





# OWNERSHIP STATEMENT

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#### Version history

		Document identifier and yearsion number
Date	Data points containing amendments or additions <sup>1</sup> and brief description	Document identifier and
[yyyy-mm-dd]	-	version number
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It is suggested	that applicants adopt a similar approach to showing revision	s and version history as outlined
in SANCO/101	180/2013 Chapter 4, 'How to revise an Assessment Report.	
	4, 5° 5° 57	
	that applicants adopt a similar approach to showing revision 180/2013 Chapter 4, 'How to revise an Assessment Report.'	
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<b>.</b> @		
	that applicants adopt a similar approach to showing revision 180/2013 Chapter 4, 'How to revise an Assessment Report.'	
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#### CP9 FATE AND BEHAVIOUR IN THE ENVIRONMENT

Fluopyram was included in Annex I to Council Directive 91/414/EEC in 2013 (Regulation ©U) 802/2013, Entry into Force on August 22, 2013). This Supplementary Dossier contains only data which were not submitted at the time of the Annex I inclusion of Fluopyram under Council Directive 91/414/EEC and which were therefore not evaluated during the first EU review. All data which were already submitted by Bayer AG (former Bayer CropScience) for the Annex Tinclusion under Council, Directive 91/414/EEC are contained in the Draft Assessment Report (DATE) and its Addenda and are included in the Baseline Dossier provided by Bayer.

The formulation FLU SC 500 is an SC formulation containing 500 g/kg of Fluor ram. Th formulation is registered throughout Europe under tode names such as Luna Privilege. FLU. was already a representative formulation of Bayer AG for the Annex Igniclusion of Fluopyram under Council Directive 91/414/EEC.

based on the prication FLU SC 500 is an end use product proposed The state of the separate of t pattern shown below.

Use pattern considered in this risk a

Intended application pattern **Table 9.1-1:** 

Maximum	Maximum
Aabel rate 👢 🤇	Application rate,
(range) (ii	ndividual treatment
	(ranges)
	[kg a.s./ha]
( prodÆha]	Fluopyram
<b>*</b> ***********************************	0.075
	(range) (i

#### **CP 9.1**

#### **CP 9.1.1**

lease refer to Document MCA, Section 7.1.2. For information on the rate of

#### CP/9/1.1.1 Laboratory studies

leaso refer to Document MCA, Section 7.1.2.1. For information on

## Field studies

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



#### **CP 9.1.1.2.1** Soil dissipation studies

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

#### **CP 9.1.1.2.2** Soil accumulation studies

For information on field accumulation studies please refer to Document M

#### **CP 9.1.2** Mobility in the soil

For information on mobility studies please refer to Document MC

#### **CP 9.1.2.1** Laboratory studies

For information on laboratory studies pleas

#### **CP 9.1.2.2** Lysimeter studie

For information on lysimeter studies prease refer

#### Field Yeaching studies **CP 9.1.2.3**

For information on field

#### Estimation of concentrations in soil CP 9.1.3.

concentrations in soil (RDCsoil) are presented below. Calculations of predicted environmental

#### Endpoints for PECsoil

Table 9.1.3- 1 Modelling input parameters for freopyram and its metabolites

Compound F Roopyram	Fluopyram-7-hydroxy (FLU-7-OH)	Trifluoroacetic acid (TFA)
Molécular mass (g/mol) 396.72	412.72	114.02
Molar mass corr. factor	1.0403	0.2874
Max. occurrence in soil [%] 100	5.8	14.8
DisT <sub>50</sub> in sojtod) 4 4000*	85.52 1)	50.3 <sup>2)</sup>

<sup>\*</sup> default

<sup>1)</sup> worst case lab, non-normalized 2) worst case DiOzo, including default degradation and leaching



#### PEC<sub>soil</sub> modelling approach

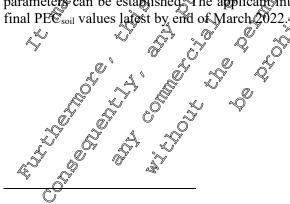
The predicted environmental concentrations in soil (PEC<sub>soil</sub>) for the active substance fluopyram and its metabolites fluopyram-7-hydroxy (FLU-7-OH) and trifluoroacetic acid (TFA) were calculated based on a first tier approach using a Microsoft® Excel spreadsheet under the assumption of an even distribution of the compound in the upper 0-5 cm soil layer. A standard soil density of 1.5 g/m<sup>3</sup> was assumed. Crop interception will reduce the amount of a compound reaching the soil and therefore this has been taken into account depending on the growth stage at application. The interception rates follow the recommendations of the FOCUS groundwater guidance paper (FOCUS 2014a). 

# Predicted environmental concentrations in soil (PECsoil)

Data Point:	IKCP 9 1 3/01
Report Author:	
Report Year:	2008
Report Title:	Predicted environmental concentrations in Soil (PE soil) for fluoryram ose on the state of the soil of
	tomatoes, strawlywries and vines in Europe
Report No:	MEF-07/466 & 2 2 0 4 2 2 2 2
Document No:	
Guideline(s) followed in	M-297834-0Q1 v v v v v v v v v v v v v v v v v v v
study:	
Deviations from current	not applicable  Current guidatine: not opplicable
test guideline:	
Previous evaluation:	yes, evaluated an Occeptal  Application of the property of the
	DAR QUIL DE CONTRACTOR DE CONT
GLP/Officially recognised	No, nat conducted under GLE Officially recognised string scilities
testing facilities:	
Acceptability/Reliability.	Yes O S

This modelling report was part of the previous submission. However the modelling endpoints have been superseded by new studies and new kinetic evaluations. Consequently the report is now outdated and a surarrary of the tosults is not presented in this dossier. For procedural reasons it has to be included in the current dossies however it is now superseded by KCP 9.1.3/03 (M-763355-01-1).

Important remark by the applicant: The modelling core information and the PEC soil values as presented below are interm values and are therefore subject to change until final modelling input parameters can be established. The applicant intends to provide final modelling core information and final PEC soil values latest by end of March 2022.



<sup>&</sup>lt;sup>1</sup> FOCUS, 2014a: Generic Guidance for Tier 1 FOCUS Groundwater Assessments, version 2.2



Data Point:	KCP 9.1.3/02
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLU): Core PECgw, PECsw, PECsoil EUR - Modelling core info document for groundwater, surface water and soil risk assessment in Europe
Report No:	EnSa-21-0077
Document No:	<u>M-763252-01-1</u>
Guideline(s) followed in study:	none
Deviations from current test guideline:	Current guideline: not applicable
Previous evaluation:	No, not previously submitted
GLP/Officially recognised	No, not conducted under Golfficially recognised testing facilities
testing facilities:	
Acceptability/Reliability:	Yes & & & X X X X

#### **Executive Summary**

This document summarises the substance purpose of soil risk assessment.

before data presented in the Modelling reports utilising this core into document Fould on form as shown in Table 9.1.3-1

Data Point:	KCR9.1.3.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Report Author:	
Report Author: Report Year: Report Title:	\$\text{921} \times \tim
Report Title:	Fluortyram (FLU) and metaborites: PFCsoil@UR - Ose in apples, spring cereals,
	winter cereals and Ones in Europe
Report No:	EnSa-21-0075 💆 🗳 💍 🗸
Document No.	M-763395-01A, O O O
Guideline followed in	not applicable of the contraction of the contractio
study: 🗳	
Deviations from current	Current guideling not applicable
test guideline:	
Previous evaluation:	No not previously submitted
GLP/Officially recognised	No, not conducted under GLP Officially recognised testing facilities
testing facilities:	
Acceptability/Reliability:	Yes 4
·	

bort is considering several use scenarios. Only those relevant for Please note: The modelling FLU SC 500 are presented here.

The predicted environmental concentrations in soil (PECsoil) of fluopyram and its metabolites fluopyram 9-hydroxy (PLU-7-OH) and trifluoroacetic acid (TFA) were calculated in a first tier approachousing a Microsoft® Excel spreadsheet. The use of fluopyram in apples was assessed according to Good Agricultural Practice (GAP) under European cropping conditions.

A soil mixing depth of 20 cm was used for the calculation in apples.



Detailed application data used for calculation of PEC<sub>soil</sub> were compiled in Table 9.1.3-2.

Table 9.1.3- 2: Application pattern used for PEC<sub>soil</sub> calculations of fluopyram

		Application			Amount &	
Individual Crop	FOCUS crop used for Interception	Rate per Season [g a.s./ha]	Interval	Plant Interception	BBOH Stage	reaching the soft per application
		[g a.s./naj	[uays]	[/0]	ar and a second	
Apples	Apples	1 × 75	- Ş	65	71 - 89	1 26.250

Findings: The PEC<sub>soil</sub> values for fluopyram and its metabolites are summarized in the tables below

Table 9.1.3-3: PEC<sub>soil</sub> for fluopyram on apples, 1 × 15/g a.s. ha, 65% interception

T		1.	<u> </u>	, , , <u>, , , , , , , , , , , , , , , , </u>			<u> </u>	
PEC <sub>soil</sub>			e applica		Apple	es Deritiple		
(mg/kg)		& Songle	e applica	ıtion "		Martiple	applic	ations
	Ø,	Acqual a		TWAD	' #\	a tual O		TWA
Initial	Ţ	0.035		~		Ø*	(( ))	-
Short term	23h	0.035		'N 025		- 57 - 57 - 57		-
√ n	2d 🐴	0.035		0.035	\$\lambda_{\psi}\)	, V-, B		-
	2d 4d 7	0.035		<b>Q</b> .035	0'	<del>*************************************</del>		-
Long term	ða 🔊	₹ 0KQ35 🦠	y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.035		Q- -		-
	14d 24d 2	0.035		0.035		<b>₩</b> -		-
	24d 6	0.034		90.035 (		<b>V</b> -		-
	28d	<b>Ø</b> .034		0.035		-		-
	424	0.03		0.034		-		-
	50d	<b>9 Q.034</b>		0.034,		-		-
	1000	( 0.033°)		0,034		-		-
Plateau concentration after y	year 10	0.102		<b>~</b> -		-		-
PEC act +PEC so	cumulation	0.157		-		-		-
		0.03 0.033 0.033 0.157 0.157						



Table 9.1.3- 4: PEC<sub>soil</sub> for fluopyram-7-hydroxy on apples, 1 × 75 g a.s./ha, 65% interception

PEC <sub>soil</sub> (mg/kg)		Apples Single application Multiple applications					
		Single a <sub>l</sub>	plication	Multiple applications			
		Actual	Actual TWA		TY TY		
Initial		0.002	-	-8	4- ,4		
Short term	24h	0.002	0.002		, 6 - 8 , p		
	2d	0.002	0.002				
	4d	0.002	0.002	, S - , S			
Long term	7d	0.002	3 <sup>©</sup> 0.002	Y			
	14d	0.002	0.002		P		
	21d	0.002	0.002		~ <u>.</u> ~ ~		
	28d	0.002	0.662	<u> </u>			
	42d	0.002	Ø.002°		- 4		
	50d	<b>0</b> .001	\$ 0.002 0.002 \$	P & - &	Ŝ O		
	100d	\$ <0.00°D	9 0.001 N		\$ \$ -		
Plateau concentration (5 cm) after year		\$ \$9,001 °C		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	(4) (5)		
PEC (PEC <sub>act</sub> +PE	Caccumulation  Csail plateau)	\$\times 0.00\$\times \tilde{\ti	7 0-		-		

Table 9.1.3-5: PEC<sub>soil</sub> for trifftor oace of acid on apples, 1 × 75 g a.s. ha, 65% interception

	1 × × ×		£, <i>01</i>	
PEC <sub>soil</sub>			ples 🔊	
PEC <sub>soil</sub> (mg/kg)	Single a	Age	Multiple a	pplications
	Averual S	TW	Actual	TWA
Initial	0.001	9.001 Å	-	-
Short term 24h	0.001	\$ \$0.001 \( \tilde{\ti}	-	=
2d &		0.00	-	-
2d 400	0.000	0.001	-	-
Long term .	0001 6	0.001	-	-
14dQ 27dd		0.001	-	-
	0.001	0.001	-	1
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Ψ <sub>20</sub> 0.001 (C)	0.001	-	-
5 A \ 426	<0.001	0.001	-	1
\$50d	<b>₹</b> < <b>6</b> 9001	0.001	-	-
1000	< 0.001	< 0.001	-	=
Pateau concentration (5 cm) after year 1  PEC accumulation (PEC out + PEC out slaves)	< 0.001	-	-	-
aftersyear 1				
PEC <sub>accumulation</sub>	0.001	-	-	-
(PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )				



## CP 9.2 Fate and behaviour in water and sediment

## **CP 9.2.1** Aerobic mineralisation in surface water

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

## CP 9.2.2 Water/sediment study

For information on water/sediment studies please refer to Document MCA, Section 2.2.2.3

## CP 9.2.3 Irradiated water/sediment/study

For information on irradiated water/sediment studies please te fer to Document MCA, Section 7.2.2.4.

