0.0003	0.0001	<0.0001
	R4 (stream, 1st)	0.0500	0.0499	0.0499	0.0499

Multiple application

Table 9.2.5- 16: Summary of FOCUS Step 4 PEC_{sw} values of deltamethrin after multiple application in spring wheat SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction 0%	50%	75%	90%	PECsw [µg/L] b) Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0095	0.0047	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	D1 (stream, 1st)	0.0108	0.0056	0.0026	0.0010	0.0032	0.0016	0.0007	0.0003
	D3 (ditch, 1st)	0.0093	0.0046	0.0023	0.0010	0.0027	0.0013	0.0006	0.0003
	D4 (pond, 1st)	0.0012	0.0006	0.0002	0.0001	0.0003	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0101	0.0052	0.0024	0.0009	0.0030	0.0015	0.0007	0.0002
	D5 (pond, 1st)	0.0013	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D5 (stream, 1st)	0.0105	0.0054	0.0025	0.0010	0.0031	0.0016	0.0007	0.0002
	R4 (stream, 1st)	0.0081	0.0042	0.0020	0.0007	0.0024	0.0012	0.0005	0.0002
10m SD & RO	D1 (ditch, 1st)	0.0047	0.0024	0.0014	0.0003	0.0014	0.0007	0.0004	<0.0001
	D1 (stream, 1st)	0.0056	0.0029	0.0013	0.0007	0.0016	0.0008	0.0003	0.0002
	D3 (ditch, 1st)	0.0046	0.0023	0.0013	0.0003	0.0013	0.0006	0.0004	<0.0001
	D4 (pond, 1st)	0.0008	0.0003	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0052	0.0028	0.0012	0.0006	0.0015	0.0008	0.0003	0.0002
	D5 (pond, 1st)	0.0009	0.0004	0.0003	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0054	0.0029	0.0013	0.0006	0.0016	0.0008	0.0003	0.0002
	R4 (stream, 1st)	0.0042	0.0022	0.0010	0.0005	0.0012	0.0006	0.0003	0.0001
20m SD & RO	D1 (ditch, 1st)	0.0024	0.0014	0.0007	0.0003	0.0007	0.0004	0.0002	<0.0001
	D1 (stream, 1st)	0.0029	0.0013	0.0007	0.0003	0.0008	0.0003	0.0002	<0.0001
	D3 (ditch, 1st)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0006	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0028	0.0012	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	D5 (pond, 1st)	0.0006	0.0003	0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0029	0.0013	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	R4 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
30m SD & RO	D1 (ditch, 1st)	0.0017	0.0007	0.0003	<0.0001	0.0005	0.0002	<0.0001	<0.0001
	D1 (stream, 1st)	0.0020	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	D3 (ditch, 1st)	0.0017	0.0007	0.0003	<0.0001	0.0004	0.0002	<0.0001	<0.0001
	D4 (pond, 1st)	0.0003	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0018	0.0009	0.0003	0.0003	0.0005	0.0002	<0.0001	<0.0001
	D5 (pond, 1st)	0.0004	0.0003	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0019	0.0010	0.0003	0.0003	0.0005	0.0002	<0.0001	<0.0001
	R4 (stream, 1st)	0.0015	0.0007	0.0002	0.0002	0.0004	0.0002	<0.0001	<0.0001

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 17: Summary of PEC_{sed} values of deltamethrin after multiple application in spring wheat with mitigation options according to FOCUS SW Step 4

