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Document/MC 8

Section 9: Fate and behaviour in the environment.

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2013-11-05

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Version history

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	Mobility in the soil	

CP 9 FATE AND BEHAVIOUR IN THE ENVIRONMENT

Table 9-1: Intended application patterns

	FATE AND	BEHAVIO	UR IN THE	ENVIRONM	ENT
Use patterns	s considered in	ı this risk as	sessment		Maximum application rate,
Table 9- 1:	Intended a	pplication pa	tterns	Ď	
Сгор	Timing of application (range)	Number of applications	Application interval	Maximum label rate (range) [kg/ha]	Maximum application rate, individual freatment [g a(s./ha] trifloxystrobin
Apple/Pear/ Quince (early)	BBCH 31 - 89	3	100	0.15	
Apple/Pear/ Quince (late)	BBCH 55 - 87	3	×10 ×	0,225	112.5
Strawberry, late	BBCH 55 - 89	28 9		0.30	
Strawberry, early	BBCH 10 - 92	\$\tilde{\t	\$ 7 \$ \$	0.25 0.25 0.25	125
Grapes	BBCH 12 -89€		10	Q.25	P25
were addresse	addressed in the active substanting documents of the active substa	ent as mey we	re major in en	vironmental rate	ets summarised in Table 9- 2 e studies.

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

Chemical Structure	Considered for
ÇH₃	PEC _{soil} PEC _{soil} PEC _{soil} PEC _{soil} PEC _{soil} PEC _{sw} PEC _{soil} PEC _{sw} PEC _{sw} PEC _{soil} PEC _{sw}
O N CF3	PEC _{gw}
H,C O N O	PEC _{sw} & PEC _{sed}
O CH ₃	PEC _{sw} & PEC _{sed} PEC _{sw} & REC _{sed} PEC _{sw} & REC _{sed}
AGH.	PECsoil
O CF ₃ Q	PEC _{gw}
H ₃ C O N O O O O O O O O O O O O O O O O O	PECsoil PECsw & PECsed O
OH ON S	
	PEGoil RECgw PECw
N N N N N N N N N N N N N N N N N N N	REC _{gw} S
H ₃ C N N N N N N N N N N N N N N N N N N N	
	PEC PEC SW
E CH.O. C.CF.	PECO Q
N N N N N N N N N N N N N N N N N N N	PEC _{sw} O
	PEC _{soll} PEC _{soll} PEC _{soll} PEC _{soll}
CF,	PECsoil
	\ \tag{\tag{\tag{\tag{\tag{\tag{\tag{
N SH.	PEC _{gw} PEC _{sw}
PC OF STATE	
CFO CFO	PECsoil
	PEC _{gw}
z z	PEC _{sw}
N O CH ₃	
H ₃ C ON O	
O' NOH NO CF3	PEC _{soil}
	PEC _{gw}
	PEC _{sw}
N N	
H ₃ C OH OH	
OH .CF.	PEC _{soil}
3	PEC _{gw}
	PEC _{sw}
O Z CH	
N CH ₃	
	CF ₃

Compound / Codes	Chemical Structure	Considered for
CGA 381318 (ZZ-isomer)	CF ₃ Z O N CH ₃ H ₃ C O O O O O O O O O O O O O	PEC _{sw} PEC _{sw} PEC _{sw}
CGA 357262 (ZZ-isomer)	CF, Q	PECSW CHANGE TO THE CONTROL OF THE C
CGA 107170 (volatile)		
2-hydroxymethylbenzonitrile	CN C	PECSW 5

Definition of the residue for risk assessment

Definition of the residue for risk assessment.

Justification for the residue definition for risk assessment is provided in MCA Section 7, data point 7.4.1.

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

Compartment	Residue Definition
Soil O	trifloxystroðin, ©GA 35/7261, CGA 321113, CGA 373466, CGA 381318,
*	NOA 413161, NOA 413163, CGA 357276, NOA 409480
Groundwater	same as soil
Surface water	same as ful plus CGA 357262, CGA 107170, 2-hydroxymethylbenzonitrile
	Y B Q
Sediment	triflogstrokin, CGA 321113
<u> </u>	
Air 💸 💍	trifloxystobin, CGA 107170

The second of th Trifloxystrobin WG 50

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 trifloxystrobin in soil is shown in Figure 9.1.1-4.

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 trifloxystrobin in soil (major degradation products)

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 71.2.2.

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 7.1.52.2.

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 7.14.1

CP 9.1.2.2 Lysimeter studies

For information only simpler studies please refer to M&A Section 7, data point 7.1.4.2.

CP 9.1.2.3 Field leaching studies

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

CP 9.1.3 Estimation of concentrations in soil

PECsoil modelling approach

The predicted environmental concentrations in soil (PEC_{soil}) for the active substance trifloxystrobin 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/cm³ 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 recommendation of the FOCUS groundwater guidance paper (FOCUS 2002) for apples, vines and strawber (Table 9.2.4-1).

Derivation of keretic modelling input values for trifloxystrobin and its major degradation products is presented in SCA Section 7, data point 7.1.2, a summary of modelling input parameters is given in the report ISPP 9.10/01.

Predicted environmental concentrations in soil (PEC_{soil}) of trifloxystrobin and its major degradation products

For trifloxystrobin, the major degradation products CGA 321113, NOA 413161, CGA 37276, CGA 357261, CGA 373466, NOA 413163, NOA 409480 and CGA 381318 were considered.

Report:	KCP 9.1.3/01, ; 2013
Title:	Trifloxystrobin (TFS) and metabolites PECsoil EUR; Use in pome Truit, grape
	and strawberry in Europe
Document No.:	<u>M-469543-01-1</u> (EnSa-13-0743)
Guidelines:	- EU Commission, 2000, Guidance Document on Persistence in Soil (Working
	Document) 9188/VI/97 rev
	- FOCUS, 1997, Soil persistence models and EU registration
	- TOCOS, 2002, Generic Quidance for reocos Groundwater scenarios,
	Version 1.1 O S S S S S S S S S S S S S S S S S S
GLP:	No (calculation)

Methods and Materials: The predicted environmental concentrations of soil (PECoil) of trifloxystrobin and its major soil degradation products CGA 221113, NOA 13164, CGA 357276, CGA 357261, CGA 373466, NOA 413163, NOA 409480 and CGA 381318 were calculated based on a first tier approach using a Microsoft Excel spreadsheet the use of triloxystrobin in pome fruit, grape and strawberry was assessed according to Good Agricultural Practice (GAP) under European cropping conditions. Detailed application data used for simulation of PECsoil were compiled in Table 9.1.3-1.

Substance Specific Parameters: PEC soil calculations were based on the DT so of 1.43 days (worst case of laboratory studies for the parent compound to loxy to bin,

Table 9.1.3- 1: Application pattern used for PEC soil calculations of Fifloxystrobin

		*************************************	, Q AQ	plication		Amount reaching
Individual Crop	FOCUS crop used for Interception	Season [g a.s./ha]	Interval	olication © Plant Interception	BBCH Stage	the soil per application [g a.s./ha]
Apples, early	Apples ©	3×75"	b 10 €	3×65	3×31-89	3×26.250
Apples, late	Apple	3×112.5	10	3×65	3×55-87	3×39.375
Grapes	Vines S	3 125	10	3×60	3×12-89	3×50.000
Strawberry, early	Strawberry	2×125	*\$ ⁷ 7	2×30	2×10-92	2×87.500
Strawberry, late	Strawberry	2×150 %	7	2×60	2×55-89	2×60.000
Strawberry, early Strawberry, late						

Findings: The maximum PEC_{soil} values for trifloxystrobin and its major degradation products are summarised in Table 9.1.3- 2.

Table 9.1.3- 2: Maximum PEC_{soil} of trifloxystrobin and its degradation products for the dises assessed

Use pattern	Trifloxystrobin	CGA 321113	NOA 413161	AGA 357276	CGA 357261	CGA 302466	MOA 413163	h, _ ,	CGA 38 (8) 18
			(PE	Csoil mg/l	دgا کی ا	ø ' <u>></u>		
Apples, early	0.035	0.051	0.006 €	0.0020	0.042	0 .029 0	0.00	0.007	0.005
Apples, late	0.053	0.076	0.0094	0.003		0.043	0,009	© .010,©	0.00
Vines	0.067	0.097	0.011	Q 003 🥎	0.023	0.055	© .011 👟	0.013	0.009
Strawberry, early	0.121	0.115	&%13 /	70.004	0.030	Ø9.068 ×	0.01	@\	3 .013
Strawberry, late	0.083	0.079	0.009	0.003	.0,020 _ C	0.046	0.600	9 .011 👸	0.009

Potential accumulation in soft.

The accumulation potential of the major triffoxystropin degradation products CGA 321113 and NOA 413161 after long term use was also assessed. The results are presented in Table 9.1.3-3 (mixing depth of 10 cm for platteau calculation, no Wlage) Table 9.1.3-4 shows the results taking the effect of tillage into account onixing depth of 20 cm for plateau calculation).

Table 9.1.3-3: PEC of triffoxystrobin and its major degradation products for the uses assessed, taking the effect of accumulation into account (mixing depth of 10 cm for plateau calculation, no-tilbage)

		7) 4\ \(\simeq\)\\	(0)%	
Use Pattern			CGA-321113	NOA 413161
		~ . O &/	PEC _{so}	_{il} [mg/kg]
Amalas saulti		rdateau.	€025	< 0.001
Apples, early	4())	ototal* S	\$0.076	0.006
A1 1 - 4 - 0	(I) V	🦖 plateau 🦙	0.037	< 0.001
Apples, late		ototal* v v v plateau v togal*	0.113	0.009
Vines 🔊	- \$\frac{1}{\sqrt{2}}	Ø∕lateay⊘ ~~	0.047	< 0.001
Vines &		total of	0.144	0.011
C4\$1		plateau 7	0.056	< 0.001
Strawberry, early		tořal* .O`	0.171	0.013
C4 1 1 4 1		plateau total*	0.038	< 0.001
Strawberry, late		total*	0.117	0.009
Strawberry, late	or (mean) &	~~~~	1.490	1.000

^{*} total = plateau (Cackground concentration after multi-year use) + max. PECsoil

Table 9.1.3- 4: PEC_{soil} of trifloxystrobin and its major degradation products for the uses assessed, taking the effect of accumulation into account (mixing depth of 20 cm for plateau calculation)

Use Pattern		CGA 321113	NOA 413161 💍
Use Pattern		PEGooil	[mg/kg]
Apples, early	plateau total*	© 0.012	<0.001 ©.006 ©.006
Apples, late	plateau total*	0.019 0.095	0.006
Vines	plateau total*	0.024	© <0001 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Strawberry, early	total*	0.142	\$\int \(\lambda \) \(\lambda
Strawberry, late	platean total*	0.019	<0.001 0 0.000
Accumulation factor (mean)	Q (4 Z	₹.240 €	₽ 1 99 0

^{*} total = plateau (background concentration after multi-year use) + max PEC

The maximum, short-term and long-term PEC_{sol} values and the time weighted werage values (TWAC_{soil}) of trifloxystrobin and its major degradation products are presented in Table 9.1.3- 5 to Table 9.1.3- 14.