# CP 9.2.4 Estimation of concentrations in groundwater

Calculations of predicted environmental concentrations in groundwater PEC, are presented below

# Endpoints for PECgw

Table 9.2.4-1: Modelling parameters for fluoryram and its metabolites OLU-7-OH and TFA

Fluopyram	Fluopyram 7-hydroxy	Trifluoroacetic acid
		(TFA)
396.7	7 5 412 <b>0</b> 5	114
0 19 (20°C) 2 7	33.75(25°C)	500000 (20°C)
12 E-6 (20°C)	1.55 E-9 (200C)	1.0 E-6 (20 - 30 °C)
298) (Tier 1, field Deg To	17,5 <b>Q</b> lab)	1000
	& A"	
254 (Tier Za 1, TOS		
	Ç	
216,48 (Tiet 2a 2,7DS DD50	. "0"	
O field equilibrium)	8	
7.525 Frier 2a	<u> </u>	-
©0.0285 (Tier 2a)	-	-
232 V 232 V	100.2	0
	58.1	0
Ø .843 Q	0.929	1
- W	0.6342 from parent	0.5402, overall from
	•	parent, total molar yield
0 (Tier 1)	0 (Tier 1)	0 (Tier 1)
20.3026 (Tier 2a, Briggs)	0.7256 (Tier 2a, Briggs)	0.17 (Tier 2a, cereals)
0.00233 (Tier 1),	0.03954	0.00069
0.00272 (Tier 2a 1),		
0.0032 (Tier 2a 2)		
	396.7  396.7  298 (Tier 1, field Deg To matrix)  2547 (Tier 2a 1, Mps  Description 1, 10 ps  per 1, field Deg To matrix  2547 (Tier 2a 1, Mps  Description 2a 2, DS DOso  field equilibrium)  3.525 (Tier 2a)  3.4.7	396.7 4120 396.7 333.75 (25°C)  298.1 (Tier 1, field Deg To 1.55 E-9 (20°C)  298.1 (Tier 2a 1, 70°S)  216.48 (Tier 2a 2 0 DS D0°s)  6 field equilibrium)  2525 (Tier 2a)



#### PECgw modelling approach

The predicted environmental concentrations in groundwater (PECgw) for the active substance fluopyram were calculated using the simulation models PEARL, PELMO and MACRO (scenario Châteaudun) following the recommendations of the FOCUS working group on groundwater scenarios.

The simulations are carried out over 26 years for pesticides which are applied every war. The simulation length increases to 46 and 66 years for pesticides which are applied only every second and third year, respectively. The first 6 years are intended as a so called 'warm up' period. The following years are taken into account for the assessment of the potential leaching behaviour. 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 PECgw 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. Grop into ception 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 FCCUS 2014a<sup>2</sup>.

A summary of important substance inparameters, spring Table

# Calculation of concentrations in groundwater **CP 9.2.4.1**

# Predicted environmental concentrations in groundwater (PECGW)

Predicted environmental concentrations in groundwater (PRC cw).

For fluopyram, the metabolites fluopyram-7-thydroxy (FLU-7-OM) and Grifluoreacetic acid (TFA) were considered.

<sup>&</sup>lt;sup>2</sup> FOCUS, 2014a: Generic Guidance for Tier 1 FOCUS Groundwater Assessments, version 2.2



Data Point:	KCP 9.2.4.1/01
Report Author:	
Report Year:	2008
Report Title:	Predicted environmental concentrations in groundwater (PECgw) for fluopyrate and its metabolite AE C656948-7-hydroxy calculated with FOCUS PEARL and OCUS
	PELMO - Use on tomatoes, strawberries and vines in Euro
Report No:	MEF-07/464
Document No:	<u>M-297574-02-1</u>
Guideline(s) followed in	not applicable
study:	
Deviations from current	Current guideline: not applicable V
test guideline:	
Previous evaluation:	yes, evaluated and accepted
	in DAR 2011
GLP/Officially recognised	No, not conducted under CLP/Officially recognised testing facilities
testing facilities:	
Acceptability/Reliability:	Yes O Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

This modelling report was part of the previous submission. However the modelling endpoints have been superseded by new studies and new kinetic evaluations. Consequently the report is now outdated and a summary of the results is not presented in this dossier. For procedural reasons at has to be included in the current dossier, however at is now superseded.

Data Point:	XCP 9.2.4.1/02
Report Author:	
Report Year: Report Title:	
Report Title:	LU PROSW FSR: Predicted Svironn Intal concentrations in groundwater recharge based on models Fixes Pears and Focus Prono - Use in tomatoes,
	recharge based on models First Pears and Focus Pears - Use in tomatoes,
	strawberrie and yims in Europe Fluopy an (AE €656948) - Fluopyram-7-
	LLANGTOXV "Y O Z O O
Report No: 🔊	EnSa-1201824
Document Vo:	M-428665-0491°
Guideline(s) followed in	OPOS 890.7100 (2009) O V
study:	
Deviations from curent	Curren Quidelite: not Opplica De
test guideline:	Currence and opposite the currence of the curr
Previous evalua@on:	yeGevaluated and Occepted "O
20	PAddendum 100 DAR 2012
GLP/Officially recognised	No, na conducted under GLI Officially recognised testing facilities
testing facilities:	
Accepţability/Reliabilio.	Yes ~ ~ ~

This modelling report was part of the previous submission. However the modelling endpoints have been superseded by new studies and new kinetic evaluations. Consequently the report is now outdated and a summary of the results is not presented in this dossier. For procedural reasons it has to be included in the current dossier, however it is now superseded.



Data Point:	KCP 9.2.4.1/03
Report Author:	
Report Year:	2012
Report Title:	Fluopyram - Peer review of new active substances - Request for additional information - Environmental fate - EFSA letter ref D(2012) HF/JS/al/620027 dated January 24, 2012
Report No:	M-428680-01-1
Document No:	<u>M-428680-01-1</u>
Guideline(s) followed in study:	not specified
Deviations from current test guideline:	Current guideline: not applicable V
Previous evaluation:	yes, evaluated and accepted in Addendum 1 to DAR 2000
GLP/Officially recognised testing facilities:	not applicable
Acceptability/Reliability:	Yes O , C , A , A , .

The document above was only included for transparency reasons since it was part of the first lighing process. It does not contain information relevant for the current active substance renewal process.

Important remark by the applicant: The modeling gore information and the PEC<sub>gw</sub> values as presented below are interim values and are therefore subject to change until final modelling input parameters can be established. The applicant intends to provide final modelling core information and final PEC<sub>gw</sub> values latest by end of March 2022.

Data Point:	KCP 9.23.1/04 0 0 0
Data Point: Report Author:	
Report Year:	2021 "
Report Title:	Fluopyram (FLU), Core DECgw DECsw DECswil EUR - Modelling core info
#G	document for groundwater, surface water and soil risk assessment in Europe
Report No.	EnSa 21-00770
Document No:	M-653252-64-1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Guideline(s) followed in	none & O & A
study:	
Deviations from current	Current guidaline: not applicable
test guideline:    O	
Previous evaluation:	No, not previously submitted
4	
GLP/Offically recognise	No, not conducted under GLP/Officially recognised testing facilities
testing facilities:	
Acceptability/Reliability:	Andrew Comment of the

## Executive Summary

This document summarises the substance data for fluopyram and its metabolites as used for the purpose of groundwater risk sessment. The following deterministic pesticide fate models were used in the calculations:

- FOCUS EARL
- FOCUS PELMO
- FOCUS MACRO

The parameters correspond to standard EU requirements.



Modelling reports utilising this core info document should have the substance data presented in the form as shown in Table 9.2.4.1-1 and Table 9.2.4.1-2.

Table 9.2.4.1- 1: Compound input parameters for fluopyram and its metabolites

			Fluopyram-7-	<u> </u>
Parameter	Unit	Fluopyram	hydroxy	Trifluoroacetic acid
Common				
Molar mass	(g/mol)	396.7	412	\$1.0 k228.0° \$
Solubility	(mg/L)	19	3@8	5 <b>00</b> 000 ×
at temp.	(°C)	20	25	Q 20 Q 4
Vapour pressure	(Pa)	1.20 <b>E</b> ∉ <b>0</b> 6	Ŷ.55E@99 🔏	\$1.00E-06
at temp.	(°C)	200	20 32	
Freundlich exponent	(-)	%9.843 © «	D.929 &	
fne, TDS	(-)	n.a. (1) / 0.525 <sup>2) 3)</sup>	0 %	
kdes, TDS	(1/day)	n.a.1)/200285 <sup>213</sup>		
Plant uptake factor	(-)	$9^{11}$ $9.3026$	( 0 <sup>1)</sup> ( 0.7256 )	
Walker exponent	(-)	0.7	( \$\infty 0.7\infty \( \text{\( \text{\) \exitity \	° 0.7 ° 0.7
PEARL parameters				
Substance code	(-) @ 4	© FLU <sup>1</sup> © FLU <sup>2</sup> D <sup>2)</sup> /	OH <sup>1</sup> ) OH2O <sup>3</sup> /	©TFA <sup>1)</sup> YTFA21 <sup>2)</sup> /
		FLU23	OH23*V	© %TFA23 <sup>3)</sup>
DT <sub>50</sub>	(days) &	216.483)	4 17,5	1000
Formation fraction	(-) (O		\$\int \text{342}\$	0.5402
Molar activ. energy	(kJ/pnot) Q	65 <del>%</del> 20	\$\ 65 <sub>6</sub> 4 \ \ \ \ \ \	65.4
Kom	$(m\mathbb{Z}/g)$	0 139.7 ×	581	0
PELMO parameters				
Substance code	(-)\(\frac{1}{2}\)	ASC	ALT ALT	B1
Rate constant	(-) (-) (-) (-) (-) (-) (-) (-) (-) (-)	$(0.00233^{1}) / (0.00232^{3})$	0.03954	0.00069
Q10	(-)\ <sup>2</sup>	2.58	<sup>™</sup> 2.58	2.58
Koc 💢	(m <b>O</b> g)	23201 4	0 100.2 × 100.2	0
MACRO parameters			À"	
Substance code		FLU / FLU 212) / (2)	> 7OH¹) / 7OH21²) /	TFA <sup>1)</sup> / TFA21 <sup>2)</sup> /
Substance code *		FLUQ <sup>3)</sup>	7OH23 <sup>3)</sup>	TFA23 <sup>3)</sup>
Exponent moisture		\$ 10,719 \$ "	0.49	0.49
Exponent temperature	©(1/K)©″	× _ \$.0948\$	0.0948	0.0948
FRACE		\$\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\left(\frac{1}{4}\right)\frac{1}{4}\right)\frac{1}{4}\left(\frac{1}{4}\right)\frac{1}{4}\left(\frac{1}{4}\right)\frac{1}{4}\right(\frac{1}{4}\right)\frac{1}{4}\right)\frac{1}{4}\left(\frac{1}{4}\right)\frac{1}{4}\right)\frac{1}{4}\right(\frac{1}{4}\right)\frac{1}{4}\right)\frac{1}{4}\right(\frac{1}{4}\right)\fr	0	0
SORPRATE *	Juday.	$n.a.^{1}$ $0.0098^{2/3}$	0	0
SOIGH PATTE	· · · · · · · · · · · · · · · · · · ·	0.0070	· ·	V

<sup>1)</sup> Tier 1

The model PELMO cannot deal with formation fractions > 1. Therefore, a formation fraction reflecting trifluoroacetic acid (TFA) formation per CF3 moiety (related to max. ff 1) was used in combination with the molar mass of 2 TFA molecules. This adaptation of the formation in soil can be assumed reliable in case of TFA, since it is a non-sorbing metabolite, where equilibrium sorption is of no concern.