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0752	0.0376	0.0188	0.0080
	D1 (stream, 1st)	0.0400	0.0203	0.0094	0.0034
	D3 (ditch, 1st)	0.0467	0.0230	0.0114	0.0048
	D4 (pond, 1st)	0.0301	0.0150	0.0060	0.0030
	D4 (stream, 1st)	0.0085	0.0043	0.0019	0.0007
	D5 (pond, 1st)	0.0313	0.0156	0.0062	0.0031
	D5 (stream, 1st)	0.0057	0.0029	0.0013	0.0005
	R4 (stream, 1st)	1.758	1.757	1.757	1.757
10m SD & RO	D1 (ditch, 1st)	0.0376	0.0188	0.0107	0.0027
	D1 (stream, 1st)	0.0203	0.0106	0.0046	0.0023
	D3 (ditch, 1st)	0.0230	0.0114	0.0064	0.0016
	D4 (pond, 1st)	0.0211	0.0090	0.0060	0.0030
	D4 (stream, 1st)	0.0043	0.0022	0.0009	0.0005
	D5 (pond, 1st)	0.0219	0.0094	0.0062	0.0031
	D5 (stream, 1st)	0.0029	0.0015	0.0006	0.0003
	R4 (stream, 1st)	0.2640	0.2640	0.2640	0.2640
20m SD & RO	D1 (ditch, 1st)	0.0188	0.0107	0.0053	0.0027
	D1 (stream, 1st)	0.0106	0.0046	0.0023	0.0011
	D3 (ditch, 1st)	0.0114	0.0064	0.0032	0.0016
	D4 (pond, 1st)	0.0150	0.0060	0.0030	<0.0001
	D4 (stream, 1st)	0.0022	0.0009	0.0005	0.0002
	D5 (pond, 1st)	0.0156	0.0062	0.0031	<0.0001
	D5 (stream, 1st)	0.0015	0.0006	0.0003	0.0001
	R4 (stream, 1st)	0.0883	0.0881	0.0880	0.0880
30m SD & RO	D1 (ditch, 1st)	0.0134	0.0053	0.0027	<0.0001
	D1 (stream, 1st)	0.0070	0.0034	0.0011	0.0011
	D3 (ditch, 1st)	0.0081	0.0032	0.0016	<0.0001
	D4 (pond, 1st)	0.0090	0.0060	0.0030	<0.0001
	D4 (stream, 1st)	0.0014	0.0007	0.0002	0.0002
	D5 (pond, 1st)	0.0094	0.0062	0.0031	<0.0001
	D5 (stream, 1st)	0.0010	0.0005	0.0001	0.0001
	R4 (stream, 1st)	0.0882	0.0881	0.0880	0.0880

Winter wheat, 2 × 6.25 g/ha

FOCUS SW Step 3 values for the application in winter wheat are presented in **Table 9.2.5- 18**.

Table 9.2.5- 18: PEC$_{sw}$ and PEC$_{sed}$ values of deltamethrin in winter wheat for all calculated scenarios according to FOCUS SW Step 3; letters S, D, and R before correspond to the dominant entry path – spray drift, drainage, and runoff

Scenario	Single Application				Multiple Application			
	Entry route	PEC$_{sw}$ [µg/L] a)	PEC$_{sw}$ [µg/L] b)	PEC$_{sed}$ [µg/kg]	Entry route	PEC$_{sw}$ [µg/L] a)	PEC$_{sw}$ [µg/L] b)	PEC$_{sed}$ [µg/kg]
D1 (ditch, 1st)	S	0.0400	0.0128	0.1760	S	0.0356	0.0113	0.2730
D1 (stream, 1st)	S	0.0307	0.0097	0.0117	S	0.0296	0.0093	0.0464
D2 (ditch, 1st)	S	0.0402	0.0128	0.2130	S	0.0358	0.0113	0.2780
D2 (stream, 1st)	S	0.0332	0.0105	0.0272	S	0.0311	0.0098	0.1860
D3 (ditch, 1st)	S	0.0399	0.0127	0.1510	S	0.0351	0.0111	0.1910
D4 (pond, 1st)	S	0.0014	0.0004	0.0224	S	0.0014	0.0004	0.0357
D4 (stream, 1st)	S	0.0317	0.0100	0.0154	S	0.0277	0.0087	0.0180
D5 (pond, 1st)	S	0.0014	0.0004	0.0220	S	0.0014	0.0004	0.0355
D5 (stream, 1st)	S	0.0321	0.0101	0.0099	S	0.0303	0.0095	0.0225
D6 (ditch, 1st)	S	0.0402	0.0128	0.2230	S	0.0375	0.0119	0.3750
R1 (pond, 1st)	S	0.0014	0.0004	0.0255	S	0.0014	0.0004	0.0466
R1 (stream, 1st)	S	0.0263	0.0082	0.2860	S	0.0228	0.0071	0.6430
R3 (stream, 1st)	S	0.0369	0.0117	0.1330	S	0.0322	0.0101	0.2610
R4 (stream, 1st)	S	0.0263	0.0082	0.5600	S	0.0229	0.0071	1.154

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

FOCUS SW Step 4 values for the application in winter wheat are presented in Table 9.2.5- 19 and Table 9.2.5- 22.