Apples, early, 3×75 g.a.s./ha 3×65% interception, 10 d app. Onterval

Table 9.1.3-5: Apples, early, PEC soil of trifloxy strobin and its major degradation products

Substa	nce A		\$\frac{1}{6}\frac{1}{8	473461	~	Of 357261	CGA 373486	NOA 413163	NOA 409480	CGA 381318
Days	after	01 .Ć				ECsoiding/l	(g]			
maxim	ium 🏻 🛦	Q Ü			~ ~ ~	>				
Initial			0.091	0.006	0, 4 d	© .012	0.029	0.006	0.007	0.005
Chart	P.		Ø.051 ℚ	0.006	£ 5002 🤝	0.012	0.028	0.006	0.006	0.005
Short term.	, 2	0.013	0.054	0006 Ø		0.011	0.028	0.006	0.006	0.005
term	4	0.005	0.0031	Ø.006 [≈]	0.002	0.011	0.028	0.006	0.006	0.004
	7	0,00/1	Q.050	0.005	0 002	0.010	0.027	0.006	0.006	0.004
	14	©0.00 P	0.050	0.005	0.002	0.009	0.025	0.005	0.005	0.003
т	215	<0.001	0.949	0.005	0.001	0.008	0.023	0.005	0.005	0.003
Long	21 \$\frac{1}{2}\text{8}	50 001 3			0.001	0.007	0.022	0.004	0.004	0.002
tCIIII +	¥42 @	\$0.001\$ ³	0.047	0.004	0.001	0.005	0.019	0.004	0.003	0.001
	5,0	<0.001	0:046	0.004	0.001	0.005	0.018	0.004	0.003	0.001
	(1)0 0		0.042	0.003	< 0.001	0.002	0.011	0.002	0.001	< 0.001



Table 9.1.3-6: Apples, early, TWAC_{soil} of trifloxystrobin and its major degradation products of trifloxystrobin and its major degradation products.

Substa	nce	Trifloxystrobin	CGA 321113	NOA 413161	CGA 357276	©CGA 357261	CGA 373466	Ç. NOA 43163	**************************************	CGA \$81318 4/2)
Days maxim	after um				TW	AĆŚ [mg	/kg]	1 L		
Initial	0				<u>A</u>	<i>D</i>	Q 2	· \$	Z	Ö, Ø
Short	1	0.028	0.051	0.006	V	0.012	%029 <u>,</u> ©	0.006	Q.907 _ ©	0.005
term	2	0.023	0.051			% 012	0.028	0.006	Ø.006××	0.005
term	4	0.016	0.051	0.006		<i>a</i>		9 .006 ®		4 005 €.
	7	0.010	0.051	<i>"</i> "	0.002		0.028	0.006	0.006	0.004
	14	0.005	0.050		0.002	· •. //		N 1 - N	0.006€	0.004
Long	21	0.003	0.050		Q .002	0.010	0,026	0.005	0.006	0.004
Long	28	0.003	0.050	0.005	0.002 ×	<i>√</i> /// <i>∧</i> //	0.025	0.005	Ø05 V	0.003
term -	42	0.002	0.049		0.00	6 5008	0.024	6.9 05 _0	0.005	0.003
	50	0.001	0.049	0.005	6 ,001	0.008	0.0023	0.005	0.003	0.002
	100	< 0.001	0.046	0.004	0.001	0.005	0.018	0.004	© 003	0.001

Apples, late, 3×112 g a.s./ha, 3 65% interception, 10 d app. interval

Table 9.1.3-7: Apples, late, PFC soil of wifloxystrobin and its major degradation products

Substa	nce C	FAMANYS	CGAS24113 &	(2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	CGA(35,7276	o a	√ © ½ CGA 373460Ø &	NOA 413163	NOA 409480	CGA 381318
Days a maxim	^				ro d	Eegil [mg/l	κg]			
Initial	(O)	0.053	\$ 076 💍	0.00 V	QQ003 🚕	0.018	0.043	0.009	0.010	0.007
Ch ort∜	l I	0.033	0.076	0.009	0.003	0.017	0.043	0.009	0.010	0.007
Short & term	2	0.020		Ø.009 Q	0.003	0.017	0.042	0.009	0.010	0.007
term	4	0.008	0.076	0.008/	0.0 03	0.017	0.041	0.009	0.009	0.006
	7	6 002 ∕	0.075	0×908	0.002	0.016	0.040	0.008	0.009	0.006
	140	<0.001	0.074	Ø.008°©	0.002	0.014	0.038	0.008	0.008	0.005
T		<0.0001	0.073 0	0.007	0.002	0.012	0.035	0.007	0.007	0.004
Long	Vio	Ø.001.	0.072	0.007	0.002	0.011	0.033	0.007	0.006	0.003
term \$	420	<0.001		0.006	0.002	0.008	0.029	0.006	0.005	0.002
	<u> </u> \$	< 0.001	0.069	0.006	0.002	0.007	0.027	0.005	0.005	0.002
	100	< 0.001	0.063	0.004	0.001	0.003	0.016	0.003	0.002	< 0.001

Table 9.1.3- 8: Apples, late, $TWAC_{soil}$ of trifloxystrobin and its major degradation products

Substa	ince	Trifloxystrobin	CGA 321113	NOA 413161	CGA 357276	©CGA 357261	CGA 373466	© 100 € 100	(NOA 409480	CGA 281318 47
Days a maxim					TW	AC Sil [mg.	/kg]	4		
Initial	0				<u>A</u>	<u></u>	Q"	- -	L *	
Short	1	0.042	0.076	0.009		0.018	0,043	0.009	Q.910 _ &	0.007
term	2	0.034	0.076	0.009		‰ 17 ॢॐ	0.043	1 - 🔍	Ø.010°×y	0.007
term	4	0.023	0.076	0.009		0.0175	0.00 2	9 .009 °	0.040	4 007 . •
	7	0.015	0.076	0.008	* ~ /		0.042	0.000	0.009	0.006
	14	0.008	0.075	0.008		6 016 4	0.040		0.009	0.006
Lana	21	0.005	0.075		Q .002	0.015	0,039	Ø.008	0.008	0.005
Long	28	0.004	0.074		Ø.002 💙		0.038	0.0	6 08 4	0.005
term -	42	0.003	0.073		0.002	6,012 P	0.03	9 07 0	0.007	0.004
	50	0.002	0.073		\n^* @	0.012	0.0634	0.007	0.007	0.004
	100	0.001	0.069	0,006	0.002	0.008	0.028	0.006	© 005	0.002

Vines, 3×125 g a.s./ha, 3×60% interception, 10 dapp, interval

Table 9.1.3-9: Vines, PECoil of trifloxystrobin and its major degradation products

Substa	ince A	STrifloxystrobin	CCN-321113C		EEA.357246.	CGA \$57261	CGA 373486	NOA 413163	NOA 409480	CGA 381318
Days a		'			X. //	ECsoir jing/l	ζgl			
maxin	num 🍃				, .**/	A	81			
Initial	0,1	0.067		9 .011 🖧	0.003	© 023	0.055	0.011	0.013	0.009
Chart		/×	., ~	0.01	Q 9 03	0.022	0.054	0.011	0.012	0.009
Short term	ໍ້າ	0.025	0.09.7	0,011 ©	0.003	0.022	0.054	0.011	0.012	0.009
	4	0.010	0. 69 6	Ø.011 🗣	0.063	0.021	0.053	0.011	0.012	0.008
	7	0.002	0.096	0.016	E Ø03	0.020	0.051	0.011	0.011	0.007
	14	©0.001	0.094	0.010	0.003	0.017	0.048	0.010	0.010	0.006
Long	21\$ \$\infty\$8	<0.00	0,003	\ \/\	0.003	0.015	0.045	0.009	0.009	0.005
Long	~Q8	< 0.0001	0.092	0.009	0.003	0.013	0.042	0.009	0.008	0.004
	1	\$0.001\$\foralle{}	0.089	0.008	0.002	0.010	0.036	0.007	0.007	0.003
	· ///	<0.001	0:088	0.007	0.002	0.009	0.034	0.007	0.006	0.002
	d96	< 0.001	0.080	0.005	0.001	0.003	0.021	0.004	0.003	< 0.001

Table 9.1.3-10: Vines, TWAC_{soil} of trifloxystrobin and its major degradation products

Substa	ınce	[rifloxystrobin]	CGA 321113	NOA 413161	357276	357261	CGA 373466	493163	409480	(281318 %)
		Triffe	CGA	NOA	CGA	CGA	CGA	NOA		
Days a maxim					TW	ACSii [mg	/kg]	4		
Initial	0				کے	<u></u>	Q" (- - - &	L *	
Short	1	0.053	0.097	0.011	0.003	0.022	% 054 <i>ू</i> ∅	0.011	0.012	0.009
term	2	0.043	0.097	0.011	0.003	© 30 ² 2	0.054		Ø.012°×	0.009
term	4	0.030	0.097	0.011	0.003	0.0225	0.064	9 .011 °		€ ,009 € °
	7	0.019	0.096	0.011		0.022	0.053	0.015	0.012	0.008© 0.007
	14	0.010	0.096	0.010	0.003	@B20_ 4	0.056	0.011	0.01 🎉	0.007
Long	21	0.007	0.095	0.016	Q .003	0.019	0,049	0.010	0.000	0.007
Long term	28	0.005	0.094	A()/	0.003	0.018	0.048	0.00	0 010 . ~	0.006
term	42	0.003	0.093	0.009	0.00	© 016	0.045	6 909 _0	0.009	0.005
	50	0.003	0.092			0.015	0. 0 43	0.009	0.009	0.005
_	100	0.001	0.088	0008	0.002	0.000	0.035		© 006	0.003

Strawberry, early, 2, 125 g. s./hax 2×30% interception, 7 d app. interval

Table 9.1.3- 11: Strawberry, early, PEC of trifloxystrobin and its major degradation products

Substa	nce		CC (2)	19824	E CA 357 E C	CGA \$57261	CGA 373486	NOA 413163	NOA 409480	CGA 381318
Days a					in and a second	ECsoiding/l	kg]			
maxim	ium 🏻 🛦				, "A	^ .	· ·			
Initial	20	0.121	0.195	0.013	0.8	© 030	0.068	0.014	0.016	0.013
Short			©.114 Q	0.013	£ 604 ×	0.029	0.067	0.014	0.016	0.012
		0.046	0.114	0 013 Ô	0.004	0.028	0.066	0.014	0.016	0.012
term	4	0.017	0 A 4	Ø.013 🗣	0.004	0.027	0.065	0.013	0.015	0.011
	7	0,004	Q.113	0.013	6004	0.026	0.063	0.013	0.014	0.010
	14	©0.00 P	0.11	~~	0.004	0.023	0.059	0.012	0.013	0.008
T	24	<0.001	Q410 S	0.011	0.003	0.020	0.055	0.011	0.012	0.007
Long	24 728	<0.001 <u>s</u>		0.011	0.003	0.017	0.052	0.011	0.010	0.005
term	42	G.001	0.106	0.010	0.003	0.013	0.045	0.009	0.008	0.004
	500	< 0.001	0:104	0.009	0.003	0.012	0.042	0.008	0.007	0.003
	Ç190	< 0.001	0.094	0.006	0.002	0.005	0.026	0.005	0.003	< 0.001



Table 9.1.3- 12: Strawberry, early, $TWAC_{soil}$ of trifloxystrobin and its major degradation products