<sup>2)</sup> Tier 2a 1

<sup>3)</sup> Tier 2a 2 \*) Pelmo: Molar

of MFA notiplied by 2, in Combination with overall formation fraction per CF3 moiety, 0.2701., i.e. 0.5 \* fatmation taction for FLU molecule. This is done to adapt for limitations in PELMO with formation



Table 9.2.4.1- 2: Degradation pathway related parameters for fluopyram and its metabolites

	Tier 1	Tier 2a 1	Tier 2a 2
Degradation fraction	FLU → 7OH: 0.6342	FLU21 → 7OH21: 0.6342	FI⁄JJ23 → 7OH23 <b>②</b> .6342
from $\rightarrow$ to	$FLU \rightarrow TFA: 0.5402$	$FLU21 \rightarrow TFA21: 0.5402$	FCU23 → TFA23: 0.5402
(-) (FOCUS PEARL)			
Degradation rate	Active Substance $\rightarrow$ A1:	Active Substance → A1;	Active Subsance - A1:
from $\rightarrow$ to	0.0014748	0.0017280	0.00203067 ~~~
(1/day) (FOCUS PELMO)	Active Substance $\rightarrow$ B1:	Active Substance → 🗗:	Active Substance $\rightarrow$ B.
a), b)	6.28E-04		[8.63[\$ <del>-</del> ]94 ≥° ,[0
	Active Substance →	Active Substance →	Action Substance
	BR/CO2: 2.23E-04	BR/CO2: 2.61E-04 💍 🖰	B&CO2:\$.06E-04
		$A1 \rightarrow BR/CO2: 0.0395406$	ÂY → BR/CO220.0395406
	$B1 \rightarrow BR/CO2: 6.93E_{\odot}04$	B1, → BR/\$02: 6/93E-04 (	B1 — BR/CQ2: 6.93 = 04
Conversion factor	$FLU \rightarrow 7OH:$	₽ <b>L</b> U21 → 70H2Y: 0	FLÆ23 → 7OH235
from $\rightarrow$ to	0.659777737	0.659 <b>7</b> 77 Q	0.659770 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
(-) (FOCUS MACRO) c)	$7OH \rightarrow TFA$ :	FLU21 → FFA21: A	$\text{prLU}_{20} \rightarrow \text{1rA23}.$
	0.155257118	0.0552574 5	0.1562571 📞 🔊

a) Calculated as ln(2) / DT50 × formation fraction
b) formation fraction of TFA (B1) divided by 2 for adaptation to limitations in PELMO
c) Calculated as molar mass / molar mass predecessor × formation fraction

Data Point:	CCP 9.2.4.1/05
Report Author:	
Report Year:	2027
Report Year: Report Title:	Fluopyrand (FLU) and metabolities: PECgw FOCUS PEARL, PELMO, MACRO PUR (Ter 1) Use in apples, spring careals, winter careals and vines in Europe
S. S	EUR (Tier 1) Vise in apples, spring coreals, winter coreals and vines in Europe
Report No: _U ~\	Ensa=21-00/26
Document No:	EnSa 21-0026  M_663352_01-1
Guideline(s) followed on	
study:	
Deviations from current	Current guideline: not applicable
test guideline:	No, not previously subjutted of
Previous evaluation:	No, not previously submitted
6 -	
GLP/Officially recognised	No not conducted under GP/Officially recognised testing facilities
testing facilities	
Acceptability/Reliability:	Ofes O' A' O'
Ø" . Q	
7	
j j	
* O *	No not previously submitted  No arot conducted under GP/Officially recognised testing facilities  Yes
Õ	



Data Point:	KCP 9.2.4.1/06
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLU) and metabolites: PECgw FOCUS PEARL, PELMO, MACRE EUR (Tier 2a 1, appl. every year) - Use in apples, spring cereals, winter cereals and vines in Europe
Report No:	EnSa-21-0053
Document No:	<u>M-763421-01-1</u>
Guideline(s) followed in study:	none S S S S
Deviations from current test guideline:	Current guideline: not applicable &
Previous evaluation:	No, not previously submitted of the subm
GLP/Officially recognised testing facilities:	No, not conducted under OLP/Officially recognised testing facilities
Acceptability/Reliability:	Yes O O O O O O O
receptuolity/remainity.	
Data Point:	KCP 9.2.4.1/07
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLU) and metabolites: PECOW FOCUS PEARL, PELMO MACRO
_	EUR (Tier 2a, 1 appl. very 2nd year) Use in apple spring cereals, winter cereals and comes in Europe
Report No:	Ensa-21-0054
Document No:	₩-7634®-01-15 Ø
Guideline(s) followed in	Yone A S OF S
study:	
Deviations from current test guideline:	Current gradeline not applicable
Previous evaluation	No, not previously submitted 5
GLP/Officially Geograped	No, not conducted under & LP/Othicially becognized testing facilities
testing facilities: Acceptability/Reliability:	Yes V
Acceptagaty/Renamity.	
Data Point:	KCP 924.1/08
Report Author:	
Report Year:	2029 . 0 0 0
Report Title:	Rinopyram (FLL) and partabolities: PECgw FOCUS PEARL, PELMO, MACRO
	EUR (Oer 2a Cappl. Every 30 year) - Use in apples, spring cereals, winter cereals and wines in Europe
Report No:	EnSa-21-6055
Document No:	763428-01-
	phone C C
study:	
Deviations from current test guideling	Corrent guideline: not applicable
Previous evaluation	No, not previously submitted
GLP/Officially recognised	No, not conducted under GLP/Officially recognised testing facilities
testing facilities:	V <sub>oc</sub>
Acceptability/Reliability:	Yes



Data Point:	KCP 9.2.4.1/09
Report Author:	KCI 9.2.4.1/09
Report Year:	2021
Report Title:	Fluopyram (FLU) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO
Report Title.	EUR (Tier 2a 3, appl. every year) - Use in apples, spring careals, winter careals appl
	vines in Europe
Report No:	EnSa-21-0064
Document No:	M-763424-01-1
Guideline(s) followed in	
study:	
Deviations from current	Current guideline: not applicable
test guideline:	Current guidenne. not appricate
Previous evaluation:	No, not previously submitted
1 Tevious evaluation.	No, not previously submitted
GLP/Officially recognised	No, not conducted under GLP officially recognised testing facilities
testing facilities:	O P P Cognised Cotting monitors
Acceptability/Reliability:	Yes A O Q Q
11000pmonity/Rendomity.	
Data Point:	KCP 9.2.4.1 (1) (1) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLC) and metabolites: PFCgw FOCUS & ARLOELMO, MACRO EUROFier 2a/3, appl. every 2nd year) - Uso in apples, spring cereals, winter cereals
	EURO Tier 2a/3, appl. every 2nd year) - Uso in apples, spring cereals, winter cereals
	and vines in Europe & S
Report No:	EmSa-21@0065 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Document No:	<u>M1-763425-01-1</u>
Guideline(s) followed in	noney C
study:	
Deviations from current	Current Paideline: not applicable
test guideline:	
Previous evaluation:	No not pre yously submitted
GLP/Officially recognised	No, not conducted under GLP/Officially recognised testing facilities
testing facilities:	
Acceptability/Reliability/	
Ş * -	
Data Point:	KCP-9:2.4.1/1
Report Author: 🕡	Kley, C.; Herrman, M. O
Report Year:	2021
Report Title	Fluop Fram (FAD) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO
The point Thinks	EURO Tier 223, apprevery 3rd year) - Use in apples, spring cereals, winter cereals
	and vines in Europe
Report No:	5nSa-2140066
Document No:	0M-76@426-01-1
Guideline(s) foll wed in	none
study:	
Deviations from current	Surrent guideline: not applicable
test guideline:	J J
Previous evaluation:	No Pot previously submitted
GLP Officially recognised	No, not conducted under GLP/Officially recognised testing facilities
testing facilities:	
Acceptability/Reliability:	Yes



<u>Please note</u>: The modelling reports are considering several use scenarios. Only those relevant for FLU SC 500 are presented here.

#### **Methods and Materials:**

Predicted environmental concentrations of the active substance fluopyrum and its major con degradation products in groundwater recharge (PEC<sub>gw</sub>) were calculated for the use in Europe, using the simulation models FOCUS PEARL 4.4.4, FOCUS PELMO 5.5.3 and FOCUS MACRO 5.5.4. PECgw were evaluated as the 80th percentile of the mean annual leachate concentration at 1 m soil depth. Model parameters and scenarios consisting of weather, soil and crop data were used as proposed by FOCUS (2014a,b<sup>1,3</sup>). The use of fluopytam in apples was assessed according to Good Agricultural Practice (GAP) under European cropping conditions

Detailed application data used for simulation of P

Application pattern used for PECgw calculations of thuopyram Table 9.2.4.1- 3:

Individual	40		Apterval	interception	Stage	Asmount reaching soil
crop	crop	(ga.s./ha)	(days)			(g a.s./ha)
Apples I	Apples &	1 × 0,5	L - B	/ 465 ×	, <b>7</b> %) - 89	1 × 26.250
Apples II	Apples (	15 75 S		€ 65 € 65 € 65 € 65 € 65 € 65 € 65 € 65	\$71 <b>- \$9</b>	1 × 26.250
Apples III	Apple	\$1 × 75	\$ - x		74, 89	1 × 26.250

Input parameters piered approach:

A detailed description of the parameters used at the different steps is presented in Table 9.2.4.1- 4. More details on the selection of input parameter are given in the ext below the table.

<sup>&</sup>lt;sup>3</sup> FOCUS, 2014b: Assessing Potential for Movement of Active Substances and their Metabolites to Ground Water in the EU: The Final Report of the Ground Water Work Group of FOCUS EC Document Reference: Sanco/13144/2010 version 3, 613 pp.



Table 9.2.4.1-4: Tiered approach for fluopyram and its metabolites used for modelling

	Tie	er 1	Tier	· 2a 1	Tier	· 2a 2
	DT <sub>50</sub>	TSCF	DT50	TSCF	DT <sub>50</sub>	TSC
FLU	298.1 a)	0 e)	254.4 b)	0.3026 f)	216 48 °)	0.3026 f)
FLU-7-OH	17.5 <sup>d)</sup>	0 e)	17.5 <sup>d)</sup>	0.7256 f)	17.5 d)	6,7256
TFA	1000 e)	0 e)	1000 e)	0.17 g)	( 1000 e)	\$\times 0.17\$\text{\$\text{\$\gamma\$}}

- a) DegT<sub>50 field matrix</sub>
- b) TDS, DT<sub>50</sub> lab equilibrium
- c) TDS, DT50 field equilibrium
- d) laboratory data
- e) FOCUS worst case default
- f) TSCF based on Briggs equation
- g) TSCF based on experimental data

#### Rate of degradation of fluopyram

Tier 1: The geometric mean field DegT<sub>50</sub> matrix value of 298 d degreed from field dissipation soldies was used for fluopyram.

Tier 2a: Degradation and time-dependent surption studies showed aged sorption effects for Auopyram. A geomean laboratory  $DT_{50}$  equilibrium of 254.4 d was used as Tier 2a 1 in groundwater assessment. At Tier 2a 2 a geomean field  $DT_{50}$  equilibrium of 26.5 d was used in groundwater assessment for fluopyram. In both cases, laboratory data for  $f_{NE}$  and  $k_{d}$  were used in combination with the  $DT_{50}$  equilibrium.