Single application

Table 9.2.5- 19: Summary of FOCUS Step 4 PEC$_{sw}$ values of deltamethrin after single application in winter wheat SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0109	0.0053	0.0026	0.0010	0.0033	0.0015	0.0007	0.0003
	D1 (stream, 1st)	0.0111	0.0057	0.0028	0.0011	0.0033	0.0016	0.0008	0.0003
	D2 (ditch, 1st)	0.0109	0.0053	0.0027	0.0010	0.0033	0.0015	0.0007	0.0003
	D2 (stream, 1st)	0.0120	0.0061	0.0031	0.0012	0.0036	0.0018	0.0009	0.0003
	D3 (ditch, 1st)	0.0109	0.0053	0.0026	0.0010	0.0032	0.0015	0.0007	0.0003
	D4 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D4 (stream, 1st)	0.0114	0.0059	0.0029	0.0012	0.0034	0.0017	0.0008	0.0003
	D5 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D5 (stream, 1st)	0.0116	0.0060	0.0030	0.0012	0.0035	0.0017	0.0008	0.0003
	D6 (ditch, 1st)	0.0109	0.0053	0.0027	0.0010	0.0033	0.0015	0.0007	0.0003
	R1 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	R1 (stream, 1st)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	R3 (stream, 1st)	0.0133	0.0068	0.0034	0.0014	0.0040	0.0020	0.0010	0.0004
	R4 (stream, 1st)	0.0095	0.0049	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
10m SD & RO	D1 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D1 (stream, 1st)	0.0060	0.0028	0.0014	0.0006	0.0017	0.0008	0.0004	0.0001
	D2 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D2 (stream, 1st)	0.0064	0.0031	0.0015	0.0006	0.0019	0.0009	0.0004	0.0002
	D3 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D4 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0062	0.0029	0.0015	0.0006	0.0018	0.0008	0.0004	0.0002
	D5 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0062	0.0030	0.0015	0.0006	0.0018	0.0008	0.0004	0.0002
	D6 (ditch, 1st)	0.0056	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	R1 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0051	0.0024	0.0012	0.0005	0.0015	0.0007	0.0003	0.0001
	R3 (stream, 1st)	0.0072	0.0034	0.0017	0.0007	0.0021	0.0010	0.0005	0.0002
	R4 (stream, 1st)	0.0051	0.0024	0.0012	0.0005	0.0015	0.0007	0.0003	0.0001
20m SD & RO	D1 (ditch, 1st)	0.0030	0.0016	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D1 (stream, 1st)	0.0031	0.0014	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D2 (ditch, 1st)	0.0030	0.0017	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D2 (stream, 1st)	0.0034	0.0015	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D3 (ditch, 1st)	0.0030	0.0016	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0006	0.0003	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0032	0.0015	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D5 (pond, 1st)	0.0006	0.0003	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0033	0.0015	0.0009	0.0003	0.0009	0.0004	0.0002	<0.0001
	D6 (ditch, 1st)	0.0030	0.0017	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	R1 (pond, 1st)	0.0006	0.0003	0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0027	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
	R3 (stream, 1st)	0.0038	0.0017	0.0010	0.0003	0.0011	0.0005	0.0003	<0.0001
	R4 (stream, 1st)	0.0027	0.0012	0.0007	0.0002	0.0007	0.0003	0.0002	<0.0001
30m SD & RO	D1 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	D1 (stream, 1st)	0.0020	0.0011	0.0006	0.0003	0.0005	0.0003	0.0001	<0.0001
	D2 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	D2 (stream, 1st)	0.0021	0.0012	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	D3 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	D4 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0021	0.0012	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	D5 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0021	0.0012	0.0006	0.0003	0.0006	0.0003	0.0002	<0.0001
	D6 (ditch, 1st)	0.0020	0.0010	0.0007	0.0003	0.0005	0.0003	0.0002	<0.0001
	R1 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0017	0.0010	0.0005	0.0002	0.0005	0.0003	0.0001	<0.0001
	R3 (stream, 1st)	0.0024	0.0014	0.0007	0.0003	0.0007	0.0004	0.0002	<0.0001
	R4 (stream, 1st)	0.0017	0.0010	0.0005	0.0002	0.0005	0.0003	0.0001	<0.0001