		F-	Juucts							<u>. Ç</u>
Substa	nce	Frifloxystrobin	CGA 321113	NOA 413161	CGA 357276	G A 357261	CGA 373466	NOA 413693	NO. 4094	7CA 3812118
Days a maxim					TW	S Soil [mg	/kg] ()			
Initial	0				20	1	- 0 i	🍣	(-O)	0.042
Short	1	0.096	0.114	0.013	0.004	Q029 S		0.094	10 .016	0.042
term	2	0.077	0.114	0.013	0.004	Ø.029		9 .014	0.016	0 012 ° °
term	4	0.053	0.114	0.013	y * %/	0.028	0.066	0.014	0.016	0.012 0 0.011
	7	0.034	0.114	0.013	0.004	9 .928	0.065	0.014		
	14	0.018	0.113	0.013	0.004	0.026	0.663	6 013 W	0.0	0.010
Long	21	0.012	0.112	0.612		0.024	0.061		9 914 W	0.009
Long term	28	0.009	0.112	0.012	1 4/11	6 23 (5)	0.059	9 9 12	0.013	0.009
	42	0.006	0.110	0.011	7(V	0.020\$		0.011	0.012	0.007
	50	0.005	0.109	0,4041 .	0.003	0.009	0.054	0.01	6 3011	0.006
	100	0.002	97	0.009 🖗		6 013	0.043	0.9 09	0.008	0.004

Strawberry, late, 2250 g a.s./ha 2×60% interception, 7 dapp. interval

Table 9.1.3- 130 Strawberry, late PEC of triffoxystrobin and its major degradation products

Substa	noë	Telfloxystrobin	CGASTAII3	CSQA 413100	CGA 2557276	\$6GA 357£60	√0 ×	NOA 413163	NOA 409480	CGA 381318
Days a	4				PI	© E ©_{seil} [mg/l	κgl			
maxim	12	v	<u></u>		<u>(i)</u>	Ũ	0,1			
Initial	O Y	0.083	@ 079 🍣	0.00\$\mathbb{\mod}\mod{\mathbb{\mod}\mathbb{	K.≫ _ //	0.020	0.046	0.010	0.011	0.009
Short	l I	0.051	~ W		0.003	0.020	0.046	0.010	0.011	0.008
term		0.031	"(())" ((')		0.003	0.020	0.045	0.009	0.011	0.008
CIIII	4	0.00/2	0.078	0.00%	G Ø03	0.019	0.045	0.009	0.010	0.008
	7 _	© 003 ⋌⇒	0.07	0%909 _{@,}	0.003	0.018	0.043	0.009	0.010	0.007
	140	<0.000	0.076	0 .008	0.002	0.016	0.041	0.008	0.009	0.006
Long	A	<0.001	0.075 0	0.008	0.002	0.014	0.038	0.008	0.008	0.005
Long) 28 ₍	9 0.001	0.074	0.007	0.002	0.012	0.035	0.007	0.007	0.004
term \$	420	<0.001	0: 6 72	0.007	0.002	0.009	0.031	0.006	0.006	0.002
	\$ 0	< 0.001	0.071	0.006	0.002	0.008	0.029	0.006	0.005	0.002
	100	< 0.001	0.065	0.004	0.001	0.003	0.018	0.004	0.002	< 0.001

Table 9.1.3- 14: Strawberry, late, TWAC_{soil} of trifloxystrobin and its major degradation products

Substance											
	Substa	ince	rifloxystrobin	GA 321113	IOA 413161	GA 357276	© A 357261	CA 373466	10A 413463	10\$ 409480	(A 38.18)
	•		L		<u>Z</u>	TW	Soil [mg	<u> </u>	Z ×		
							7				
	IIIIII			0.079	0.009	0.003	0.020 %	157 <u>W</u>	0.d@0 %	9011	0 000
term 4 0.037 0.078 0.009 40.033 0.026 0.045 0.009 0.011 80.008	Short				0.009	0.003	Ø20 3	0.046	1 % //	T //	0 00 0
Tour Court	term	4	0.037	0.078	0.009	0.003.	0.028	0.945 4	0.000	0.011	0.008
Long term 14		7	0.024	0.078	0.009	0.003%	0019	0.045	0.009	Ø.010 ₆	0.008
Long term 21 0.008 0.077 0.009 0.003 0.019 0.042 0.009 0.009 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.005 0.006 0.005 0.006 0.005 0.005 0.006 0.005 0.006		14	0.012	0.078	0.0090	Q.603 ×	0.018	0.043	0.009	0.0	0.007
Long term 28 0.006 0.076 0.008 0.009 0.004 0.041 0.008 0.009 0.006 0.005	_	21	0.008	0.077	0.609	3 .003	0.017	0,042	0.000	9 09	0.006
42 0.004 0.075 0.008 0.002 0.0144 0.098 0.008 0.008 0.004 0.005 0.008 0.004 0.005 0.008 0.004 0.008 0.004 0.008 0.004 0.008 0.004 0.008 0.004 0.008 0.008 0.004 0.008 0.008 0.004 0.008	Long	28	0.006	0.076	0.008	0.002	Q916 (5)	0.041	0.008	0.009	
50 0.003 0.075 0.008 0.002 0.003 0.003 0.003 0.008 0.004 0.000 0.003 0.003 0.008 0.008 0.004 0.003 0.003 0.003 0.008 0.008 0.000 0.003 0.003 0.008 0.0	term	42	0.004	0.075	0.008/	0.002	0.014	0.638	0.008	0.068	0.005
		50	0.003	0.075	0.008	0.002 S	0.033	0.037	0.008	9 008	0.004
		100	0.002	0.071	0.006	0.062	Q ,009 🔊	0.036	Ø. 9 06	0.006	0.003
					Ö (J		

CP 9.2 Fate and behaviour in water and sediment

The proposed degradation pathway of trifloxystrobin in water and sediment is shown in Figure 2-1.

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 triffoxystrobin to water and sediment (major degradation products)

CP 9.2.1 Aerobic mineralisation in surface water

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

CP 9.2.2 Water/sediment study

For information on water/sediment studies please refer to MCA Section, data point XI

Irradiated water/sediment study **CP 9.2.3**

For information on irradiated water/sediment studies please point 7.2.2.4.

Estimation of concentrations in groundwater **CP 9.2.4**

PEC_{gw} modelling approach

The predicted environmental concentrations in groundwater (PFC_{gw}) for the active substance trifloxystrobin were calculated using the simulation models PEARL and PEIMO following the recommendations of the FOCUS world and the recommendations of the recommendation of the recommendation of the r recommendations of the FOCUS working group on groundwater somarios

The leaching calculations were run over 26 years, as proposed For posticides which may be applied every year. The simulation length increases to so and so years for pesticides which are applied only every second and third year, respectively. The first six years are w' warm up, period; only the last 20 years were considered for the assessment of the leading potential. The 80th percentile of the average annual ground water conceptrations in the percolate at I 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 moissure 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 Intercep				
Apples	without leaves	floweri 65	ng		developme 70	nt	full foliage 80
Vines	without 4 fi	@n* . V ()	eaf opment 60		ering	•	ripening 85
Strawberry	Bare ↓ Ø envergence §	Leaf Q development	Stem elo	ongation	Flowe	ering	Senescence Ripening
Š	BRCH 00 59	∠BBCMQ0 - 19 30	BBCH 5	20 - 39 0	BBCH 4		BBCH 90 - 99 60

Derivation & 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 KCP 9.2.4.1/01.

CP 9.2.4.1 Calculation of concentrations in groundwater

Predicted environmental concentrations in groundwater (PEC_{gw}) of triflox strobin and the major degradation products

For trifloxystrobin, the major degradation products CGA 321113, NOA 413161, CGA 357276, CGA 357261, CGA 373466, NOA 413163, NOA 409480 and CGA 381418 were considered.

Report:	KCP 9.2.4.1/01, , , , , , , , , , , , , , , , , , ,
Title:	Trifloxystrobin (TFS) and metabolites: PECgQ FOCUS PEARL, PELMOEUR
	Use in pome fruit, grape and strawberry in Europe V
Document No:	M-469500-01-1 (EnSa-13-0741)
Guidelines:	- FOCUS 2000, SANCO 321/2000 v. 2.0
	- FOCUS 2009, SANCO/132#4/2016ftv. 1.0°
	- FOCUS 2012, Generic Condance for FOCUS Oroundwater Assessments, y 2.1
GLP:	No (calculation) No (calculation) No (calculation)

Methods and Materials: Predicted environmental concentrations of the active substance trifloxystrobin and its major sold degradation products in groundwater recharge (PEC_{gw}) were calculated for the use in Europe, using the simulation models FOCUS PEAR 4.4.4. (Leistra et al. 2001) and FOCUS PELMO 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 trifloxystrobin of ponte fruit, grape and strawberry was assessed according to Good Agricultural Practice (GAP) under European cropping conditions. Detailed application data used for simulation of PEC week compiled in Table 9.2.4.14.

Table 9.2.4.1-1: Application pattern used for PEC calculations of trifloxystrobin

27		O , (App	olication		Amount reaching
Individual Crop	Interception		Interval	Plant Interception	BBCH Stage	the soil per application [g a.s./ha]
Apples, late	Apples	\$\int_3\times11205		3×65	3×55-87	3×39.375
Apples, early	Apples	3.475		3×65	3×31-89	3×26.250
Grapes, late	Vines	3×125	, %, %,	3×60	3×12-89	3×50.000
Grapes, early	Vines O	3×125	10	60; 70; 70	3×12-89	50.0; 37.5; 37.5
Strawberry, late	Strawberry	2×150°	7	2×60	2×55-89	2×60.000
Strawberry early	Strawberry	2×125	7	2×30	2×10-92	2×87.500

Application cates for the simulation runs were defined following the crop event dates of the respective crop and scenario (Table 9.2.4.1- 2) 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 trifloxystrobin 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	Apples, late	Apples, early	Vines, late	Vines, early	Strawberry,	Strawberry early
Repeat Interval for App. Events	Every Year	Every Year	Every Year	Every Year	Ævery Year	Évery Year
Application Technique	Spray	Spray	Spray 💎	Spray	Spray	Spray
Absolute / Relative to	Absolute	Absolute	Absorte	Absolute	Absoute	Absoute @
Scenario	1 st App. Date (Julian day)	1 st App. Date (Julian day)	1 st App. Date (Julian day)	1 st App. Dage (Anlian day)	1st App. Dage (Julian day)	1 st App. Dafe (Julian Cay)
	Offset	Offset	Softs@t	Offset	✓ Offset	Offset
	29 Apr (119)	07 Apr (97)	06 Jun (157)	05 Apr. (95)		
	17 May (137)	22 % pr & 4112)	16 Jun (166)	19 Apr (109)	2&Apr @ (115)	16 Mar (75)
	03 Jun (154)	© 15 May (135)			13 Jun & (164)	15 May (135)
	16 May (136)	21 Apr	25 Jun (106)	04 May (124)	24 Apr (154)	15 Mar (74)
	Apr (111)	\$\frac{1}{2} \text{Mar \$\mathcal{Q}\$} \text{(90)}			~~ <u>~</u> ~ -	- - -
	04 May	08 Apr ©	04 Jun (155)	S Apr (95)	- -	-
	20 Apr %	23 V ar	14 M ay \$	7 18 Mar	- -	- -
			(P34)	(77) 2 -		
	17 Apr (100)	© 22 Mar (®) (9 12 Jun 7 (4063)	04 Apr (94)	02 Feb (33)	01 Dec (335)
	18 App	22 Mag	20 May	- 19 Mar (78)	- - -	- - -
	(108)			-	-	-

Findings: PEGw were evaluated as the 80 percentile of the mean annual leachate concentration at 1 m soil depth PEGw values for trifloxy probin and its metabolites are given in the following tables.