# Plant uptake (TSCF) of fluoryram and its metabolites

Tier 1: For fluopyram and its metabolites a TSCF of Q an be used for modelling as a first tier.

Tier 2a: As a more realistic tier a TSCF based on the Briggs equation of 0.3026 (fluopyram) and 0.7256 (FLU-OOH) should be taken into account.

For a more realistic consideration of the plant uptake of TFA, a bydroponic plant uptake study has been capted out with careal plants. As a second ties a TSOF of 017 should be taken into account.

Input parameters for flyopyran and its metabolites were used as summarised in Table 9.2.4.1- 1 and Table 9.2.4.1- 2.

Application dates for the simulation runs were defined following the crop event dates of the respective crop and scenario (see Table 9.2.4 > 5) as given by FOCUS (2014b). Crop interception was taken into account according to the BBCH growth stage, as recommended by FOCUS (2014a).

For use patterns with large application time windows, multiple starting times for modelling were chosen to cover the full application time rame given in the GAP. This was done according to the proposal of the tool Application (Klein 2019). For application windows > 60 d, the earliest and the latest possible application dates were chosen for modelling. For windows > 90 d, a further application date was set of the produce of the considered application window according to AppDate.



**Table 9.2.4.1-5:** First application dates and related information for fluopyram 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 I	Apples II	Apples III	
Repeat interval for app. events	Every year Every 2 <sup>nd</sup> year Every 3 <sup>rd</sup> year	Every year Every 2 <sup>nd</sup> year Every 3 <sup>rd</sup> year	Apples III  Every Pear Every 3rd year Every 3rd year  Spray  Absolute  Julian day  Offset	IJ ~
Application technique	Spray	Spray	Spray	, , , ,
Absolute / Relative to	Absolute	Absolute	Absolute	
Scenario	1 <sup>st</sup> app. date (Julian day) Offset	1 <sup>st</sup> app. date (Julian day)	Ost apporate (Julian day)	
Chateaudun	06 Jun (457)	28 Jul 7 (209)	717 Seft (269) (269) (16 Oct (288)	, <b>)</b> ,
Hamburg	© 07 Jin	27 Aug 0	76 Oct 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
Jokioinen Q	01 Jun	01 Arg (203)	Oct 274)	
Kremsmuenster	(188) (188)	©27 Aug (238)	16 Oct (289) &	
Okehanipton	- 3 19 Pun (2070)	27 Jul (208) (208) (328)	(244)	
Pracenza 47	08 Aun (189)	[ \( \sum_{\infty} \) (223) \( \sum_{\infty} \)	18 Oct (291)	
Porto S	06 Joh (187)	- 0 27 Aug (239)	17 Oct (290)	
Sextila 4	07 Jun (158)	04 Ang 0 (216)	01 Oct (274)	
Thive	06 Jul 07	21 Aug (233)	06 Oct (279)	
			-	
Sextilla  Thive  Thive  There evaluated as the 80th or thropyrum and its metabo	Q A S	mean annual la	achate at 1 m soil down	, D
vere evaluated as the 80th or thropyrem and its metabo	litecare given in	the following tal	oles.	1. P



## Tier 1: DT<sub>50</sub> soil for fluopyram based on field data

Table 9.2.4.1- 6: Tier 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples I (with FOCUS PEARL/PELMO/ MACRO) – 1 × 75 g a.s./ha, 65% interception

			80 <sup>th</sup> percen	tile PEC <sub>gw</sub> a	nt 1 m soil d	epth (μg/L)	
Crop	Scenario	Fluop	oyram	Fluopy hyd	ram-7- 🎳 roxy 🙏	Trifluoro	
		PEARL	PELMO	PEARL	<b>E</b> ELMO	PEARL	PELMO
Apples I	Chateaudun	0.491	0.47	0.072	0.067	2.23Q	£084 &
	Hamburg	0.710	<b>\$</b> 424	0.103	\$0.070	3.416	2.067
	Jokioinen	0.003	0.002 .	<b>0</b> 0010	× 0.007	2.904	2,2988
	Kremsmuenster	0.362 🔘	0,928	× 0.054	<b>200</b> 054 7	1.497	<u>1.813</u>
	Okehampton	0.388,	√9.471√ <sup>®</sup>	0.081	0.075	1.269	1.250
	Piacenza	<b>431</b>	y 0.4 <b>01</b>	\$0.057 <sub>0</sub>	0,081	© 2.19 <b>%</b>	4200
	Porto	0.20%	230	0.039	\$ .048		0.747
	Sevilla Q	0,384	0.10%	<b>200</b> 59 C	0.034	2.845	6.988
	Thiva	. ≼q <sup>8</sup> 521 ®	0.334	© 0.071Q	0.052	4.673	4.647
		MAC	cko o	MA	RO N	MAC	CRO
	Châteaudun 🕰		01	0.0	013 🗸 👸	6.3	350

Table 9.2.4.1-7: Sier 1 RECgw for fluggerram and its metabolites on Apples II (with FOCUS PEARL/PELNO/MACRO) – 1 × 15/g a.s. ha, 65% interception

			80th percen	tile BEC <sub>gw</sub>	₩ 1 m soil d	epth (μg/L)	
<b>Cop</b>	Scenario	Fluop	yra <b>o</b>	( <i>(/)</i>	ram-7-		acetic acid
Ž	Charcaudum Hambing	PFARL	PELMO	PEARL	PELMO	PEARL	PELMO
Apples II	Chateaudyn	0.400	<u></u> 0.474 0	0.073	0.067	2.220	2.079
	Hamburg		0.44	0.107	0.074	3.413	2.046
J. T.	Joki@nen	$\mathbb{C}_{0.002}$	2002	0.011	0.007	2.823	2.253
	Kremsmuenster	0.870	<b>0.348</b>	0.055	0.055	1.491	1.824
, A	Okehampton 🖰	0.401	0.485	0.063	0.076	1.260	1.243
	Piácenza V Z Porto V	0.48%	0.422	0.064	0.064	2.204	1.207
	Porto S	<b>©</b> 215	0.243	0.041	0.049	0.856	0.767
	Porto Sevilla	0.373	0.100	0.058	0.022	2.841	6.987
	Timva ,	0.523	0.335	0.071	0.049	4.728	4.588
		MAC	CRO	MAC	CRO	MAG	CRO
Ü	Châteaudun	0.1	15	0.0	014	5.9	933



Table 9.2.4.1- 8: Tier 1 PEC<sub>gw</sub> for fluopyram and its metabolites on Apples III (with FOCUS PEARL/ PELMO/ MACRO)  $-1 \times 75$  g a.s./ha, 65% interception

			80 <sup>th</sup> percen	tile PEC <sub>gw</sub> a	ıt 1 m soil d	epth (μg/L)	
Crop	Scenario	Fluop	oyram		ram-7- C	4	acetic acid
		PEARL	PELMO	PEARL	РЕСМО	PEAR	PELMQ
Apples III	Chateaudun	0.511	0.497	0.075	<b>2</b> 0.070	2021	2.070
	Hamburg	0.744	0.456	0.108	0.075	₹3.383Q	<b>2</b> 935 (
	Jokioinen	0.003	<b>9.0</b> 02	0.01	@0.007	2.747	C2.251
	Kremsmuenster	0.373	0.353	<b>9</b> 056	<b>(</b>		2.251 1; <b>©</b> 4
	Okehampton	0.420 🔘	0.504	× 0.065	Ø980 Z	1.254	1.240
	Piacenza	0.484	, <b>0</b> .445	0.084	0.067	2.961	1.2 <b>5</b> 2
	Porto	g,218 ×	y 0.2 <b>69</b>	0.041	0,053	© 0.85¥	<b>9</b> 63
	Sevilla	0.389	Q 127	0.060	\$9.027\$	2.837	6.913
	Thiva	0.545	0.414	0074	0.059	€ <b>4</b> .773-	4.656
		MAC	ČRO ,	W MA	CRO Ĉ	MAC	CRO
	Châteaudun	0.1	18 0	0.4	<u> </u>	© 6.3	340
	Rremsmuenster Okehampton Piacenza Porto Sevilla Thiva Châteaudun						



#### Tier 2a 1: DT<sub>50</sub> soil for fluopyram (TDS) based on laboratory data

#### **Annual application**

Table 9.2.4.1- 9: Tier 2a 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples I (with FOCUS PECKL/PELMO/MACRO) – 1 × 75 g a.s./ha, 65% interception, annual application

					~@	,	<i>(U)</i>
			80 <sup>th</sup> percen	tile PEC <sub>gw</sub> a	ıt 1 m sojl d	epth (μg/L)	¥ .
Crop	Scenario	Fluop	oyram	Fluopy	rang	Trifluaros	acetta
		PEARL	PELMO	PEARL	PELMO	() ×	PE
Apples I	Chateaudun	0.173	<b>\$</b> 130	0.032	©0.027	2.488	1.
	Hamburg	0.225	0.102 0	<b>000</b> 41	× 0.028	3.242 V	l,
	Jokioinen	<0.0010	<0.901	× 0.001	200002 a	2.549	<u>4</u> 2.
	Kremsmuenster	0.118 0.186 0.166 0.090	√Ø.070√	0.023	0.019	1.471	1.
	Okehampton	£186,%	0.204	0.038	0.043	© 1.27 <b>%</b>	49.
	Piacenza	0.16	©192 \( \)	0.026	S.038	2 <b>.4</b> 5	<b>b</b> 1.
	Porto Q	0.090	0.0%	0024	0.029	2 \$\varP45 \(\infty\) .845\(\infty\)	0.
	Sevilla		04908	© 0.023Q,	0.003		6.
	Thiva	0.103	\$0.056 <sub>@</sub>	0.630	ÿ0.01 <b>4</b> 0	4.509	4.
	Y A	MAN	RO S	MA	CRO	MAC	CRO
	Clateaudu	(1) (0.	.000	/ O <0.	gon Z	6.0	)14
F)	Okehampton Piacenza Porto Sevilla Thiva Choteaudur						



Table 9.2.4.1- 10: Tier 2a 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples II (with FOCUS PEARL/ PELMO/ MACRO) – 1 × 75 g a.s./ha, 65% interception, annual application

			80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)							
Crop	Scenario	Fluopyram		Fluopyram-7- C hydroxy		Trifluoroacetic acid				
		PEARL	PELMO	PEARL	PELMO	PEARO	PELMO			
Apples II	Chateaudun	0.174	0.126	0.032	$\sqrt[\infty]{0}$ .027	20194	) 1.9 <i>5</i>			
	Hamburg	0.235	0.10%	0.043	0.029	<b>₹</b> 3.239€	£885 €			
	Jokioinen	< 0.001	< <del>0</del> .001	0.000	©9.002	2.470	2.103			
	Kremsmuenster	0.120	0.071 .	Ø 24 ×	0.049	<b>№</b> .465 €				
	Okehampton	0.188	0.206	× 0.039	<b>0</b> 0944	1.265	1.191			
	Piacenza	0.174	. <b>0</b> .201	0.028	0.038	2.967	7 1.1 <b>5</b>			
	Porto	g 094	× 0.099		0,028	0.844	<b>Q</b> 717			
	Sevilla	O.119	Q 007 ~	0.023	Ø.003	2 <b>D</b> 5	6.136			
	Thiva	0.173	0.048	<b>200</b> 30	0.019	\$3.556 ×	4.058			
		MAC	CRO		CRO C	O MAC	CRO			
	Châteaudun	<0.	<b>6</b> 64 0	√ <q< td=""><td><b>9</b>01 ~</td><td>§ 5.6</td><td>566</td></q<>	<b>9</b> 01 ~	§ 5.6	566			

Table 9.2.4.1-11: Tier 2a 1 PCCgw for fluopyram and its metabolities on Apples III (with FOCUS PEARL/PELMO/MACRO) ~ × 75 g a.s./ha, 65% interception, annual application