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 20: Summary of PEC_{sed} values of deltamethrin after multiple application in winter wheat with mitigation options according to FOCUS SW Step 4

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0471	0.0226	0.0112	0.0041
	D1 (stream, 1st)	0.0040	0.0020	0.0010	0.0004
	D2 (ditch, 1st)	0.0576	0.0278	0.0139	0.0052
	D2 (stream, 1st)	0.0094	0.0047	0.0023	0.0009
	D3 (ditch, 1st)	0.0399	0.0191	0.0094	0.0034
	D4 (pond, 1st)	0.0195	0.0097	0.0049	0.0016
	D4 (stream, 1st)	0.0053	0.0026	0.0013	0.0005
	D5 (pond, 1st)	0.0192	0.0096	0.0048	0.0016
	D5 (stream, 1st)	0.0034	0.0017	0.0008	0.0003
	D6 (ditch, 1st)	0.0606	0.0294	0.0147	0.0055
	R1 (pond, 1st)	0.0230	0.0163	0.0130	0.0109
	R1 (stream, 1st)	0.2840	0.2840	0.2840	0.2840
	R3 (stream, 1st)	0.1300	0.1290	0.1290	0.1290
	R4 (stream, 1st)	0.5580	0.5580	0.5580	0.5580
10m SD & RO	D1 (ditch, 1st)	0.0240	0.0126	0.0055	0.0027
	D1 (stream, 1st)	0.0021	0.0010	0.0005	0.0002
	D2 (ditch, 1st)	0.0296	0.0156	0.0069	0.0034
	D2 (stream, 1st)	0.0049	0.0023	0.0011	0.0004
	D3 (ditch, 1st)	0.0203	0.0106	0.0046	0.0023
	D4 (pond, 1st)	0.0146	0.0065	0.0032	0.0016
	D4 (stream, 1st)	0.0028	0.0013	0.0006	0.0002
	D5 (pond, 1st)	0.0144	0.0064	0.0032	0.0016
	D5 (stream, 1st)	0.0018	0.0008	0.0004	0.0001
	D6 (ditch, 1st)	0.0312	0.0165	0.0074	0.0037
	R1 (pond, 1st)	0.0143	0.0066	0.0038	0.0026
	R1 (stream, 1st)	0.0430	0.0428	0.0427	0.0427
	R3 (stream, 1st)	0.0201	0.0197	0.0195	0.0194
	R4 (stream, 1st)	0.0841	0.0839	0.0838	0.0838
20m SD & RO	D1 (ditch, 1st)	0.0126	0.0069	0.0027	0.0013
	D1 (stream, 1st)	0.0011	0.0005	0.0003	<0.0001
	D2 (ditch, 1st)	0.0156	0.0086	0.0034	0.0017
	D2 (stream, 1st)	0.0025	0.0011	0.0006	0.0002
	D3 (ditch, 1st)	0.0106	0.0058	0.0023	0.0011
	D4 (pond, 1st)	0.0097	0.0049	0.0016	0.0016
	D4 (stream, 1st)	0.0014	0.0006	0.0004	0.0001
	D5 (pond, 1st)	0.0096	0.0048	0.0016	0.0016
	D5 (stream, 1st)	0.0009	0.0004	0.0002	<0.0001
	D6 (ditch, 1st)	0.0165	0.0092	0.0037	0.0018
	R1 (pond, 1st)	0.0093	0.0048	0.0017	0.0017
	R1 (stream, 1st)	0.0144	0.0143	0.0143	0.0142
	R3 (stream, 1st)	0.0069	0.0066	0.0066	0.0065
	R4 (stream, 1st)	0.0281	0.0280	0.0280	0.0279