Overview of the maximum DEC_{gw} values for all uses obtained with FOCUS PEARL is given in Table 92.4.13.



Table 9.2.4.1- 3: Maximum FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in μ g/L for the uses assessed

Сгор	Trifloxystrobin	CGA 321113	NOA 413161	CGA 357276	୍ଦି CGA 357261	CGA 373466	NOA 413162	NOXO409480	CGA 388 318
Apples, late	< 0.001	1.154	4.299	0.003	< 0.001	0.004	7.403	×0.00,	<0.001
Apples, early	< 0.001	0.698	2.709	0.002	< 0.001	0.09		<0.000	<95001 (4)
Vines, late	< 0.001	0.699	1.884	0.002	< 0.001	100 0005	3.355	<0.001	&0.001,©
Vines, early	< 0.001	0.700	2.013	0.002°° 0.001	<0.001	0.002	3.480,	©.001	<0.00
Strawberry, late	< 0.001	0.582	2.487	0.001	\$0.001@ ⁷	0.001	40k// A	1%() ()()%(<i>)</i>	<()^49U3/1
Strawberry, early	< 0.001	0.820	3.507	Ø√002 💆	<0.00%	0,003	§v.905 🔊	<0.001	<0.001

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

Table 9.2.4.1-4: Maximum FOCUS PELMO PEC, results of triffoxystrobin and its major degradation products in ug/L for the uses assessed

Apples, late Apples, early (0.001) 0.763 (0.001) 0.765 (0.001) 0.765 (0.001) 0.59 (0.001) 0.003		_	~~~				-Q,			
Apples, late	Сгор	ے م	- m		CGAQ\$7276		CON 373466		ONOA 409480	CGA 381318
Apples, early <0.00 0.540	Apples, late	0.001 O	0.810	3.074	Ø.003°	<0,001	0 €007 ≪	5.195		< 0.001
Vines, late	Apples, early	<0.00	0.540	\$1.963	0.002	<u>≤0.001</u>	₩ 0.005 🖴			< 0.001
Vines, early (2001) 0.765 2.252 0.003 0.001 0.008 3.782 0.001 0.000 0.55 1.058 0.002 0.005 0.000 0.005 0.000 0.005 0	Vines, late	<0.001	0,763	2.055	Q. Ø Ø3	Ø.001	0.006			< 0.001
Strawberry, Parte <0.001 0.597 1.958 0.002 <0.001 0.003 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.00	Vines, early 🥎	<0.001	0.765 🖗	2.252	0,003	<0.001	0.008			< 0.001
Strawbord, early <0.001 0.005 2.825 0.003 4.625 <0.001 <0.00	Strawberry, Pate	<0.00	0.597	1.958	0.002_{\odot}	<0.001	0.002			< 0.001
	Strawberry, early	<0,001	0.835	2.825	0.003	< 0 4001 s	9 0.003	4.625	< 0.001	< 0.001

Apples, late, 3×112.5 g a.s./ha

Table 9.2.4.1- 5: FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in µg/L (Apples, 3×112.5 g a.s./ha, 3×65% interception, 10 days app. interval)

Scenario	Trifloxystrobin	CGA 321113	NOA 413161	©GA 357276	CGA 357261	40 \$73466 CGA \$73466	90 4 4	NO & 1094	
	<0.001 <0.001	0.635 1.154	1.930 4.299	<0.001	<0.001	<0.001 0.004	38/32 8	<0.001 <0.001	<0.001
	<0.001 <0.001	0.496	3.958 1.427	0.001 <0.001 <0.001 <0.001	<0 0 001	l@mainn 1′2‱	6.467 ⁰ 2.4 3 1	<0.001 0.001	0.001° <0.000
	<0.001 <0.001	0.591 0.489	11.278	Ø.001 _√ ₩	<0.007	0.002 0.002 0.001 «	2.4 4 4 2. 9 78 1.801	<0.001 <0.001 <0.001 <0.001 <0.001	<0.001 -0.001
	<0.001 <0.001	0.245 0.589	1.893® 1.893®	<0.000 <0.001	8 0.001	0.001 0.000	1.09 0 3.453	<@ 2001 &	<0.001
	< 0.001	0.561	1.663	49 .001	<0.00	<0.001	2 532 Č	\$0.001∠ <0.001⁄2	< 0.001

Table 9.2.4.1-6: FOCUS PELMO PEC gw results of trifloxystrobin and its major degradation products in ug/L (Apples 3×112.3 g a.s. na, 3×65% interception, 10 days app. interval)

Scenario	1000 100 100 100 100 100 100 100 100 10	CON 32111K7 / CON 1	NOA 413161 4	CA 354256	Con 357264S	CGA 203466	NOA 413163	NOA 409480	CGA 381318
	<0.001 0.001 0.001 <0.001 <0.001 <0.001 <0.004 <0.004	0.679 0.811 0.43 0.652 0.657 0.333 0.342	1.625 2.292 3 974 3.569 1.344 1.029 0670 1.430	<pre><0:001 0:003 0:0001 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.001 <0.001</pre>	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.001 0.005 <0.001 0.002 0.004 0.007 0.001 <0.001	2.905 3.970 5.195 2.730 2.334 1.923 1.050 2.233 1.893	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001
		0.342			<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	I	1	1	

Apples, early, 3×75 g a.s./ha

Table 9.2.4.1-7: FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in µg/L (Apples, 3×75 g a.s./ha, 3×65% interception, 10 days app. interval)

Scenario	Trifloxystrobin	CGA 321113	NOA 413161	©GA 357276	CGA 357261	LOF CGA 978466 SOF	4 40 4 40	0.4049480°	CO SO 1 <0:001
	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	0.447 0.698 0.308 0.395 0.393 0.315	1.320 2.709 2.499 0.949 0.839 0.754 0.779	<0.001 0.002 0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	1	<0.001 0.001 0.001 0.001 <0.001 <0.001	2,2,78 4,416 3.869 1.594	<00001 ©.001	≰ 0.001. ∘ l

Table 9.2.4.1-8: FOCUS PELMO PEC results of trifloxystrobin and its major degradation products in µg/L (Apples, \$2.75 g/a.s./ha, 3×65% interception, 10 days app. interval)

	\sim		<i></i>	^\) <u>×</u>	- 6 /		
Scenario	Triflox Stropin	CGA 3211A36	2	CGA 357276	(GA 357268)	CGA@73466	NOA 413163	NOA 409480	CGA 381318
	Quality Qua	0.464 0.272 0.488 0.340 0.264 0.264 0.264	1.097.	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001	0.001 0.002 <0.001 0.002 0.005 0.001 <0.001 <0.001	1.978 2.400 3.125 1.779 1.545 1.358 0.799 1.499 1.241	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001
	F	~							

Vines, late, 3×125 g a.s./ha

Table 9.2.4.1- 9: FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in μg/L (Vines, late, 3×125 g a.s./ha, 60/70/70% interception, 10 days app. interval)

Scenario	Trifloxystrobin	CGA 321113	NOA 413161	©GA 357276	Ο.	CGA 9/23466	90 4 4	**************************************	CGA 3863
	< 0.001	0.521	1.497	<0.001	\$0.001@ <0.001	<0.001	2 /5 27 ~	<0.00*\(\frac{1}{2}\) <0.00\(\frac{1}{2}\) <0.00\(\frac{1}2\) <0.00\(\fr	<0,0001
		0.699	1.884	6.001 0.002 0.001	<0.00		§4.355 🔊	< 0.00Y	<0.001
	< 0.001	0.557	1.079	<0.001)	<00001	6 0003	2.012°	<0001	0.001 •
	< 0.001	0.454	0.957,🛋,	0.QOO	< % 001 ^	€0.0Q1	1.24(1)(0)	~0.001	~U.U\(\mathref{y}\)
	< 0.001	0.214	0.648	≈ 0,001 ~	< 0.00	<0,601	W933 &	/ <0.001	<0.001
	< 0.001	0.276	0. 92 0	≈ 0.001,©	<0.001	< © 0001 «	J.481	<0.001	<0.001 <0.001
	< 0.001	0.208	0.957 0.648 0.920	<0.00	<00001	\$0.001 ©	1.234	<0.001 <0.001	<0.001

Table 9.2.4.1- 10: FOCUS PELMO PEC_{gw} results of trifloxystrobin and its major degradation products in µg/L (Vines, late, 3×125 g a.s./ka, 60/70/70% interception, 10 days app. interval)

		,	<i>~</i>		.0		¥ ~~		
Scenario	· TO WAS THE	CGK3211132	NOA 443461	COA 357240	CGK387261	√0 € CGA 373€66	~	NOA 409480	CGA 381318
	<0.001 <0.001 <0.000 <0.001 <0.001 \$0.001 <0.001	0.471 0 0.763 0.677 0.537 4 0.299 5 0.155 0.487 (0	1.277 2.655 \$281 0.874 0.699 0.941	0.001 0.003 <0.064 0.064 0.001 0.001 <0.001	0.001 0.001 0.001 0.001 0.001 0.001	0.001 0.004 0.003 0.001 <0.001 <0.001	2.163 3.674 2.442 1.471 1.083 1.087 1.157	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001
					y				
Scenario									

Vines, early, 3×125 g a.s./ha

Table 9.2.4.1- 11: FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in µg/L (Vines, early, 3×125 g a.s./ha, 3×60% interception, 10 days app. interval)

Scenario	Trifloxystrobin	CGA 321113	NOA 413161	65A 357276	الم	\$\$ \$\$GA\$\$2866	Ŷ© IP VŎŲ		GGA 38tb
	< 0.001	0.631	1.881	€0.001	<0.0010/ <0.001 <0.001 <0.001	<0 ç0x1	າ@∗⊳າາ 🦠	≥0.00¶	<0.001
	< 0.001	0.700	2.013	0.002 °	<0.90	0.002	3.480	< 0.001	≤ 0.001
	< 0.001	0.544	1.194	<0.001 0.001	<0.901	Ø.002 🔊 0.00k	2.114 ^{°©}	<0 0001	\$0.00) (,°
	< 0.001	0.462	1.087	0.009	< 0.001 ~	0.00 <u>k</u>	1.6\$6 1.030 ×	<0.001₽	<0.0 @ r"
	< 0.001	0.253	0.699	<0.001 0	×0.00.0	<0.001	1,030	<0.001	<0.001
	< 0.001	0.385	1444 &	₹0.00 1€	<0.001	≨ 0 :001 ×	1,763©	<0.001 <0.001 <0.001 <0.001	© .001
	< 0.001	0.204	0.9 59 🚫 '	<0.007		0.001	1.37	<0.001 <0.001 <0.001 <0.001	< 0.001

Table 9.2.4.1- 12: FOCUS PELMO PEC results of trifloxystrobin and its major degradation products in µg/L (Vines, early, 3×125 g a.s./ha, 3×60% interception, 10 days app. interval)

Scenario	TREED XV STORTHE	CGA821113	NOA 413WA	CGA-357276Q	CGA \$67261	0.004 0.004 0.008 0.001	NOA 413163	NOA 409480	CGA 381318
	<0.001 <0.00 <0.00	0.666 * 0.763 0.890	1.539~\`	0.003 <0.091	<0.001 <0.001 <0.001	0.001 0.004 0.004 0.008 0.001 <0.001 <0.001	2.992 3.782 2.840 2.072 1.461 1.385 1.629	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001
	&-	' <u>J</u>		< 0, 90 1)				
				0.002 0.001 <0.000 <0.901					