الم الم	80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)						
Crop	Scenario S		yram S	Fluory hyd	v ram-7-	Trifluoroacetic acid	
		PEARL	PELMO	PĚARL	PELMO	PEARL	PELMO
Apples III	Chateaudun	<b>40</b> .179		<b>0.033</b>	0.027	2.202	1.932
	Hamburg 5	0.23		0.043	0.029	3.208	1.878
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Jokioinon J	<b>20</b> 001 €	(0.0°)	0.001	0.002	2.400	2.089
	Krensmuenster	0.121	90,073	0.024	0.019	1.461	1.733
***	Okehampton	0.097	<b>3</b> 0.218	0.040	0.046	1.260	1.188
<b>*</b>	Piacenda D	0.180	0.208	0.028	0.039	2.128	1.187
	Portò	₹ 0.0 <b>9</b> %	0.109	0.026	0.030	0.840	0.717
	Sevilla &	<b>₽</b> 114	0.008	0.023	0.003	2.720	5.995
	Sevilla Thiva	0.183	0.062	0.031	0.016	4.604	4.075
		MAG	CRO	MAG	CRO	MAG	CRO
	Châteaudun	<0.	001	<0.	001	6.0	)97



## **Biennial application**

Table 9.2.4.1- 12: Tier 2a 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples I (with FOCUS PEARL/PELMO/ MACRO)  $-1 \times 75$  g a.s./ha, 65% interception, biennial application

			80 <sup>th</sup> percen	tile PEC <sub>gw</sub> a	nt 1 m soil	epth (μg/L)	
Crop	Scenario	Fluop	oyram	yram Fluopyi hydr		Trifluoro	aceticacid
		PEARL	PELMO	PEARL	<b>E</b> ELMO	PEARL	PELMO
Apples I	Chateaudun	0.063	0.05	0.013	0.012	1.024Q	₽907 &
	Hamburg	0.099	<b>9</b> 063	0.020	Ø.016	1.746	0.908
	Jokioinen	<0.001	0.001 .	Ø 02 ×	× 0.002	<b>№</b> .722 €	1,382
	Kremsmuenster	0.048	0.027	× 0.01	<b>900</b> 910 7	0.827	<u>0.945</u>
	Okehampton	0.069,	. <b>0</b> .079	0.086	0.019	0.324	0.5 <b>%</b>
	Piacenza	Ø56 ×	y 0.0 <b>69</b>	Ø.010	0,015	© 2.09 <b>%</b>	9899
	Porto	0.036	<b>Q</b> 033	0.049	\$6.012		0.366
	Sevilla Q	0.035	0.004	<b>20009</b> [C	0.002	2.854×	2.941
	Thiva	. ∜g <sup>8</sup> 057 ®	0.018	© 0.012Q	0.006	1.699	1.954
	\$ 0	MAC	cko o	MA	RO S	₩	CRO
	Châteaudun 🕰		001		001 🗸 💲	3.6	553

Table 9.2.4.1- 13: Pier 2a PEC for thopyram and its metabolites on Apples II (with FOCUS PEARE) PELNO MACRO) – 1 75 g a.s. ha, 65% interception, biennial application

			80th percen	tile <b>E</b> Cgw	# 1 m soil d	epth (μg/L)	
<b>Cop</b>	Scenario	Fluop	yra <b>o</b>	( <i>(/)</i>	ram-7-		acetic acid
Ž	Charcaudum Hambing	PFARL	PELMO	PEARL	PELMO	PEARL	PELMO
Apples II	Chateaudyn	0.06	<b>0.</b> 050 ©	0.013	0.012	1.015	1.025
	Hamburg		0.06	0.021	0.017	1.749	0.905
	Joki@nen	©0.00	20001	0.002	0.002	1.731	1.419
4	Kremsmuenster	0.048	<b>0.038</b>	0.011	0.010	0.828	0.967
, Y	Okehampton 🗸	0.069	0.079	0.016	0.019	0.528	0.517
	Piácenza V Z Porto V	₹ 0.06%	0.074	0.012	0.016	2.117	0.602
	Porto S	<b>©</b> 032	0.035	0.010	0.012	0.376	0.368
	Porto Sevilla	0.035	0.003	0.009	0.002	1.823	2.953
	Timva ,	0.056	0.016	0.012	0.005	1.715	1.880
		MAC	CRO	MAC	CRO	MAG	CRO
Ü	Châteaudun	<0.	001	<0.	001	3.3	350



Table 9.2.4.1- 14: Tier 2a 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples III (with FOCUS PEARL/ PELMO/ MACRO) – 1 × 75 g a.s./ha, 65% interception, biennial application

		80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)							
Crop	Scenario	Fluopyram		Fluopyram-7- C hydroxy		Trifluoroacetic acid			
		PEARL	PELMO	PEARL	PELMO	PEARO	PELMQ		
Apples III	Chateaudun	0.065	0.051	0.014	<b>2</b> 0.012	10018	1.05 <b>%</b>		
	Hamburg	0.103	0.06	0.021	0.017	∜1.7520°	<b>5</b> 900 &		
	Jokioinen	< 0.001	<b>9</b> 001	0.002	@0.002	1.732	C <sub>1.452</sub>		
	Kremsmuenster	0.049	0.039	<b>200</b> 011	0.010	<b>№</b> .828 €	Y)) (///////////////////////////////////		
	Okehampton	0.072	0. <b>@</b> 34	×0.017	<b>%</b> 920	0.526	0.512		
	Piacenza	0.065	. <b>10</b> .076	0.082	0.017	2.945	0.5		
	Porto	\$ 032	× 0.038	Ø.010	0,0,13	0.379	<b>9</b> 73		
	Sevilla	0.03 <b>%</b>	0,004	0.00	\$9.003	1,807	2.905		
	Thiva	0.060	0.021	<b>12</b>	0.006	7.707 ×	1.878		
		MAC	CRO		CRO C	O MAC	CRO		
	Châteaudun	\ \sigma^\(\infty^{\neq} < 0.	<b>6</b>	\$\sqrt{	<b>0</b> 01 ×	3.6	541		

Triennial application

Table 9.2.4.1- 15: PEC for thopyram and its metabolites on Apples I (with FOCUS PEARL/PELMO/MACRO) – 1 × 25 g a.s./ha, 65% interception priennial application

			. 📎	g mer gpt		п пррисине	
			80th percen	tile BECgw	₫1 m soil d	epth (μg/L)	
CLOD.	Scenario	Fluop	yram ~	Fluopyram-7- hydroxy		Trifluoroacetic acid	
Ĉ	Charcauden Hambing	PFARL	PELMO	PEARL	PELMO	PEARL	PELMO
Apples I	Chateaudyn	0.035	. 027 °	0.008	0.007	0.700	0.718
	Hamburg		<b>6</b> 0.0	0.012	0.009	0.925	0.566
	Joki@nen	©0.002	2003	0.002	0.002	0.891	0.769
	Kremsmuenster	0.037	<b>7</b> 0.019	0.006	0.005	0.567	0.574
- Y	Okehampton	0.037	0.043	0.009	0.011	0.357	0.343
	Piacenza V	₹ 0.03	0.039	0.006	0.009	1.641	0.367
	Porto S	<b>≈</b> 0015	0.017	0.005	0.006	0.235	0.236
	Porto Sevilla	0.017	0.002	0.005	0.001	1.004	1.820
	Tonva .	0.029	0.009	0.007	0.003	1.350	1.401
		MAG	CRO	MAC	CRO	MAG	CRO
	Châteaudun	<0.	001	<0.	001	2.3	364



Table 9.2.4.1- 16: Tier 2a 1 PEC $_{gw}$  for fluopyram and its metabolites on Apples II (with FOCUS PEARL/ PELMO/ MACRO)  $-1 \times 75$  g a.s./ha, 65% interception, triennial application

			80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)							
Crop	Scenario	Fluopyram		Fluopyram-7- C hydroxy		Trifluoroacefic acid				
		PEARL	PELMO	PEARL	PETMO	PEAR	PALMO			
Apples II	Chateaudun	0.033	0.026	0.008	©0.007	<b>0</b> 706	0.72			
	Hamburg	0.055	0.03\$	0.012	0.010	∜0.918Q	<b>8</b> 559 &			
	Jokioinen	0.002	g <del>.</del> 003	0.002	@0.002	0.868	0.773			
	Kremsmuenster	0.026	0.019	Ø 06 %	0.006	<b>№</b> .578 <b>€</b>	0,533			
	Okehampton	0.039	0.044	×0.002	<b>0</b> 0011	0.359	0.346			
	Piacenza	0.034,	, <b>0</b> .040 C	0.007	0.010	1.850	0.3			
	Porto	Ø16	, –	, 40.006°	0.097	© 0.23 <b>6</b>	<b>Q2</b> 36			
	Sevilla	0.01 <b>%</b>	<b>(</b> \$002 \	0.00	\$9.001\$	0,998	1.803			
	Thiva	0.029	0.008	<b>200</b> 06	0.003	326 ×	1.356			
		MAC	CRO		CRO	O MAC	CRO			
	Châteaudun	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	<b>66</b> 1 0	4	<b>9</b> 01 🔊	<b>©</b> 2.1	106			

Table 9.2.4.1- 17: Tiet 2a 1 PEC gw for fluopyram and its metabolities on apples III (with FOCUS REARL/PELMO/MACRO) IX 75 g a.s./ha, 65% interception, triennial application

			- ×		<i>@</i> ,	<u> </u>	11			
			80 <sup>th</sup> percentile PEC <sub>gw</sub> at £m soil depth (μg/L)							
Crop	Scenario 9	Fluor	yram S	Fluopy	V ram-7- roxy	Trifluoroacetic acid				
			*RELMO	PĚARL	PELMO	PEARL	PELMO			
Apples III	Chateaudun	<0.034 C	0.027	<b>300.0</b>	0.007	0.702	0.721			
~	Haonburg ~	0.056	. 036 Ô	0.012	0.010	0.915	0.561			
	Jokioinen	<b>£Q0</b> 02	Ø 0.0 <b>9</b>	0.002	0.002	0.862	0.765			
	Krefosmueroter	0.02	9,020	0.006	0.006	0.591	0.594			
	Okehampton 0	0.640	<b>0.046</b>	0.010	0.012	0.361	0.347			
<b>*</b>	Piacenza D	0.033	0.041	0.007	0.010	1.685	0.379			
	Porto	) 0.0 f	0.019	0.006	0.007	0.238	0.238			
	Sevilla	<b>₽</b> 017	0.002	0.005	0.001	0.992	1.795			
	Sévilla Thiva	0.030	0.010	0.007	0.003	1.318	1.374			
		MAG	CRO	MAG	CRO	MACRO				
	Châteaudun	<0.	.001	<0.	001	2.3	359			



#### Tier 2a 2: DT<sub>50</sub> soil for fluopyram (TDS) based on field data

#### **Annual application**

Table 9.2.4.1- 18: Tier 2a 2 PECgw for fluopyram and its metabolites on Apples I (with FOCUS PECKL/PELMO/MACRO) –  $1 \times 75$  g a.s./ha, 65% interception, annual application

	I	1			"		(// //
			80 <sup>th</sup> percen	tile PEC <sub>gw</sub> at 1 m sool depth (μg/L)			
Crop	Scenario	Fluop	oyram	Fluopy	rang-7	Triffinaro	acetar.
		PEARL	PELMO	PEARL	PELMO	PEAR	PE
Apples I	Chateaudun	0.085	<b>£</b> 061	0.021	©0.018	2.229	2.0
	Hamburg	0.124	0.052 •	<b>2000</b> 31	0.020	3.387	12
	Jokioinen	<0.001	<0.001	0.001	<b>6000</b> 01	2.768	<u></u> <u>2</u> 2.
	Kremsmuenster	0.059	√Ø.032√		0.0120	1.497	1.
	Okehampton	<b>101</b>	0.105	\$0.029°	0.083	© 1.29 <b>©</b>	1.
	Piacenza	0.078	. 14	0.048	S.031	2 <b>9</b> 0	b 1.
	Porto Q	0.044	0.050	0017	0.020	2.470 20.859	0.
	Sevilla		04902	© 0.012Q	0.002	2.756	6.3
	Thiva &	0.082	\$0.020@	0.621	× 0.0080	4.575	4.2
	Okehampton Piacenza Porto Sevilla Thiva Clateaudur	MA	ŽRO 🛴	NA MA	CRQ	MAC	CRO
	Ckateaudu	$\mathcal{I}$ $\mathcal{I}$ $\mathcal{I}$ $\mathcal{I}$	000	O <0.	gon J	6.0	)33
Po	(V)		~ × × ×	<b>4</b>	1		