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction			
		0%	50%	75%	90%
30m SD & RO	D1 (ditch, 1st)	0.0083	0.0041	0.0027	0.0013
	D1 (stream, 1st)	0.0007	0.0004	0.0002	<0.0001
	D2 (ditch, 1st)	0.0104	0.0052	0.0034	0.0017
	D2 (stream, 1st)	0.0016	0.0009	0.0004	0.0002
	D3 (ditch, 1st)	0.0070	0.0034	0.0023	0.0011
	D4 (pond, 1st)	0.0065	0.0032	0.0016	<0.0001
	D4 (stream, 1st)	0.0009	0.0005	0.0002	0.0001
	D5 (pond, 1st)	0.0064	0.0032	0.0016	<0.0001
	D5 (stream, 1st)	0.0006	0.0003	0.0001	<0.0001
	D6 (ditch, 1st)	0.0110	0.0055	0.0037	0.0018
	R1 (pond, 1st)	0.0063	0.0032	0.0017	0.0005
	R1 (stream, 1st)	0.0143	0.0143	0.0142	0.0142
	R3 (stream, 1st)	0.0067	0.0066	0.0065	0.0065
	R4 (stream, 1st)	0.0280	0.0280	0.0280	0.0279

Multiple application

Table 9.2.5- 21: Summary of FOCUS Step 4 PEC_{sw} values of deltamethrin after multiple application in winter wheat SD and RO denote spray drift and runoff buffer, respectively

Buffer Width & Type	Scenario	PECsw [µg/L] a) Drift Reduction				PECsw [µg/L] b) Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0094	0.0047	0.0023	0.0010	0.0028	0.0013	0.0006	0.0003
	D1 (stream, 1st)	0.0105	0.0054	0.0025	0.0010	0.0031	0.0016	0.0007	0.0002
	D2 (ditch, 1st)	0.0094	0.0047	0.0024	0.0010	0.0028	0.0014	0.0007	0.0003
	D2 (stream, 1st)	0.0110	0.0057	0.0027	0.0010	0.0033	0.0016	0.0007	0.0003
	D3 (ditch, 1st)	0.0093	0.0046	0.0023	0.0010	0.0027	0.0013	0.0006	0.0003
	D4 (pond, 1st)	0.0012	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D4 (stream, 1st)	0.0098	0.0050	0.0024	0.0009	0.0029	0.0014	0.0007	0.0002
	D5 (pond, 1st)	0.0013	0.0006	0.0003	0.0001	0.0003	0.0002	<0.0001	<0.0001
	D5 (stream, 1st)	0.0107	0.0055	0.0026	0.0010	0.0032	0.0016	0.0007	0.0003
	D6 (ditch, 1st)	0.0099	0.0050	0.0025	0.0011	0.0029	0.0014	0.0007	0.0003
	R1 (pond, 1st)	0.0012	0.0006	0.0002	0.0001	0.0003	0.0002	<0.0001	<0.0001
	R1 (stream, 1st)	0.0080	0.0041	0.0019	0.0007	0.0024	0.0012	0.0005	0.0002
	R3 (stream, 1st)	0.0114	0.0059	0.0028	0.0010	0.0034	0.0017	0.0008	0.0003
	R4 (stream, 1st)	0.0081	0.0042	0.0020	0.0007	0.0024	0.0012	0.0005	0.0002
10m SD & RO	D1 (ditch, 1st)	0.0047	0.0023	0.0013	0.0003	0.0013	0.0006	0.0004	<0.0001
	D1 (stream, 1st)	0.0054	0.0029	0.0013	0.0006	0.0016	0.0008	0.0003	0.0002
	D2 (ditch, 1st)	0.0047	0.0024	0.0013	0.0003	0.0014	0.0007	0.0004	<0.0001
	D2 (stream, 1st)	0.0057	0.0030	0.0013	0.0007	0.0016	0.0008	0.0004	0.0002
	D3 (ditch, 1st)	0.0046	0.0023	0.0013	0.0003	0.0013	0.0006	0.0004	<0.0001
	D4 (pond, 1st)	0.0009	0.0004	0.0003	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0050	0.0027	0.0012	0.0006	0.0014	0.0007	0.0003	0.0002
	D5 (pond, 1st)	0.0009	0.0004	0.0003	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0055	0.0029	0.0013	0.0006	0.0016	0.0008	0.0003	0.0002
	D6 (ditch, 1st)	0.0050	0.0025	0.0014	0.0004	0.0014	0.0007	0.0004	<0.0001
	R1 (pond, 1st)	0.0009	0.0004	0.0002	0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0041	0.0022	0.0010	0.0005	0.0012	0.0006	0.0003	0.0001
	R3 (stream, 1st)	0.0059	0.0031	0.0014	0.0007	0.0017	0.0009	0.0004	0.0002
	R4 (stream, 1st)	0.0042	0.0022	0.0010	0.0005	0.0012	0.0006	0.0003	0.0001