Strawberry, late, 2×150 g a.s./ha

Table 9.2.4.1- 13: FOCUS PEARL PEC_{gw} results of trifloxystrobin and its major degradation products in μg/L (Strawberry, late, 2×150 g a.s./ha, 2×60% interception days app. interval)

Scenario	Trifloxystrobin	CGA 321113	NOA 413161	GGA 357276	U O	CGA 392866	ADA 413163	O 2 C C C C C C C C C C C C C C C C C C	GGA 38101
	<0.001 <0.001 <0.001 <0.001	0.582 0.216 0.441 0.021	2.487 2.116 1.083 0.279	0.001 0.001 <0.06\frac{1}{2} <0.061	<0.001 \$0.001	0.007 0.001 0.001 0.001	4022 °	<0,001	<0.001 <0.001 0.001 <0.002

Table 9.2.4.1- 14: FOCUS PELMO PEC results of trifloxystrobin and its major degradation products in µgA. (Strawberry, late 2×150 g a.s. da, 2×60% interception, 7 days app. interval)

		≪(`A	~	0		(7) N			
Scenario	Triffoxstrobin	M3 (1)	A 41318V	CGX/ksn276	SGA 35PEBI	3.73	NOÁ 4 (3163	NOA 409480	CGA 381318
	₹0.0Ω1\	0.5 % 0 <u>3</u> 14	(1.751 (1.958)	0.002 0.002 0.001	′ <0.39/01	0.002 × <0.001	2.825 3.301	<0.001 <0.001	<0.001 <0.001
	< 0000001	9.486 p	1.2 1 5 °	≤0.001	0.001	0.00	2.176	< 0.001	< 0.001
	<0.001	ر [0.01 مر]	0,566	© 0.001	<0.00/1	< @ 0001	0.178	< 0.001	< 0.001

Strawberry, early, 2×125 g a, Sha

Table 9.2.4.1 15: FOCUS PEARL PEGw results of trifloxystrobin and its major degradation products in ug/L (Strawberry, early, 2×125 g a.s./ha, 2×30% interception, 7 days applinterval)

Trifloxystr CGA 32727 CGA 35727 CGA 35726 CGA 35726 CGA 35727 CGA 35726 CGA 35727	Scenario
CO.001 O.220 3.507 0.002 <0.001	

Table 9.2.4.1- 16: FOCUS PELMO PEC_{gw} results of trifloxystrobin and its major degradation products in μg/L (Strawberry, early, 2×125 g a.s./ha, 2×30% interception, 7 days app. interval)

	-		· · ·						~ '0'
Scenario	Trifloxystrobin	CGA 321113	NOA 413161	CGA 357276	્યું હ્	©GA 373466	NOA 413163≪	ÄÇ≿ NOA¥®480 %%	CGA 381348
	<0.001 <0.001 <0.001 <0.001	0.815 0.285 0.659 0.066	2.463 2.825 1.806 0.412	0.003 <0.004 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001	0.003 0.002 0.002 <0.001	3.976 4.625 3.316 0704	<0.00 <0.001 ©.001 >0.001	<0.001 % C 0.001 % C 0.001 % C 0.0001 % C 0.
Scenario CP 9.2.4.2 No additional field CP 9.2.4.2	Additional deld studies	al field to	ests (
, Ø							L, ¹ V		
EG .									
)				
				,					
	T È	**							

CP 9.2.5 Estimation of concentrations in surface water and sediment

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: All inputs are considered as a single loading to the water body and a worst case RP PEC_{sed} is calculated (most conservative step).

Step 2: Individual loadings into the water body from different entry voutes according to the number of applications 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 as performed. The scenarios are representative for agricultural conditions in Europe, and consider weather, soft crop and different water-bodies. Simulations use the models PRZM, WACRO and TOXSWA.

Step 4: PEC values are refined by considering mitigation measures according to the FQUUS Landscape and Mitigation Factors, i.e. drift reduction or vegetated there shops, which intercept funoff water and eroded sediment prior to engy into surface water

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 KCP 9.2.5/00.

Predicted environmental concentrations in Surface water (PECsw) and sediment (PECsed) of trifloxystrobin and its major degradation products

For trifloxystrobin, the major degradation products CGA 321113 NOA 413161, CGA 357276, CGA 357261, CGA 373466, NOA 413465, NOA 409480, CGA 357262, CGA 381318, CGA 107170 and 2-hydroxymetrylber@onitrile were considered.

Report:	KCP-9.2.5/01,
Title:	Trifloxystrobin (TAS): PECsw,sed FOGUS EUX - Use in apples, vines and
	strawberts in Enrope
Document No:	13-469 71-01-1 (EnSa-13-0742)
Guidelines:	\$\times \text{FOCVS 2005}, SANCO/4892/2007/rev 2^-
	FQCUS 2006, SANCO/00058/2005 vQ2.0
	FGCUS 2006, SANCO 10058/2005 v 2.0 FGCUS 2007, SANCO 1042 2005 S. 2.0
GLP:	ONo (colculation) A A A

Methods and Materials: Predicted environmental concentrations of the active substance trifloxystrobin and cuts major degradation products CGA 321113, NOA 413161, CGA 357276, CGA 357261, CGA 373466, NO 4413463, NOA 409480, CGA 357262, CGA 381318, CGA 107170 and 2-hydroxymethylbenzonitrile in surface water (PECsw) and sediment (PECsed) were calculated for the use in Europe, employing the pered FQCUS Surface Water (SW) approach (FOCUS, 2003). All relevant entrorioutes 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 jungicule trail oxystrobin in apples, early, apples, late and vines 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 trifloxystrobin in Europe (for FOCUS Step 1&2)

	EOCHE			Application	, SY O
Individual Crop	FOCUS crop used for interception	Rate per season [g a.s./ha]	Interval [days]	Plant Interception	Growth Stage
Apples, early	Apples	3×75	10	Average crop cover	31-89 \$\times \text{Mar. May \$\times \text{May}}
Apples, late	Apples	3×112.5	10	Full capopy	53-87 & May - May &
Grapes	Vines	3×125		Minimal crop cover	12-890 0 Mar. May
Strawberry, early	Strawberry	2×125	7 %°	Migrimal crop cover	10-92 Mar May
Strawberry, late	Strawberry	2×150		Average cropsover (50%)	55-89 Mar, May

For the use in apples (early and late) and the use in vines, FOCOS Step 3 and Step 4 values were conducted in addition to FOCUS Step 1&2 values.

conducted in addition to FOCUS Step 1&2 values of the scenario is determined by the Periode Application Timer (PAT), which is part of the FQCUS SW Scenarios. The user may only define an application time window. The actual application state 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 fine 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. 10 mm of rainfall in the first 10 days after application, and at the same time less than 2 mm of rain per

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

	11	untes of triffo	J		1		
Parameter	Apples	<u>, early</u>	Apple	es, late	Vi	nes 🎺 🌡	
PAT start date rel./absolute Appl. method (appl. type) No of appl. PAT window	Abso air b (CAl	olast M 2)	air	olute blast M 2)	Absolute air blast (CAO 2)		
range	18	20	1	50 S	, W 19		
Appl. interval	1			0			
Application Details	PAT Start Date (Julian Day)	Appl. Date	PAT Start Date (Julian Day)	Appl. Date	PAT Start Date Julian Day)	Appl. Date	
D3 (1st)	21-Apr (111)	20-Apr 04-May 17-May	07-May ©	06 May 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
D4 (1st)	26-Apr (116)	30-May Ok Jul & Q7-Aug	117 Way &	30- Q ay 24-Jul 27-A Q			
D5 (1st)	07-Apr (97)	- ©08-Agyr Z 22-Aypr - ″ 11-May.~	© 22-A o r © (152)	22-Apr 11 May 22 May		-	
D6 (1st)	- 3				(34)	27-Feb 14-Mar 09-Apr	
R1 (1st)	24/Apr \$\frac{1}{2}(111)	26 ² Apr 09-Ma 13-Jun	0 May (127)	13-Jus 05-Jul	As Apr √ (108)	26-Apr 09-May 13-Jun	
R2 (1st)	7 21 Mar 4 (80)	22-Mar 22-Apr 07-May	06-Apr \$ \$(96)	224pr 57-May 020-May	18-Mar (77)	22-Mar 22-Apr 07-May	
R3 (1st)	07-Apr (87) \$\$ \$\$\ \$\$\ \$\$\$	11- A pr 22-Apr 18-May	22-Afr (\$12)	22- % pr 18≽May ∞01-Jun	05-Apr (95)	11-Apr 22-Apr 18-May	
R4 (1st)	22-Mar	\$15-Ap\$	\$\infty 07-App	△ 15-Apr	13-Mar	04-May	
, ,	(&1) (Ŵ 28 _€ Åpr _	© (9 9) ?	28-Apr	(72)	27-May	
		1.00 May 🔊		10-May		12-Aug	

Findings:
FOCUS Step 1 and 2: The maximum PEC values for FOCUS Step 1 and 2 are given in the tables below for trifloxystrobin and its major degradation products.

Table 9.2.5- 3: Maximum PEC_{sw} values of trifloxystrobin and its major degradation products according to FOCUS SW Step 2 calculations

Сгор	Trifloxystrobin	CGA 357261	CGA 357262	CGA 321113	المجال ا	CGA 386276 V2
			<i>ω</i> [μg	[/L] (O)		Q 6 4
Apples, Early	3.931	3.376	0.828	13.1% %°	5.664	0.319
Apples, Late	5.897	5.063	103°43	15,05 0	6.1\$5 \O'	0 ⊘ 478
Vines	3.345	3.524	0.865	P 7.66	Ør.857 🄊 🦠	9.289
Strawberry, Early	1.150	0.886	♥0.20 <i>5</i> 5° &	NU	5.865	0.093
Strawberry, Late	1.380	1.064	0.246	9.709	4.944	0.14 % (°
Maximum	5.897	5.063	1,243	17.66 🛕	3 857	6 \$478 ©

Table 9.2.5-3 (contd.): Maximum FEC, values of triffoxystrobin and its major degradation products according to FOCUS SW Step 2 Calculations

Apples, Early Apples, Late Vines Strawberry, Early Strawberry, Late 1933 1.080 1.087		*		à à	<u>~ .</u> 0 .	<u> </u>	***
Apples, Early	Crop	100 4 4 3 4 6 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		NOA 469480		CGA 18th Zo	2-hydroxymethyl- benzonitrile-
Apples, Early Apples, Late O626 O653 O783 O783 O786 O787 Vines O789 O789 O789 O789 O789 O789 O789 O789	Š	\$. O'Y _>		/ \$\times [mg	JLI 😽 🏖	Ž)	
Strawber Late 1.933 1.680 0.894 0.836 0.603 0.159 Maximum 1.991 4.4451 0.406 1.044 3.050 0.807	Apples, Early Apples, Late Vines Strawberry Early	0.834 0.626 0.391 1.294	0.870 0.853 0.1.451 1.350	0.243 0.183 0.406 0.379	0.006 0.006 0.006 1.027 1.044	3.050 2.123	0.807 0.561
Maximum 3891 7 4451 7 0406 3.050 0.807	Strawberry, Late	1,933	1.680	0.504			
	Maximum	13 91	4.451 O	,0×406 & ,	<u>4</u> .044	3.050	0.807



Table 9.2.5- 4: Summary of the maximum PEC_{sw} values in μ g/L of trifloxystrobin and its major degradation products (FOCUS Steps 1-2)