Table 9.2.4.1- 19: Tier 2a 2 PEC $_{gw}$  for fluopyram and its metabolites on Apples II (with FOCUS PEARL/ PELMO/ MACRO) – 1 × 75 g a.s./ha, 65% interception, annual application

		80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)						
Crop	Scenario	Fluopyram		Fluopyram-7- C hydroxy		Trifluoroacetic acid		
		PEARL	PELMO	PEARL	PELMO	PEARO	PELMO	
Apples II	Chateaudun	0.086	0.059	0.021	<b>2</b> 0.017	2027	1.996	
	Hamburg	0.131	0.055	0.032	0.022	∜3.3920°	£963 €	
	Jokioinen	< 0.001	<b>0.00</b> 1	<0.00%	@9.001	2.689	2.162	
	Kremsmuenster	0.060	0.033	<b>200</b> 16 7	0.043	<b>№</b> .490 €		
	Okehampton	0.103	0.07	× 0.029	Ø934	1.290	1.223	
	Piacenza	0.088,	<b>. 0</b> .119 C	0.020	0.032	2.998	1.17	
	Porto	Ø 047	× 0.052	Ø.018	0.021	© 0.85 <b>%</b>	<b>9</b> 730	
	Sevilla	0.05 <b>Q</b>	<b>0</b> ,002	0.045	\$9.002 \$	2, \$\mathbb{Q}(3)	6.281	
	Thiva	0.081	0.017	00020	0.007	£4.633√	4.135	
		MA	CRO		CRO Ĉ	) MAC	CRO	
	Châteaudun	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<b>66</b> 7 0		<b>9</b> 01 ~	<b>S</b> 5.7	712	

Table 9.2.4.1-20: Tier 2a 2 REC<sub>gw</sub> for fluopyram and its metabolities on Apples III (with FOCUS PEARL/PELMO/MACRO) I × 75 g a.s./ha, 65% interception, annual application

Crop   Scenario   Fluopyram   Fluopyram	څ		80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)						
Apples III Chateaudun (10.089 0.060 0.022 0.018 2.237 1.976  Hamburg 0.123 0.055 0.033 0.022 3.361 1.943  Jokioiren 0.001 0.001 0.001 2.601 2.149  Kremsmuenster 0.061 0.034 0.016 0.013 1.482 1.769  Okehampton 0.009 0.125 0.031 0.036 1.286 1.221	Crop	Scenario 9			Fluopyram-7-		Trifluoroacetic acid		
Apples III Chatcaudun (20.089 0.060 0.022 0.018 2.237 1.976  Hamburg 0.133 0.055 0.033 0.022 3.361 1.943  Jokioiren 0.001 0.001 0.001 2.601 2.149  Kremsmuenster 0.061 0.034 0.016 0.013 1.482 1.769  Okehampton 0.009 0.125 0.031 0.036 1.286 1.221			PEARL		PEARL	PELMO	PEARL	PELMO	
Hamburg 0.16 (0.055 (0.033 0.022 3.361 1.943 Jokioinen 0.001 <0.001 <0.001 0.001 0.001 2.601 2.149 Krensmuenster 0.061 0.034 0.016 0.013 1.482 1.769 Okehampton 0.009 0.125 0.031 0.036 1.286 1.221	Apples III	Chateaudun &	<0.089 <sub>4</sub>	0.060		0.018	2.237	1.976	
Jokioinen 20001 20001 20001 2.601 2.149  Krensmuerriter 20.061 2034 0.016 0.013 1.482 1.769  Okehameton 0.009 0.125 0.031 0.036 1.286 1.221		Hamburg	0.133	*A /	0.033	0.022	3.361	1.943	
Oxenampton 0.009 0.125 0.031 0.036 1.286 1.221	4	Jokioinen		(0.00)	< 0.001	0.001	2.601	2.149	
Oxenampton 0.009 0.125 0.031 0.036 1.286 1.221		Kreissmuerster	0.06	20034	0.016	0.013	1.482	1.769	
Piacefiza         0.092         0.125         0.021         0.033         2.154         1.217           Porto         0.049         0.059         0.019         0.023         0.854         0.736           Sevilla         0.053         0.003         0.015         0.002         2.771         6.149           Thiva         0.087         0.023         0.022         0.009         4.688         4.153           MACRO         MACRO         MACRO         MACRO	,*\	Okehampton			0.031	0.036	1.286	1.221	
Portò         0.049         0.059         0.019         0.023         0.854         0.736           Sevilla         0.053         0.003         0.015         0.002         2.771         6.149           Thiva         0.087         0.023         0.022         0.009         4.688         4.153           MACRO         MACRO         MACRO         MACRO	~	Piacena D	0.092	0.125	0.021	0.033	2.154	1.217	
Sevilla   10053   0.003   0.015   0.002   2.771   6.149     Thiva		Portò 🗸	0.04%		0.019	0.023	0.854	0.736	
Thiva 0.087 0.023 0.022 0.009 4.688 4.153  MACRO MACRO MACRO		Sevilla S	<b>₽</b> 053	0.003	0.015	0.002	2.771	6.149	
MACRO MACRO MACRO		Thịva	0.087	0.023	0.022	0.009	4.688	4.153	
			MACRO		MACRO		MACRO		
Châteaudun <0.001 <0.001 6.122		Châteaudun	< 0.001		< 0.001		6.122		



## **Biennial application**

Table 9.2.4.1- 21: Tier 2a 2 PEC $_{gw}$  for fluopyram and its metabolites on Apples I (with FOCUS PEARL/PELMO/MACRO) – 1 × 75 g a.s./ha, 65% interception, biennial application, biennial application

		80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)						
Crop	Scenario	Fluop	Fluopyram		Fluopyram-A hydroxy		acetic acid	
		PEARL	PELMO	PEARL	PELMO	PEARLS	PELMO	
Apples I	Chateaudun	0.028	0.1022	0.0030	0.007	1.033	Ci.020	
	Hamburg	0.050	©0.030	0,015	0.011	~\ <sup>9</sup> 70	0.4	
	Jokioinen	<0.001	Ø 0.0 <b>6</b>	₹.001£	0.001	1.729	1.407	
	Kremsmuenster	0.024	015	0.007	0.006	0835	0.95%°	
	Okehampton	0.035	0.042	<b>©</b> 011 &	0.00	<b>\$0.537</b>	0528	
	Piacenza	\$0.026 \$\times\$	0.638	♥ 0.00 <b>%</b>	0.012	2.134	Q.609	
	Porto	0.013	0.016	0.006	0.005	378 4	0.373	
	Sevilla	©.014 ©		0.005	00001	0 1.877	3.003	
	Thiva &	0.025	0.006	0.067	©0.003	1.913	1.995	
			RO	MAN MAN	<b>₹</b> , ₹	S MA	CRO	
	Chateaudur	$\mathbb{Q}_0$	.0010		.001	3.0	568	

Table 9.2.4.1- 22: Tier 2a 2 PECgw for fluopyram and its metabolity on Apples II (with FOCUS PEORL/PELMO MACRO) – 1 75 g a.s./ha 65% interception, biennial application

		80 <sup>th</sup> percentile PEC <sub>27</sub> at 1 m soil depth (μg/L)							
Erop	Scenario	Fluopyram		Fuopyram-7- hydroxy		Trifluoroacetic acid			
Ž.		PEARI	PKD MO	PEARL	PELMO	PEARL	PELMO		
Apples II	Chateau Dan	0-028	0.02	0.008	0.007	1.023	1.041		
	Hamburg 5	0.053×	0.032	0.015	0.012	1.773	0.944		
	Jok Joinen ^	<0.601	<b>3</b> 0.001	0.001	0.001	1.740	1.451		
4	Kremsiruenster	®021 0	0.016	0.007	0.006	0.837	0.985		
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	Okehampton	© 0.035	0.041	0.012	0.014	0.538	0.529		
	Piacenza	00031	0.041	0.008	0.012	2.137	0.613		
	Porto S	0.014	0.017	0.007	0.009	0.381	0.376		
	Se illa	0.014	0.001	0.005	0.001	1.844	3.012		
	Thiva 🔊	0.024	0.005	0.007	0.003	1.733	1.922		
		MACRO		MACRO		MACRO			
	Châteaudun	<0.	001	<0.	001	3.3	389		



Table 9.2.4.1- 23: Tier 2a 2 PEC $_{gw}$  for fluopyram and its metabolites on Apples III (with FOCUS PEARL/ PELMO/ MACRO) – 1 × 75 g a.s./ha, 65% interception, biennial application

		80 <sup>th</sup> percentile PEC <sub>gw</sub> at 1 m soil depth (μg/L)						
Crop	Scenario	Fluopyram		Fluopyram-7- C hydroxy		Trifluoroacetic acid		
		PEARL	PELMO	PEARL	PELMO	PEAR	PELMQ	
Apples III	Chateaudun	0.029	0.022	0.009	<b>2</b> 0.007	10033	1.07	
	Hamburg	0.053	0.03\$	0.015	0.012	∜1.7760°	<b>3</b> 940 &	
	Jokioinen	< 0.001	<b>9</b> 001	0.000	@0.001	1.742	C <sub>1.492</sub>	
	Kremsmuenster	0.022	0.016	Ø907 Ž	0.006	<b>№</b> 0.836 €		
	Okehampton	0.037	0.045	× 0.012	<b>00</b> 015	0.538	0.525	
	Piacenza	0.034		0.08	0.013	2.970	0.608	
	Porto	\$ 014	× 0.0	\$0.007°	0.000	© 0.38 <b>5</b>	<b>9</b> 381	
	Sevilla	0.014	<b>(50</b> 001 ~	0.00	\$0.001	1,827	2.970	
	Thiva	0.027	0.007	<b>1</b> 00008	0.000	7.725 ×	1.908	
		MAC	CRO		CRO E	O MAC	CRO	
	Châteaudun	<0.		<sup>N</sup> <0	<b>9</b> 01 ×	§ 3.6	545	

Triennial application

Table 9.2.4.1- 24: Sier 2a PEC for thopyram and its metabolites on Apples I (with FOCUS PEARL/PELNO/MACRO) – 1 × 15 g a.s./ha, 65 % interception or intential application

	The state of the s						
		80 <sup>th</sup> percentile CEC <sub>gw</sub> 20 1 m soil depth (μg/L)					
Crop C	Scenario	Fluopyram		Finepyram-7- hydroxy		Trifluoroacetic aci	
Ž	Charcauden Hambing	PFARL	PELMO	PEARL	PELMO	PEARL	PELMO
Apples I	Chateaudyn	0.00	©.011 ®	0.005	0.004	0.704	0.725
4	Hamburg	<b>£</b> 2026	0.01	0.008	0.006	0.935	0.587
	Joki@nen	$\mathbb{Z}_{0.00}$	<b>20</b> 001	< 0.001	0.001	0.909	0.781
***	Kremsmuenster	0.0010	<b>0.007</b>	0.004	0.003	0.569	0.576
, A	Okehampton	0.018	0.022	0.006	0.008	0.361	0.348
	Piácenza	× 0.0f3⁄	0.020	0.004	0.007	1.651	0.370
	Porto S	<b>√</b> 006	0.008	0.003	0.004	0.237	0.238
	Porto S	0.006	0.001	0.003	0.001	1.011	1.867
	Triva V	0.012	0.003	0.004	0.002	1.365	1.426
		MACRO		MACRO		MACRO	
Ü	Châteaudun	<0.	001	<0.	001	2.3	371