Buffer Width & Type	Scenario	PECsw [µg/L] [a)] Drift Reduction				PECsw [µg/L] [b)] Drift Reduction			
		0%	50%	75%	90%	0%	50%	75%	90%
20m SD & RO	D1 (ditch, 1st)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D1 (stream, 1st)	0.0029	0.0013	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	D2 (ditch, 1st)	0.0024	0.0013	0.0007	0.0003	0.0007	0.0004	0.0002	<0.0001
	D2 (stream, 1st)	0.0030	0.0013	0.0007	0.0003	0.0008	0.0004	0.0002	<0.0001
	D3 (ditch, 1st)	0.0023	0.0013	0.0007	0.0003	0.0006	0.0004	0.0002	<0.0001
	D4 (pond, 1st)	0.0006	0.0003	0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0027	0.0012	0.0006	0.0003	0.0007	0.0003	0.0002	<0.0001
	D5 (pond, 1st)	0.0006	0.0003	0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0029	0.0013	0.0006	0.0003	0.0008	0.0003	0.0002	<0.0001
	D6 (ditch, 1st)	0.0025	0.0014	0.0007	0.0004	0.0007	0.0004	0.0002	<0.0001
	R1 (pond, 1st)	0.0006	0.0002	0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
	R3 (stream, 1st)	0.0031	0.0014	0.0007	0.0003	0.0009	0.0004	0.0002	<0.0001
	R4 (stream, 1st)	0.0022	0.0010	0.0005	0.0002	0.0006	0.0003	0.0001	<0.0001
30m SD & RO	D1 (ditch, 1st)	0.0017	0.0007	0.0003	<0.0001	0.0005	0.0002	<0.0001	<0.0001
	D1 (stream, 1st)	0.0019	0.0010	0.0003	0.0003	0.0005	0.0002	<0.0001	<0.0001
	D2 (ditch, 1st)	0.0017	0.0007	0.0003	<0.0001	0.0005	0.0002	<0.0001	<0.0001
	D2 (stream, 1st)	0.0020	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	D3 (ditch, 1st)	0.0017	0.0007	0.0003	<0.0001	0.0004	0.0002	<0.0001	<0.0001
	D4 (pond, 1st)	0.0004	0.0003	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	D4 (stream, 1st)	0.0018	0.0009	0.0003	0.0003	0.0005	0.0002	<0.0001	<0.0001
	D5 (pond, 1st)	0.0004	0.0003	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	D5 (stream, 1st)	0.0019	0.0010	0.0003	0.0003	0.0005	0.0003	<0.0001	<0.0001
	D6 (ditch, 1st)	0.0018	0.0007	0.0004	<0.0001	0.0005	0.0002	<0.0001	<0.0001
	R1 (pond, 1st)	0.0004	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	R1 (stream, 1st)	0.0015	0.0007	0.0002	0.0002	0.0004	0.0002	<0.0001	<0.0001
	R3 (stream, 1st)	0.0021	0.0010	0.0003	0.0003	0.0006	0.0003	<0.0001	<0.0001
	R4 (stream, 1st)	0.0015	0.0007	0.0002	0.0002	0.0004	0.0002	<0.0001	<0.0001

a) maximum PECsw values including the amount of deltamethrin adsorbed to suspended solids
b) maximum PECsw values not including the amount of deltamethrin adsorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only

Table 9.2.5- 22: Summary of PEC_{sed} values of deltamethrin after multiple application in winter wheat with mitigation options according to FOCUS SW Step 4