Apples, early 3 × 75 g a.s./ha	Сгор	Scenario	Trifloxystrobin	CGA 357261	CGA 357262	CGA321113	ŽČA 373466	CGASSITIO
Apples, late 3 × 112.5 g a.s./ha Step 1		Step 2 N-EU Multi S-EU Multi N-EU Single	2.759 2.759 3.931	3.375 3.376 2.025	0.828 Q, 0.828,	10.03 15.17 Q 1.589 m	24@6 A.103 5.66 1-921 2-624	0.077 0.277 0.319 0.319
Vines 3 × 125 g a.s./ha N-EU Multi 2.880 3.524 0.865 7.66 7.857 0.289 N-EU Single 3.345 1.723 0.338 4.887 2.08 0.271 S-EU Single 3.345 1.723 0.338 6.894 3.379 0.271 Strawberry, early 2 × 125 g a.s./ha N-EU Single 3.345 1.723 0.386 0.232 3.71 2.3.11 0.312 Strawberry, early 2 × 125 g a.s./ha 2 × 125 g a.s./ha 3 × 12		Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single	14.89 4.138 4.038	18.32 5.063 5.063 3.03	1.293 1.243 0.596	64.99 12.70 15.95 5.981 5.884	36.09 4.985 6.155 2.355 2.88	0.415 0.45 0.45 0.478
Strawberry, early N-EE Multi 1.024 0.886 0.205 6.500 3.247 0.092 0.886 0.205 11.27 5.865 0.092 0.886 0.205 11.27 5.865 0.092 0.116 3.498 1.820 0.093 0.116 0.007 3.283 0.093 0.116 0.007 3.283 0.093 0.116 0.007 0.308 0.008 0.116 0.246 0		Step 2 N-EU Multi S-EU Multi N-EU Single	2.880~~	3.524 3.524 ©	0.865	77.66 4.887 6.894	5.25© 7.857 \$.208	0.289 0.289 0.271
Strawberry, late 2 × 150 g a.s./ha Step 1 Step 2 1.228 1.064 0.246 0.246 9.709 45.25 27.73 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.374 0.375 0.374 0.374 0.375 0.374 0.375 0.374 0.375 0.374 0.375 0.375 0.376 0.374 0.375 0.376 0.374 0.375 0.376	2 × 125 g a.s./ha 💍	N-EE Multi S-KU Multi S-KU Single	1.024 Y.150	0.886	0.116	6.50 © 11.37 3.498	3.247 5.865 1.820	0.092 0.092 0.093
	2 × 150 g a.s./ha	Step.l. Step.2 SEU Multi SEU Multi N-BU Single	1.228	1.064 1.064 0.710	0.246 0.246 0.139	45.25 5.893 9.709 3.195	27.73 2.849 4.944 1.599	0.374 0.111 0.111 0.112
		THU SIMBLE						

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

	major degi	1	•		,		
Стор	Scenario	NOA 413161	NOA 413163 ☆	NOA 409480	್ಲಿಸ್ಟ್ರಿ CGA 381318	CGA 407170	2-hydroxymethyk benzonitrik?
Apples, early 3 × 75 g a.s./ha	Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single S-EU Single	4.420 0.417 0.834 0.165 & 0.329	4.636 0.433 0.870 0.1726 0.349	1.313 0 0.122 0 0.243	4.075 0308 6.616 0.141 0.282	2.035 2.035 2.033 2.033 0.75 0.975	0.775 0.538 0.538 0.258
Apples, late 3 × 112.5 g a.s./ha	Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single S-EU Single	0.630 0.626 0.123 0.247	0.3260 0.639 0.259 0.259	1.969Q, 0.991 0.183 0.037 0.037	6.112 0.2317 0.462 0.106 0.212	4.386 \$050 \$.050 1.462 1.462	0.807 0.807 0.387 0.387
Vines 3 × 125 g a.s./ha	Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single SEU Single	7.367 6 0.6955 1.397 0.274 5 0.549	7.727 00725 0.451 0.287 0.364	0.20\$\times 0.406 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	6.70 0.513 1.027 0.235 0.470	2.123 2.523 2.523 0.829 0.829	0.658 0.561 0.561 0.219 0.219
Strawberry, early 2 × 125 g a.s./ha	Step 1 Step 2 N-EV Multi SEU Multi N-EU Single S-EU Single	4.91 (a) 0.645 (b) 1.291 (c) 0.343 (c) 0.686 (c)	0.675/ 1.550 0.7185/	© 190 © 0.379	3.528 & 0.502 0.502 1.644 0.294 0.588	0.570 0.503 0.503 0.285 0.285	0.151 0.133 0.133 0.075 0.075
Strawberry, late 2 × 150 g a.s./ha	Step 1 Step 2 N-EU(Multi S-EU Multi N-EU Single O'EU Single	0.516 1.033 0.5490	0.184 0.540 & 1.080 0.287	0.152 0.304 0.081 0.162	5.433 0.418 0.836 0.235 0.470	0.684 0.603 0.603 0.342 0.342	0.181 0.159 0.159 0.090 0.090
		10.5490°					
	SEU SAME LE						



Table 9.2.5- 5: Summary of the maximum PEC_{sed} values in μg/kg of trifloxystrobin and its major degradation products (FOCUS Steps 1-2)

						/A\ ^
Scenario	Trifloxystrobin	CGA 357261	CGA 357262	CGA321113	ŽČA 373466	CGA358776
Step 2 N-EU Multi S-EU Multi N-EU Single	8.023 8.023 11.26	12.45 12043 5.960	<0.001 <0.001 <0.001 <0.001 <0.001 \$0.001	11.72 15.51 Q 5.348	17061 \$\frac{1}{2}\$,	9.236 5.472 6.393 2.534 2.881
Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single	213.8 12.03 12.03 12.03 88.89 &	44.87 \$.65 18.65 8.941 \$.941	<0.0010 <0.001 <0.001 <0.000 <0.0001	5 7 7 14.74 0 17.58 6.923 6.923	26.42 4247 5.272 2.00© 2.467	7.51/2 8.208 3.534 3.796
Step 1 Step 2 N-EU Multi S-EU Single S-EU Single	237 <i>5</i> 5 0	12.98 12.98 2.98 5.072 5.072	<0.001 <0.000 <0.001 <0.001 \$0.004	64.300 14.59 20.90. 5.736 8.156	20.35 4.520 4.520 6.797 4.901 2.926	15.39 6.286 7.821 2.439 3.021
Step 2 N-EL-Multi S-EU Multi NEU Single	3.090 3.090 3.090 3.293 3.293		<0.001	7.74 6 1 3.5 0 4.165	2.823 5.115 1.582	10.26 2.515 3.905 1.366 2.095
Step 1 Step 2 SEU Whati S-EU Multi N-EU Single SOU Single	285 1 3.708 3.708 3.251 3.251 2.251	39.88°0° 3.687°5 2.092°	<0.001 <0.001 <0.001 >0.001 >0.001	3.788	23.48 2.471 4.305 1.386	9.236 5.472 6.393 2.531 2.881
	Step 1 Step 2 N-EU Multi S-EU Single S-EU Single Step 1 Step 2 N-EU Multi N-EU Single S-EU Single S-EU Single S-EU Single S-EU Single S-EU Multi N-EU Single S-EU Single	Step 1 Step 2 N-EU Multi S-EU Single Step 1 Step 2 N-EU Single Step 1 Step 2 N-EU Multi S-EU Multi S-EU Multi S-EU Single S-EU Single S-EU Single S-EU Single S-EU Single S-EU Single S-EU Multi N-EU Single S-EU Single	Step 1 Step 2 N-EU Multi S-EU Multi S-EU Single Step 1 Step 2 N-EU Single Step 1 Step 2 N-EU Multi S-EU Multi S-EU Multi S-EU Multi S-EU Multi S-EU Single S-EU Single S-EU Single S-EU Single S-EU Single S-EU Multi N-EU Single S-EU Single	Step 1 Step 2 N-EU Multi S-EU Multi N-EU Single Step 1 Step 2 N-EU Multi S-EU Single S-EU Single S-EU Multi S-EU Multi S-EU Multi S-EU Multi S-EU Multi S-EU Multi N-EU Single S-EU Multi N-EU Single S-EU S	Step 1	Step 1 142.5 29.91 <0.001 38.58 17.61

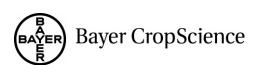


Table 9.2.5- 5 (contd.): Summary of the maximum PEC $_{sed}$ values in $\mu g/kg$ of trifloxystrobin and its major degradation products (FOCUS Steps 1-2)