Table 9.2.4.1- 25: Tier 2a 2 PEC $_{gw}$  for fluopyram and its metabolites on Apples II (with FOCUS PEARL/ PELMO/ MACRO)  $-1 \times 75$  g a.s./ha, 65% interception, triennial application

	80 <sup>th</sup> percentile PE					tile PEC <sub>gw</sub> at 1 m soil depth (μg/L)				
Crop	Scenario	Fluop	Fluopyram		Fluopyram-7- C hydroxy		aceric acid			
		PEARL	PELMO	PEARL	PELMO	PEARO	PELMO			
Apples II	Chateaudun	0.014	0.011	0.005	Ø0.004	<b>©</b> 709	7 0.72 <b>9</b>			
	Hamburg	0.027	0.016	0.008	0.007	<b>≈</b> 0.927€	<b>B</b> \$80 &			
	Jokioinen	< 0.001	<b>9</b> 001	<0.00%	@9.001	0.905	0.786			
	Kremsmuenster	0.011	0.008	0004 V	0.003	<b>№</b> .576 €				
	Okehampton	0.019	0. <b>@</b> 2	×0.007	<b>9</b> 908 7	0.362	0.352			
	Piacenza	0.0₺	~ <b>0</b> .021 ~ C	0.064	0.007	1.859	0.376			
	Porto	9,007	y 0.0 <b>68</b>	0.004	0,095	0.23	<b>9</b> 239			
	Sevilla	\$0.00 <b>6</b>	<b>30</b> .001	0.003	\$0.001	1,004	1.852			
	Thiva	0.012	0.003	00004	Ön n Ö	337×	1.381			
		MA	ČRO ,	WA(	C <b>RO</b>	O MAC	CRO			
	Châteaudun	<b>√</b> <0.	· PW.	~~ <q< td=""><td><b>9</b>01</td><td><b>Q</b> 2.1</td><td>128</td></q<>	<b>9</b> 01	<b>Q</b> 2.1	128			

Table 9.2.4.1- 26: Tier 2a 2 PEC<sub>gw</sub> for fluopyram and its metabolities on apples HI (with FOCUS PEARL/PELMO/MACRO) X × 75 g a.s./ha, 65% interception, triennial application

Crops Apples III	Scenario	/ <i>W</i>			_		
L ő			80th percent		Fluopyram-7-		acetic acid
Annles III	Scenario 9	PEARL	PELMO	PĚ ARL	PELMO	PEARL	PELMO
Apples III	hateaudun 🔎 📗	«0.014 <sub>«</sub> "		<b>0.005</b>	0.004	0.706	0.730
H	lam burg	0.028		0.009	0.007	0.924	0.573
У Т	okioinon y	<b>20</b> 001	2 0.00P	< 0.001	0.001	0.905	0.778
K.	reformuenster	0.01	<b>2008</b>	0.004	0.003	0.590	0.599
Ž Sp.	kehampton		0.024	0.007	0.009	0.365	0.353
Pi	iacefe a	0.015	0.022	0.004	0.008	1.697	0.384
L Po	ortò 🗸 🏅	₹ 0.00 <b>%</b>	0.009	0.004	0.005	0.240	0.241
	evilla 🛴	<b>&amp;</b> 006	0.001	0.003	0.001	0.998	1.825
TI	evillas S	0.012	0.003	0.004	0.002	1.327	1.402
Piacerza Portò Sevilla Thiva Châteaudun		MACRO MACRO		MAC	MACRO		
C	Châteaudun	<0.001		< 0.001		2.362	



#### **Conclusion:**

Following a tiered approach for all intended uses of FLU SC 500 in apples there are no concerns for groundwater from the active substance fluopyram and its metabolites.

In Table 9.2.4.1- 27 to Table 9.2.4.1- 47 the maximum PEC<sub>gw</sub> values of fluopyram and its metabolites for FOCUS PEARL/ PELMO/ MACRO calculations for all use patterns in apples are given at Tieo1 (Table 9.2.4.1- 27 to Table 9.2.4.1- 29), Tier 2a 1 (Table 9.2.4.1- 30 to Table 9.2.4.1- 38), and Tier 2a 2 (Table 9.2.4.1- 39 to Table 9.2.4.1- 47).

Tier 1: DT<sub>50</sub> soil for fluopyram based on field data

Table 9.2.4.1- 27: Maximum FOCUS PEARL PROF results of Thopyram and its metabolites in µg/I for the uses assessed – Tier 1

Use pattern	Fluopyram Fluopyram-7- Triffuoroasetic acid' hydroxy
Apples I, 1×75 g a.s./ha	© 103.7 2 4.673
Apples II, 1×75 g a.s./ha	0.739 0.109 0.109 0.4.728
Apples III, 1×75 g a.s./ha	0.744 0.008 0 2 4.973

Use pattern		Puopyom	hydroxy &	Trifluoroacetic acid
Apples I, 1×75 g a.s. na		© ~9.474.°	Ø.075 Q	6.988
Apples II, 1×75 gals./ha	, *	0.485	\$\tag{\pi} 0.0\tag{6}	6.987
Apples III, 1×79 g a.s. pa	<b>V</b> V	0.614	00080	6.913

Table 9.2.4.1-29: Maximum POCUS MACRO PECgw results of Juopyram and its metabolites in μg/L

Use pattern A Luopy Com	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, $1 \times \sqrt{5}$ g a.s./ha $\circ$	0.013	6.350
Apples ILV-75 g a.s./ha Q Q 0.115	0.014	5.933
Apples III, 1×75 g a.s Oa A O O 18	0.015	6.340
Apples III, 1×75 g a.s. va		



#### Tier 2a 1: DT<sub>50</sub> soil for fluopyram (TDS) based on laboratory data

## **Annual application**

Table 9.2.4.1- 30: Maximum FOCUS PEARL PECgw results of fluopyram and its metabolites in µg@ for the uses assessed – Tier 2a 1, annual application

Use pattern	Fluopyram	Fluopyram-7, hydroxy	Trifluoroagetic acid
Apples I, 1×75 g a.s./ha	0.225	0.04	4.502
Apples II, 1×75 g a.s./ha	0.235	0.043	\$ 4.536 J. O.
Apples III, 1×75 g a.s./ha	0.237	©043	£ 604 \$ 4

Table 9.2.4.1-31: Maximum FOCUS PELMO Plot gw results of fluopyrum and its metabolites in µg/l for the uses assessed – Tier 2a 1, annual application

Use pattern		Hopyram-7- hydroxy	rifiaoroacetic acad
Apples I, 1×75 g a.s./ha	© ~.204, ©	Ø.043	6.202
Apples II, 1×75 g a.s./ha	0.206	~ 0.044 ~ [Si]	Ø 6.136
Apples III, 1×75 g a.s./ha	0.218	0,046	<b>5</b> . <b>5</b> . <b>9</b> 95

Table 9.2.4.1- 32: Maximum FOCUS MACRO PEC<sub>gw</sub> results of the operation and its metabolites in μg/L for the uses assessed – Ger 2a J annual application

Use pattern Thopy	hydroxy [7]
	0.001 0<0.000 5.666
Apples II, 1×75 g a.s./ha	2 0.00 5.666
Apples III, 1×75 g a.s./h	01 0 <0.001 6.097

#### Biennial@pplication

Table 9.2.4.1-33: Maximum FOCUS PEORL PECgw results of Tuopyram and its metabolites in μg/L for the uses assessed – Tier 2a 1 Diennia application

Use pattern Pluop am	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, 155 g a.s./ha 50.099	0.020	2.092
Apples Is 1×75 g a.s./hay \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.021	2.117
Apples III, 1×75 g a.s. ha	0.021	2.145

Table 9.2.4.1- 34: Maximum FOCOS PELMO PECgw results of fluopyram and its metabolites in μg/L for the uses assessed — Fier 2a 1, biennial application

Use pattern O O	Fluopyram	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, 1 % g a.s. Tha	0.079	0.019	2.941
Apples II ×75 g a.s./ha	0.079	0.019	2.953
Apples H1, 1×75 g a.s./ha	0.084	0.020	2.905



Table 9.2.4.1- 35: Maximum FOCUS MACRO PEC<sub>gw</sub> results of fluopyram and its metabolites in μg/L for the uses assessed – Tier 2a 1, biennial application

Use pattern	Fluopyram	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, 1×75 g a.s./ha	< 0.001	<0.001	3.65%
Apples II, 1×75 g a.s./ha	< 0.001	< 0.001	3.350
Apples III, 1×75 g a.s./ha	< 0.001	<0.001	\$.641\$\text{\$\infty}\$

#### **Triennial application**

Table 9.2.4.1- 36: Maximum FOCUS PEARL PECgy results of fluoryram and its metabolites in ig/L for the uses assessed – Tier 2a 1, trigonial application

Use pattern		FluopyrameJ- bydroxy	rifluoroacetic acid
Apples I, 1×75 g a.s./ha	0:053	0.012	1.641
Apples II, 1×75 g a.s./ha	20055 V	0×012 ×	/ 📣 .650 🔊
Apples III, 1×75 g a.s./ha	0.05	0.012	1.685

Table 9.2.4.1- 37: Maximum FQCUS PELMQ PEC<sub>gw</sub> results of fluory ram and its metabolites in μg/L for the uses assessed — Tier 2a 1, triennial application

Use pattern		Fluopyram	Fluopyram-7	Prifluoroacetic acid
Apples I, 1×75 g a.s./ha			0.041	1.820
Apples II, 1×75 g a.s. &a	L É	0:944	0.011	1.803
Apples III, 1×75 gas./ha	1\0' \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<b>20.046</b>	0.012	1.795

Table 9.2.4.1-38: Waximum FOCUS MACRO DEC gweesults of fluoryram and its metabolites in μg/L for the uses assessed. Tier 2a 1, triennial application

			·	
Use pattern  Apples I, 1×75 g a  Apples II, 1×75 g	a.s./ha	Fluopyram	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, 1×75 g	a.s./ha	<0.000	< 0.001	2.364
Apples II, 1×75	a.s./kg S	<0.001	< 0.001	2.106
Apples III, 1×75 g	g a.s./ha	\$ \$0.001 °	< 0.001	2.359
(M) ·		<0.001 		



#### Tier 2a 2: DT<sub>50</sub> soil for fluopyram (TDS) based on field data

### **Annual application**

Table 9.2.4.1- 39: Maximum FOCUS PEARL PEC<sub>gw</sub> results of fluopyram and its metabolites in µg@ for the uses assessed – Tier 2a 2, annual application

Use pattern	Fluopyram	Fluopyram-7, hydroxy	Trifluoroaetic acid
Apples I, 1×75 g a.s./ha	0.124	0.03	3× 4.575
Apples II, 1×75 g a.s./ha	0.131	0.032	\$ 4633 J
Apples III, 1×75 g a.s./ha	0.133	©033	£ 88.688

Table 9.2.4.1- 40: Maximum FOCUS PELMO PEC<sub>gw</sub> results of fluopyram and its metabolites in µg/L for the uses assessed – Tier 24.2, annual application

Use pattern	AFluop@am C	Quopyram-7-	Tribuoroacetic acid
Apples I, 1×75 g a.s./ha	0.115		\$ 6.349O
Apples II, 1×75 g a.s./ha	0.14 <b>9</b>	0.034 5	6,291
Apples III, 1×75 g a.s./ha	Ø 125 Ø	©036	© °6€149

Table 9.2.4.1- 41: Maximum FOC S MACRO PFCgw results of fluopyram and its metabolites in μg/L for the uses assessed Tier 25.2, annual application.