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction 0%	50%	75%	90%
5m SD	D1 (ditch, 1st)	0.0717	0.0358	0.0178	0.0076
	D1 (stream, 1st)	0.0157	0.0079	0.0036	0.0013
	D2 (ditch, 1st)	0.0734	0.0367	0.0183	0.0079
	D2 (stream, 1st)	0.0656	0.0338	0.0159	0.0060
	D3 (ditch, 1st)	0.0495	0.0244	0.0121	0.0051
	D4 (pond, 1st)	0.0317	0.0158	0.0063	0.0032
	D4 (stream, 1st)	0.0061	0.0031	0.0014	0.0005
	D5 (pond, 1st)	0.0315	0.0157	0.0063	0.0031
	D5 (stream, 1st)	0.0076	0.0038	0.0017	0.0006
	D6 (ditch, 1st)	0.0991	0.0495	0.0248	0.0106
	R1 (pond, 1st)	0.0438	0.0329	0.0264	0.0243
	R1 (stream, 1st)	0.6410	0.6400	0.6400	0.6400
	R3 (stream, 1st)	0.2550	0.2540	0.2530	0.2530
	R4 (stream, 1st)	1.152	1.151	1.151	1.151
10m SD & RO	D1 (ditch, 1st)	0.0358	0.0178	0.0102	0.0025
	D1 (stream, 1st)	0.0079	0.0041	0.0017	0.0008
	D2 (ditch, 1st)	0.0367	0.0183	0.0105	0.0026
	D2 (stream, 1st)	0.0338	0.0179	0.0080	0.0040
	D3 (ditch, 1st)	0.0244	0.0121	0.0068	0.0017
	D4 (pond, 1st)	0.0221	0.0095	0.0063	0.0032
	D4 (stream, 1st)	0.0031	0.0016	0.0007	0.0003
	D5 (pond, 1st)	0.0220	0.0094	0.0063	0.0031
	D5 (stream, 1st)	0.0038	0.0020	0.0008	0.0004
	D6 (ditch, 1st)	0.0495	0.0248	0.0141	0.0035
	R1 (pond, 1st)	0.0225	0.0105	0.0078	0.0055
	R1 (stream, 1st)	0.0967	0.0964	0.0962	0.0962
	R3 (stream, 1st)	0.0393	0.0387	0.0382	0.0381
	R4 (stream, 1st)	0.1730	0.1730	0.1730	0.1730
20m SD & RO	D1 (ditch, 1st)	0.0178	0.0102	0.0051	0.0025
	D1 (stream, 1st)	0.0041	0.0017	0.0008	0.0004
	D2 (ditch, 1st)	0.0183	0.0105	0.0052	0.0026
	D2 (stream, 1st)	0.0179	0.0080	0.0040	0.0020
	D3 (ditch, 1st)	0.0121	0.0068	0.0034	0.0017
	D4 (pond, 1st)	0.0158	0.0063	0.0032	<0.0001
	D4 (stream, 1st)	0.0016	0.0007	0.0003	0.0002
	D5 (pond, 1st)	0.0157	0.0063	0.0031	<0.0001
	D5 (stream, 1st)	0.0020	0.0008	0.0004	0.0002
	D6 (ditch, 1st)	0.0248	0.0141	0.0071	0.0035
	R1 (pond, 1st)	0.0156	0.0065	0.0035	0.0012
	R1 (stream, 1st)	0.0324	0.0322	0.0321	0.0321
	R3 (stream, 1st)	0.0134	0.0130	0.0128	0.0127
	R4 (stream, 1st)	0.0580	0.0578	0.0577	0.0577

Buffer Width & Type	Scenario	PECsed [µg/kg] Drift Reduction			
		0%	50%	75%	90%
30m SD & RO	D1 (ditch, 1st)	0.0127	0.0051	0.0025	<0.0001
	D1 (stream, 1st)	0.0027	0.0013	0.0004	0.0004
	D2 (ditch, 1st)	0.0131	0.0052	0.0026	<0.0001
	D2 (stream, 1st)	0.0119	0.0060	0.0020	0.0020
	D3 (ditch, 1st)	0.0086	0.0034	0.0017	<0.0001
	D4 (pond, 1st)	0.0095	0.0063	0.0032	<0.0001
	D4 (stream, 1st)	0.0010	0.0005	0.0002	0.0002
	D5 (pond, 1st)	0.0094	0.0063	0.0031	<0.0001
	D5 (stream, 1st)	0.0013	0.0006	0.0002	0.0002
	D6 (ditch, 1st)	0.0177	0.0071	0.0035	<0.0001
	R1 (pond, 1st)	0.0095	0.0065	0.0035	0.0012
	R1 (stream, 1st)	0.0323	0.0322	0.0321	0.0321
	R3 (stream, 1st)	0.0131	0.0129	0.0127	0.0127
	R4 (stream, 1st)	0.0579	0.0577	0.0577	0.0577

CP 9.3 Fate and behaviour in air

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

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

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

CP 9.4 Estimation of concentrations for other routes of exposure

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