Step 1 Step 2 Step 1 Step 2 Step 2 Step 2 Step 2 Step 3 Step 4 Step 4 Step 4 Step 5 Step 5 Step 5 Step 6 Step 6 Step 6 Step 7 S				produces	(F /		. &
Step 1 Step 2 Step 2 Step 2 Step 2 Step 2 Step 2 Step 3 Step 4 Step 4 Step 4 Step 4 Step 5 Step 5 Step 5 Step 6 Step 6 Step 6 Step 6 Step 6 Step 7 Step 7 Step 7 Step 8 Step 9 S	Crop	Scenario	OA 413161	DA 413163	OA 409480	3A 381318	4 107170	A Conitrice
Apples, early 3 × 75 g a.s./ha			<u> </u>			© 5	ر کی ا	7.7
Apples, early 3 × 75 g a.s./ha			0.159	0.292	30.93	3.117	40 .001	<0.001
S-EU Multi	A mmlas apulti		0.015	0.02	2060 Q	0006	· .	0001
N-EU Single 0.006 0.011 0.022 2.290 0.246 0.001				u// ye .		09250 Q	<0.00¥	
S-EU Single	3 × 73 g a.s./11a		0.006	0.011&°	1.145	0.108	0.001	<0.001
Step 1 Step 2 N-EU Multi S-EU Multi S-EU Single			0.012	0.02 ©	2.290			
Apples, late 3 × 112.5 g a.s./ha				0.438	46.390		<0.001	© 0.001.
S-EU Multi		Step 2					K K	
N-EU Single 0.004 0.008 0.859 0.081 <0.007 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0	Apples, late		0.0M	0.021 ₀ "	2.051 6	0.177		
S-EU Single 0.009 0.016 1.738 0.162 9.001 <0.001	$3 \times 112.5 \text{ g a.s./ha}$		100023 ×	.(~)	2 /.301 \(\bigcirc	0.353	1 \(\mathreal\)//	
Vines 3 × 125 g a.s./ha Step 1 0.265 0.487 5.196 0.001 0.001 Step 2 0.0046 4.779 0.393 0.001 0.001 S-EU Multi 0.050 0.091 9.558 0.785 0.001 0.001 N-EU Single 0.010 0.018 1.009 0.180 0.001 0.001 Step 1 0.177 0.325 34.36 3.464 0.001 0.001 Step 2 0.020 0.036 3.817 0.360 0.001 0.001 Step 1 0.177 0.325 34.36 3.464 0.001 0.001 Step 2 0.001 0.001 0.001 Step 2 0.023 0.043 4.70 0.406 0.001 0.001 Step 2 0.012 0.025 0.045 4.771 0.450 0.001 0.001 Step 4 0.025 0.045 4.771 0.450 0.001 0.001 Step 5 0.045 0.032 0.032 0.001 0.001 Step 6 0.012 0.034 3.576 0.320 0.001 0.001 Step 8 0.010 0.037 0.068 7.152 0.639 0.001 0.001 Step 8 0.010 0.018 9.909 0.180 0.001 0.001 Step 9 0.001 0.001 0.001 0.001 Step 9 0.001 0.001 0.001 0.001 Step 9 0.001 0.001 0.001 0.001 0.001 0.001 Step 9 0.001 0.001 0.001 0.001 0.001 0.001 Step 9 0.001 0.001 0.001 0.001 0.001 0.001 0.001 Step 9 0.001			10.004		0.8590	160 C		
Vines 3 × 125 g a.s./ha			0.009	1) (`)?	1. D8 C	5 10		
Vines 3 × 125 g a.s./ha				0.401	0°204	3.190	0.001	<0.001
3 × 125 g a.s./ha S-EU/Multi N-EU/Single S-EU/Single	Vines		0.025	0046	/ 4.77√s √	0393 &	<0.001	< 0.001
SEU Single 0.020 0.036 3.817 0.360 0.001 0.001			1	@ V 4//V	9.558	0.785	<i>₽</i> ~	
SEU Single 0.020 0.036 3.817 0.360 0.001 0.001	S	N-ÈV Single	0.00	0.0185	10909 W	0.180	3 0.001	
Strawberry, early 2 N-EU Multi 0.023 0.043 4.70 0.400 0.001			3 0.020		3.817∜	Q.360 S	<0.001	< 0.001
Strawberry, early N.E. Multi 0.023 0.043 4.70 0.400 0.001		Step 1	0.17%	Q \$25 ≪″	34.36	3.464 🎸	< 0.001	< 0.001
2 × 125 g a.s./ha SEU Multi 0.047 0.085 8.939 0.799 0.001							.0.001	0.001
S-EU Single 0.012 0.023 2.386 0.225 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	Strawberry, early		0.023	0.043/	4.470 @"			
S-EU Single 0.025 0.045 4.771 0.450 <0.001 <0.001 Step 1 2 0.389 41.24 4.157 <0.001 <0.001 Strawberry, late 2 × 150 g a.s./ha S-EU Multi 0.015 0.007 0.068 7.152 0.639 <0.001 <0.001 N-EU Single 0.010 0.048 9.909 0.180 <0.001 <0.001	2 × 125 g a.s./na		0.04/	0.083 6.023	2 20			
Strawberry, late 2 × 150 g a.s./ha Step 1 Single 0.010 0.018 0.018 0.001	*			0 045	4 771			
Strawberry, late 2 × 150 g a.s./ha S-EU Multi 0.019 0.018 2.0001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001			7 70 (())	0.389	\$1.24 \\			
2 × 150 g a.s./ha S-EU Multi 0,027 0.0680 7.152 0.639 <0.001 <0.001 NEU Single 0.010 0.018 7.909 0.180 <0.001 <0.001	ĘĢ ⁱ					,		
2 × 150 g a.s./ha S-EU Multi 0,027 0.0680 7.152 0.639 <0.001 <0.001 NEU Single 0.010 0.018 7.909 0.180 <0.001 <0.001	Strawberry, late	N-EU Wulti	0.010	0.034 &	3.538	0.320	< 0.001	< 0.001
	2 × 150 g a.s./ha		0,03/7	0.068© °				
SEU Sangle 40.020° 10036 % 3.817 0.360 <0.001 <0.001	Q		010	- "	b			
			¥0.020⊙″	0036	3.817	0.360	< 0.001	< 0.001
				7				
		<u>.</u>						

FOCUS Step 3 and 4: The maximum PEC values for FOCUS Step 3 and 4 are given in the tables below for trifloxystrobin considering the application in apples (early and late) and in vines. Concerning maximum PEC_{sw} values it can be seen from FOCUS Step 3 that the single application results in the worst case PEC_{sw} values in all application scenarios, therefore in the following for FOCUS Step 4 values only PEC_{sw} values for the single application are presented. For other PEC values please refer to the report.

Apples, early, 3×75 g a.s./ha

FOCUS SW Step 3 values for the application in apples, early are presented in Table 9.2.5

PECsw and PECsed values of trifloxystropin in appless early for all calculated **Table 9.2.5- 6:** scenarios according to FOCUS SW Step 3; letters S.D., and R. before correspond to the dominant entry path - spray drift, drainage, and runoff

	Si	ngle Applicați	on 🚫 📌	Mi	Htiple Applica	tion 🔊
Scenario	Entry	PECK	«PECsed»	& Entry &	BECsw	REC _{sec}
	route	PECK	PECseary	Entry S S S S S S S S S S S S S S S S S S S	μg/J	္တ[μg/kg
D3 (ditch, 1st)	S Q	2.740	1.252 0.147 00140		Ŭ1.948♥	0.889
D4 (pond, 1st)	S S S S S	0.123 0.123	0.147	S S	0.00	0.068
D4 (stream, 1st)	S	°2,565	001°40 √		1.970	0.343
D5 (pond, 1st)	S ' &	0.123	L0.11-	1 % *~		0.100
D5 (stream, 1st)		2.510° @	0.066		1.941	0.095
R1 (pond, 1st)	ŠŠ S	0.123	0.500	S	0.000	0.085
R1 (stream, 1st)	e, Soy	2.545	0.066 0.437 9.250 0.164	$S_{\mathbb{Q}}$.1.9005	0.199
R2 (stream, 1st)	, B	¥2.77 6 ₇ ,	©0.164€,"	O 87	£2.016	0.152
R3 (stream, 1st)	L S S	2.964	0.593 _@	, Š	2.116	0.466
R2 (stream, 1st) R3 (stream, 1st) R4 (stream, 1st)	SS	2.108	0.595	SS S	1.504	0.215
R2 (stream, 1st) R3 (stream, 1st) R4 (stream, 1st) FOCUS SW Step 4 por						



Table 9.2.5-7: Summary of <u>FOCUS Step 4</u> PEC_{sw} values of trifloxystrobin after application in <u>apples, early;</u> S and M denote whether single or multiple application lead to the maximum value; SD and RO denote spray drift and runoff buffer, respectively

Buffer Width	Scenario	PEC _{sw} [μg/L] Drift Reduction							
& Type			0%		50%		75%	4	₹90%
	D3 (ditch, 1st)	S	2.740	S	1,370	S	[™] 0.685	`S/	×0,274
	D4 (pond, 1st)	S	0.123	S	.062	S	0.031	\$	3 0.012 ∂
	D4 (stream, 1st)	S	2.565	S	1.283	S Q	0.641 @	Š S 🌡	0.256
	D5 (pond, 1st)	S	0.123	S	y 0.062	(S)	0.031	S₽	0012
0m	D5 (stream, 1st)	S	2.511	SI	1.255 🐇	Į S	。 0.6 2 7	S	©.251 _d
SD	R1 (pond, 1st)	S	0.123	00°S'	0.062	S	^② 0. 6 §i 、	ΟŠ	Ø.231 Ø 0.012
	R1 (stream, 1st)	S	2.095	[♥] S	. 1.04®	\$\forall \text{\$\text{\$\text{\$'}\$}	1 0≈524 %	S	(° 0.209
	R2 (stream, 1st)	S	2.776	S	1.388	(S	0.694	S	0.277
	R3 (stream, 1st)	S	2.964	8	C482 C 054 Q	S	> 0.74¥	OS	296
	R4 (stream, 1st)	S	2.108	®	7.05	S	0.627		0.21
	D3 (ditch, 1st)	S	1:849	S	0.920	S y	≈ 9 .462 ≪	S	0.1883
	D4 (pond, 1st)	S	Ø.141	S	0.070	$\bigcup_{s} S$	20.035		@14
	D4 (stream, 1st)	S	2.0 03 , 0.1 4 1	, S	1,001	S	0.564	- N	0.200
_	D5 (pond, 1st)	S &	0.1°4/1	S	0.070	80	0.035	∛S S %	0.014
5m	D5 (stream, 1st)	S ¥ Ø8	\$960 € . ∞0.141 ©		©°0.9 8 90° °0. 0 070		3 .490 C	~	. 0.170
SD	R1 (pond, 1st)	M S	% 90.1∓1 °	S	0.00/0 (). 2	0.03	S OS	0.014
	R1 (stream, 1st) R2 (stream, 1st)	S S	1.636 2.167	\ \[\scale{C}	0.818 ©1.083	2	0.409	S	0.163 0.217
	R3 (stream, 1st)	S	2,197	S	1.15		90.342 G	S	0.217
	R4 (stream, 1st)	⊿S	1.645	Sal	0.5073	S	0.414	S	0.231
	D2 (11: 1 1)		0.826		9.413 O			S	0.083
	D3 (ditch, 1st)		0.820 0.878 *	Sc.	0.039	SO	0.020	S	0.008
	D4 (stream 1st)		20 × 95 ×	⊌ S ≪	0.44	1.S	©0.224	S	0.089
	D5 (pond, 1st)	√Š	© 0.078	S	0.039	$\sqrt[3]{S}$	0.020	S	0.008
10m		S	0.876	KS	≈0.438 ₂	S	0.219	S	0.088
		′ I `		\circ S	₹ 0.03 ₽	_ &	0.020	S	0.008
	Rigstream, 1st)	« \$	731	S	0.365	∂Š	0.183	S	0.073
<i>k</i>	R2 (stream, 1st)	SS	©0.968	\$	70,484	S	0.242	S	0.097
	R3 (stream, 1st)	$P S_{\mathcal{A}}$	1.034	S	0.517	S	0.258	S	0.103
	R4 (stream Qst) 😽	S		√ S	0.517 0.368	S	0.184	S	0.074
	R1 (pond, lov) R (stream, 1st) R2 (stream, 1st) R3 (stream, str) R4 (stream ost)			Æ.	F 0.308				
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Apples, late, 3×112.5 g a.s./ha

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

PEC_{sw} and PEC_{sed} values of trifloxystrobin in applesolate for all calculated scenarios according to FOCUS SW Ston 2: 1444 **Table 9.2.5-8:** scenarios according to FOCUS SW Step 3; letters S, D, and R perfore correspond to the dominant entry path - spray drift, drainage, and rumati

	Si	ngle Applicati	on V	Mu	ltiple Applicați	PBČsed & F#g/kg}
Scenario	Entry			Entry	-X-1- OF	PAÑ . (4
	route	[ug/L]	⊿lug/kgl	**************************************	PECsw Q Jug/Lj	Adg/kg
D3 (ditch, 1st)	S	4.115	1.589	y SV	2.929	7 1.23 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
D4 (pond, 1st)	S	0.185	1.589 0.140 0.329 0.100 0.100 0.141 0.280 0.250		0034	0.402
D4 (stream, 1st)	S	3.9810	<b>"</b> ©0.329.♥	S S	2.956.°	04.02 0.513 0.125 0.327
D5 (pond, 1st)	S	0.185	0.17	Q S	0.13€	Ø0.12 <b>5</b> ∜
D5 (stream, 1st)	S	<b>4</b> :079 ~	QJ93 8	, <b>(\$)</b>	3,085	0.307
R1 (pond, 1st)	S	Ø.185≫″	<b>20</b> .141, <b>3</b>	OS S	<b>1</b> 34 <b>2</b>	<b>6</b> 103
R1 (stream, 1st)	S	3.108	0.28	S	2.26107	0.304
R2 (stream, 1st)	S	4.4070	0.250		3.03	§ 0.232
R3 (stream, 1st)	S ~	<b>3</b> .446 <b>5</b>	0891	<b>S</b> S	30/87	0.649
R4 (stream, 1st)		3.161	~0.42 <b>6</b> ♥	Q'S	<b>2.257</b>	0.323
D3 (ditch, 1st) D4 (pond, 1st) D4 (stream, 1st) D5 (pond, 1st) D5 (stream, 1st) R1 (pond, 1st) R2 (stream, 1st) R3 (stream, 1st) R4 (stream, 1st)  FOCUS SW Step 4 value  FOCUS SW Step	W (		1.589 140 0.329 0.100 0.141 0.280 0.250 0.891 0.426		Q 1:00T 11 (	25.0
FOCUS SW Step 4 val	ues for the or	plication in a	ppies, fate (sii	igle) are presi	ented in I able	9.2.5- 9.
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Table 9.2.5-9: Summary of <u>FOCUS Step 4</u> PEC_{sw} values of trifloxystrobin after application in <u>apples, late</u>; S and M denote whether single or multiple application lead to the maximum value; SD and RO denote spray drift and runoff buffer, respectively

Width	Scenario	PEC _{sw} [µg/L]  Drift Reduction							
& Type			0%		50%		75%	Á	₹90%
	D3 (ditch, 1st)	S	4.115	S	2,058	S	1.029	, SV	×0,411
	D4 (pond, 1st)	S	0.185	S	.092	S 🔊	0.046	*,*\$	<b>(</b> 20.0190)
	D4 (stream, 1st)	S	3.981	S	, [§] 1.990	<b>S</b> Q	0.995 🥷	S ,	0.328
	D5 (pond, 1st)	S	0.185	S	√ 0.092	(S	0.046	S₽	0019
0m SD	D5 (stream, 1st)	S	4.079	SA	2.039	g s	° 1.020	S OS	9.408
	R1 (pond, 1st)	S	0.185	% ( )	0.092	SØ	0.046	O'S	ش 0.019 <i>0</i>
	R1 (stream, 1st)	S	3.108	[™] S ,	。1.5 <b>5</b> 40°	4\$Y	_ <b>10</b> €777 %	Son	0.319
	R2 (stream, 1st)	S	4.170	S	2.0 <b>8</b> 5 .	ÇS	1.042	S	0.417
	R3 (stream, 1st)	S	4.446	\$ \$ \$	<b>2</b> 223 C	Š S	1.112	S OS	<b>₹</b> 0x445 <u>√</u>
	R4 (stream, 1st)	S	3,1 <del>%</del> } ~	(E	7.580 Q	Ş٩	0:Q90	$\cup_{S}$	©0.31@
	D3 (ditch, 1st)	S	2775 ,^	r S	y 1.388°	\$\footstark \rightarrow \right	~£694.∜	S	0.257
	D4 (pond, 1st)	S	Ø.2116	SU	0406 🔏	OS ;	<b>₹</b> 0.05 <b>%</b>		<b>©</b> 021
	D4 (stream, 1st)	S	⊙ [≫] 3.10 <b>%</b> /	. <b>S</b>	\$554 ®	S	0.797	S.	ۇر _{0.311}
	D5 (pond, 1st)	S	0.201	S S	0.106		<b>6.053</b>		<b>∜</b> 0.021
5m	D5 (stream, 1st)	S	<b>3</b> 5)184 🖏		1.583	(S)	<b>3</b> .796	S [°] ≽	0.510
SD	R1 (pond, 1st)	<b>OS</b>		S	0.406 Q	)"S	0.05	S	0.021
	R1 (stream, 1st)	JY S	" 2.4 <b>20</b>	S	1.213	ľ Ş 🏟	0.606	©s	0.243
	R2 (stream, 1st)	S	¥ 3,2,\$5 _{_@}	S	1.213 © 1.628	~ <b>&amp;</b> **	9,814 O	S	0.325
	K5 (stream, 1st)	S ^O	<b>6</b> ,471	S	, 1.20	<b>S</b>	<b>20.868</b>	S	0.347
	R4 (stream, 1st)	₽S	2.468	S.	1 <u></u> 34 <u>&amp;</u>	S	0.61	S	0.247
	D3 (ditch, 1st)	S	1.240	<b>S</b>	Ø.620 O	S.	0,370	S	0.124
	D4 (pond, 100)	\$\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\int_{\inttileftinteta}\int_{\inttileftinteta}\int_{\inttileftinteta\int_{\inttileftinteta\int_{\inttileftinteta\int_{\inttileftinteta\int_{\inttileftinteta\inttileftinteta\inttileftinteta\inttileftinteta\inttileftinteta\intileftinteta\intileftinteta\intileftinteta\intileftinteta\intileftileftinteta\intileftinteta\intileftinteta\intileftinteta\intileftileftinteta\intileftileftileftileftileftileftileftilef	0.47	JYS .	~ 0.059,	SO	0.029	S	0.012
	D4 (stream, 1st)		41.389~y	S	0.694	S	<b>©</b> 0.347	S	0.139
	D5 (pond, 1st)	∜S	0.117	3. \$5	0.059	S	0.029	S	0.012
10m	D5 (stream, lsr) R1 (pond, lsr)	S	D 1.429		0.7113	S	0.356	S	0.142
SD	R1 (pond, 187)	\ \S	0.117	S	\$ 0.05\$	45	0.029	S	0.012
	Rf (stream, 1st)		7×084 O	S	0.542	ØS	0.271	S	0.108
	(\$2 (stream, 1st)	S S	0.117 0.084 0.1.455		<b>3</b> 727 0	S	0.364	S	0.145
*	R3 (stream, 1st)		1.3031	S	0.775	S	0.388	S	0.155
	R4 (stream st)		1,403		0.551	S	0.276	S	0.110
	R1 (pond, 189) R1 (stream, 1st) R2 (stream, 1st) R3 (stream, 1st) R4 (stream) st)								

Vines, 3×125 g a.s./ha

FOCUS SW Step 3 values for the application in vines are presented in Table 9.2.5-10.

Table 9.2.5- 10: PEC_{sw} and PEC_{sed} values of trifloxystrobin in <u>vines</u> for all calculated scenarios according to <u>FOCUS SW Step 3</u>; letters S, D, and <u>R</u> before correspond to the dominant entry path – spray drift, drainage, and ranoff

	Si	ingle Application	on 🔻	Multiple Application				
Scenario	Entry route	PEC _{sw} [μg/L]	ÆC _{sed} [μg/kg]	Entry Proute	PECsw ♥ õg/L}	POC _{sed}		
D6 (ditch, 1st)	S	2.092	0.485	y , <u>s</u>	1.818	© 0.22 <b>8</b>		
R1 (pond, 1st)	S	0.076₡₡	8,073 S	( &\$ 4)	) 00064 ×	0.061		
R1 (stream, 1st)	S	1.5550	_@0.178 <del>/</del>	SS	∰.335 _. "	(0.173		
R2 (stream, 1st)	S	2.062	<b>0.120</b>	S O	1.78	®0.132√		
R3 (stream, 1st)	S	2.002 24200 ~	0.420	, » 🔊	1.875	0.39		
R4 (stream, 1st)	S	¥.555	<b>3</b> .177 L	S' 'S	1,338 €	0.370		

FOCUS SW Step 4 values for the application in vines (single) are presented in Table 9.2.5 11

Table 9.2.5-11: Summary of <u>FOCUS Step 4</u> PEC_{sw} values of trifloxystrobin after application in vines; S and M denote whether single or multiple application lead to the maximum value; SD and RO denote spray drift and runoff buffer, respectively

γ	جيًا.		. 01						
		2 n ²		PEGW					
Scenario	ario 💸 🧢 💇 💸 Drift Redu <b>©</b> ion 🥎								
				¸≪\$50%⊗		√y 7 <b>5</b> 9%		90%	
D6 (ditch, 1st)	∜S	& 2.09 <b>2</b>	S,	1.046	S s	0.523	S	0.209	
R1 (pend, 1st)	5 (	D"0. <b>0.7</b> 6	, \$\$	0.038	S _n	0.019	S	0.008	
R1 (stream, Øst)	S	1.555 🔊	S	\$ 0.778	4S	0.389	S	0.155	
R2 (stream, 1st)	<b>K</b> \$	2.062°°	S	1.001	ØS	0.515	S	0.206	
₿3 (stream, 1st) 🗦	₹S	<b>2.200</b>	\$		S	0.550	S	0.220	
D 1 (stassam North S	$S_{\mathscr{L}}$	, 1. <b>5</b> \$5 °	S	0.77 <b>2</b>	S	0.389	S	0.155	
D6 (ditch, St)	<b>\$</b> \$	1,265	S	0.633	S	0.316	S	0.126	
R1 (pond 1st)		<b>0.088</b>	S	0.044	S	0.022	S	0.009	
R1 (stream, 1st)	₹S	الم ^{ال} 1.13 <b>3</b>	\$	<b>3</b> .566	S	0.283	S	0.113	
R2 (or eam, (st)	S [®]	/ 1:502 ³	$\sqrt{S}$	0.751	S	0.375	S	0.150	
R3 (stream, 1st)	~S	Q603	S	0.801	S	0.401	S	0.160	
IBS#4 Suream. ISLA.	$\sim$ 10	l @i*1.133≪	ૂઽ<	0.566	S	0.283	S	0.113	
D6 (ditch, 1st)	∛ S∝	0.458	Š	0.229	S	0.115	S	0.046	
R1 (pond, 1st)	S	" 0 <b>⊘</b> 0¥9 ≽	' 'y C	0.024	S	0.012	S	0.005	
R1 (stream, 1st)	, SV	<b>%</b> 410	S	0.205	S	0.103	S	0.041	
R2 (stream, 1st)	(S	@ 0.54 <b>4</b> C	S		S	0.136	S	0.054	
R3 (stream, 1st)	$S_{s}$	Ş 0.5 <b>8</b> €						0.058	
R4 (Pream, 1st)	S	Q <b>2</b> 410	S	0.205	S	0.103	S	0.041	
		<b>~</b>							
	D6 (ditch, 1st) R1 (pand, 1st) R1 (stream, 1st) R2 (stream, 1st) R4 (stream, 1st) D6 (ditch, 1st) R1 (pond, 1st) R1 (stream, 1st) R2 (stream, 1st) R2 (stream, 1st) R3 (stream, 1st) R4 (stream, 1st) R5 (stream, 1st)	Scenario  D6 (ditch, 1st)  R1 (pend, 1st)  S  R1 (stream, 1st)  S  R4 (stream, 1st)  R1 (pond, 1st)  R1 (pond, 1st)  R1 (stream, 1st)  S  R2 (stream, 1st)  R3 (stream, 1st)  R4 (stream, 1st)  S  R6 (ditch, 1st)  R7 (stream, 1st)  S  R1 (stream, 1st)	D6 (ditck, 1st)	Scenario         S         2.09         S           R1 (pand, 1st)         S         0.06         S           R1 (stream, 0st)         S         1.555         S           R2 (stream, 1st)         S         2.200         S           R4 (stream, 1st)         S         1.55         S           D6 (ditch, 3t)         S         1.135         S           R1 (pond, 1st)         S         1.133         S           R2 (stream, 1st)         S         1.133         S           R2 (stream, 1st)         S         0.049         S           R1 (pond, 1st)         S         0.049         S           R1 (pond, 1st)         S         0.049         S           R1 (stream, 1st)         S         0.049         S           R1 (stream, 1st)         S         0.458         S           R1 (stream, 1st)         S         0.049         S	De   De   De   De   De   De   De   De	D6 (ditck, 1st)	De (ditch, 1st)	D6 (ditch, 1st)	

#### **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.

... on route and rate of degradation in air and transport via air
... on 7, data points 7.3.1 and 7.3.2.

CP 9.4 Estimation of concentrations furoither routely of exposure

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