Use pattern			Fluopyram	hydro	xy 🤝	Trifluoroacetic acid
Apples I, 1×75 g a	spha V		₹0.00 <b>)</b>	\$ \$\tau\tau\0.09	H\$	6.033
Apples II, 1×75	ı.s./ha©`		0'<0 <u>:</u> 001 %	<0.00	01	5.712
Apples III, 1×75 g		Ö 4	<b>\$0.001</b>	0 40.00	)1	6.122

#### Biennial application

Table 9.2.4.1- 42: Maximum FGCUS REARL PEC<sub>gw</sub> results of fluopyram and its metabolites in μg/L for the uses assessed Tier 23.2, bien fial application

Use pattern  Apples I. 7×75 g a.s./ha  O.600	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, $1 \times /3$ g a.s./ $1 $	0.015	2.114
Apples II, 1×75 g a.s. Ha	0.015	2.137
Apples III, $1 \times 75$ g ass./na $\sqrt{}$ 0.053	0.015	2.170
Apples III, 1 × 73 g as 3.71a		



Table 9.2.4.1- 43: Maximum FOCUS PELMO PEC<sub>gw</sub> results of fluopyram and its metabolites in μg/L for the uses assessed – Tier 2a 2, biennial application

Use pattern	Fluopyram	Fluopyram-7- hydroxy	Trifluoroacetic
Apples I, 1×75 g a.s./ha	0.042	0.014	3.00%
Apples II, 1×75 g a.s./ha	0.041	0.014	3.012
Apples III, 1×75 g a.s./ha	0.045	0.015	, Ž.970

Table 9.2.4.1- 44: Maximum FOCUS MACRO PEC<sub>gw</sub> results of fluoporam and its metabolities in 19/1 for the uses assessed – Tier 2a 2, biennial application

Use pattern	Fluopyram	Fluopyram-7- bydroxy	Tvifluoroacetic acid
Apples I, 1×75 g a.s./ha	(0.000 C	©<0.0 <b>©</b>	\$\int 3.668 \\ \mathrew \( \mathrew \) \\ \\ \mathrew \( \mathrew \) \\ \\ \mathrew \\ \m
Apples II, 1×75 g a.s./ha	<0.001	<0.001	3.\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Apples III, 1×75 g a.s./ha	Ø.001 Ø	₹ 6.001°¥	₹ ₹3.645 \$

## **Triennial application**

Table 9.2.4.1- 45: Maximum FOCO'S PEARL PEC gw results of fluopyram and its metabolites in μg/L for the uses assessed – Tier 2a 2 Triennial application

Use pattern		Fluopyram Fluopyram-7-7 hydroxy	Trifluoroacetic acid
Apples I, 1×75 g a	ha O	0.0267 5 00.0085	1.651
Apples II, 1×75 Qa	.s./ha©`	0.007	1.659
	a.s.Dha 🗸 💍	28 5 0009	1.697

Table 9.2.4.1- 46: Maximum FOCUS PECMO PEC<sub>gw</sub> results of fluopyram and its metabolites in μg/L for the uses a sessed γ lier 22/2, trionial application

Use pattern Pluopo am &	Fluopyram-7- hydroxy	Trifluoroacetic acid
Apples I, 1, 5 g a.s./ha	0.008	1.867
Apples I ×75 g a.s./hay 0.02	0.008	1.852
Apples III, 1×75 g a. Tha	0.009	1.825

Table 9.2.4.1-47: Maximum FOCUS MACRO PECgw results of fluopyram and its metabolites in μg/L for the uses assessed Tier 2a 2, triennial application

Use pattern	Fluopyram	Fluopyram-7- hydroxy	Trifluoroacetic acid
Appers I, 1, 95 g a.s./ha	< 0.001	< 0.001	2.371
Apples Holix75 g a.s./ha	< 0.001	< 0.001	2.128
Apples III, 1×75 g a.s./ha	< 0.001	< 0.001	2.362



#### **CP 9.2.4.2** Additional field tests

# Estimation of concentrations in surface water and rediment **CP 9.2.5**

### **Endpoints for PECsw**

Modelling input parameters for Muopyram and its metabolites FLU-7-OH, and TF **Table 9.2.5-1**:

CP 9.2.4.2 Addi	tional field tests		
For information on additi	onal field studies please re	efer to Document MCA, Se	ection 7.1.2.2.1.
CP 9.2.5 Estin	nation of concentration	s in surface water and	sediment & S
Calculations of predicte	ed environmental concen	trations in surface water	r (PEC <sub>sw</sub> ) and sectiments
(PEC <sub>sed</sub> ) are presented be	low.	Ch L	
<b>Endpoints for PECsw</b>			
T. 1. 0.0.5.4			
<b>Table 9.2.5- 1:</b> Model	ling input parameters for <u>A</u>	luopyram and its metabolit	tes FLU-7-OH and TFA
Compound	Fluopyram 🎳 🐧	@Fluopyvam-7.hvydrox	Frifluoroacetic acid
		(FLU-POH)	O(TFA)
Molecular mass (g/mol)	396.70	P2.72	114.02
Water solubility (mg/L)	19 ( <b>20</b> °C)	\$39.75 (25°C) \$3	© 50000 (20°€)
Saturated vapour pressure (Pa)	1.2 F (20%)	¥4.55 E-9,7(20°C)*	r (PEC <sub>sw</sub> ) and seament tes FLU-7-OH and TF  Prifluoroacetic acid  (TFA)  114.02  500600 (20°C)  15 E-6 20°C)
Koc (mL/g)	© 23½,1 ° °	\$\tilde{\text{00.25}}	% <sub>2</sub> 0*
Kom (mL/g)	134.7	58,1	©*0*
1/n	© 00.8432 ° 0	0.9292	1*
Plant uptake factor TSCF			0
Wash off factor from cros		50 50	50
$\frac{(1/m)}{DT_{50} \text{ in soil (d)}}$	708 8 (Feld) ~	19.53 (Jab)	1000*
DT <sub>50</sub> in water (d)	909 Step 1.20	1000*	1000*
O F	1000* (Step 3,4)		1000
DT <sub>50</sub> in sediment (d)	909 (Step 1,2)	© 01000*©	1000*
DT <sub>50</sub> in total system (d)	\$\footnote{000* Step 3,4}	1000	1000
DT (4) &	10%	10*	10*
Maximum occurrence (%0)			
Water/sediment	100 0	0	0
Soll:	7 1000	5.8 0.6342, from parent	14.8 0.5402, overall from
romation action in son		7 0.0342, Hom parent	parent, total molar yield
Formation fraciton in		0	0
water, sediment			
* default			
	. J		



#### PEC<sub>sw</sub> modelling approach

### Calculation of PEC values for the active substance according to FOCUS

FOCUS<sub>sw</sub> is a 4 step tiered approach:

Step 1: In this, the most conservative step, all inputs are considered as a single loading to body and a worst-case PEC<sub>sw</sub> and PEC<sub>sed</sub> is calculated.

Step 2: Individual loadings into the water body from different entry routes are considered. Sceparios are also considered for Northern and Southern Europe separately, but province specific crops scenarios defined.

Step 3: An exposure assessment using realistic worst-case scenarios is made. The cenarios representative for agricultural conditions in Europe and consider weather, soft, crop and differ water-bodies. Simulations use the models PRZM, MACRO and TOXS. A.

Step 4: PEC values are refined by considering mitigation measures or specific scenario descriptions on a case-by-case basis a case-by-case basis.

A summary of important substance input parame

Data Point:	KCP \$2.5/04 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLØ): Core PECgw, PECsw, PECsoil EDR - Modelling core info
√ »	docyment for groundwater, surface water and soil risk assessment in Europe
Report No:	En&a-21-0077
Document No:	M-76322-01-1
Guideline(s) follower in	none y y
Study:	
Deviations from current	Current guideline not applicable
test guideline:	
Previous evaluation:	No, not previously submitted
GLP/Officially recognised	No not conducted under OLP/Officially recognised testing facilities
testing facilities:	
testing facilities:  Acceptability/Reliability:	Yes

#### Executive Summary

This document summarises the substance data for fluopyram and its metabolites as used for the purpose of surface water rish assessment

Modelling reports utilising this core info document should have the substance data presented in the form as shown in Table 9.2.52 and Table 9.2.5-3.



Table 9.2.5- 2: Substance parameters used for fluopyram and its metabolites fluopyram-7-hydroxy (FLU-7-OH) and trifluoroacetic acid (TFA) at Steps 1-2 level

Parameter	Unit	Fluopyram	Fluopyram-7- hydroxy	Trifluoroaceticacid
Molar mass	(g/mol)	396.72	412.72	114.67
Water solubility	(mg/L)	19	33.75	50 <b>6</b> 000 \$
Koc	(mL/g)	232.1	100.2	AE-10 🔊
Degradation				
Soil	(days)	298.08	17.53	1000
Total system	(days)	909	<b>1©</b> 00	
Water	(days)	909 🦸	<b>6</b> 1000	\$\tilde{\pi} \tilde{\pi} \tild
Sediment	(days)	90%	√ 1000 °C	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Max occurrence				
Water / sediment	(%)	Ø 00	× . 66 ×	
Soil	(%)	100000	© 4,75.8,0° (	D

Table 9.2.5- 3: Substance parameters used for fluopyram and its metabolites at Step 3 level

Parameter	Umt	Patent >	Metabolite &	Metabolite
Substance		Fluopyram_Ter 1	C FANT 7 .	TFA Tier 1
SWASH code	<b>~</b> "		J″ hvønkovv Laeri /	TFA
SWASH code			706	)
General	***			Ö
Molar mass	(g/mol)	\$96.72	√ ¥¥2.72 ©	114.02
Water solubility (temp.)	$\mathbb{Q}_{\mathrm{mg/L}}$	[ _49.0 (20 °C)	33,95 (25,5℃) «	500000 (20 °C)
Vapour pressure (temp.)	(Pa)	£2E-06 (20 °C)\$	1.55E-09420°C	1E-06 (20 °C)
Crop processes Coefficient for uptake by plant (TSCF)	Į.		~ & ~ ~	
Coefficient for uptake by plant			0 4	
(TSCF) Wash-off factor	) (-),~~			0
Wash-off factor	(1/m)	₹ <b>3</b> % 5%		50
Sorption O O				
K <sub>oc</sub>	(mL/g)	/ <u>\$</u> 232.1\$ (	Ør00.2	0
K <sub>OM</sub>	(mL/g)	134. <b>0</b> 7	58.1	0
Freundlich exponent (1/n)  Transfermation  DT50 in soil		0.8432	<b>№</b> 0.9292	1
Transfermation DT50 in soil temperature moisture content (pF) formation fraction in Soil DT50 in water temperature				
DT50 in soil	∜(dayş)©	298.08	17.53	1000
temperature S	$({}^{\circ}\mathbf{C})_{\mathbb{A}}$	298.08	20	20
moisture content (pF)	(log@m))		2	2
moisture content (pF)	(-) ~	1000	0.6342	0.5402
DT50 in water	(days	(a) 100€	1000	1000
temperature	(°C)	<sub>₹</sub>	20	20
temperature formation fraction in water	(=)		-	-
DT50 in sediment	(days)	§ § \$1000	1000	1000
temperature V	(°C)	20 × 20	20	20
formation fraction in sed formation	(-) *		-	-
	(days)	<b>10</b>	10	10
Exponent for the effect of		V		
moisture PRZM and POXSWA (Waker	, 🧖			
PRZM and POXSWA (Walker	v			
exp.)	(-)	0.7	0.7	0.7
	(-)	0.49	0.49	0.49
Effect of temperature				
10X3 w A millionar activat. energy)	(kJ/mol)	65.4	65.4	65.4
MACRO (effect of temperature)	(1/K)	0.0948	0.0948	0.0948
PRZM (Q <sub>10</sub> )	(-)	2.58	2.58	2.58



# Predicted environmental concentrations in surface water (PEC<sub>sw</sub>) and sediment (PEC<sub>sed</sub>) of fluopyram and its metabolites

For fluopyram, the metabolites fluopyram-7-hydroxy (FLU-7-OH) and trifluoroacetic acid (TPA) were considered.

Data Point:	KCP 9.2.5/01
Report Author:	
Report Year:	2008
Report Title:	Predicted environmental concentrations in surface vater and sediment (P) csw,
	PECsed) of Fluopyram calculated according FQUS - use on forting Setables
	and vines in Europe
Report No:	MEF-07/465 4 Q, , o 4 , C Q
Document No:	M-297592-01-1
Guideline(s) followed in	not applicable
study:	
Deviations from current	
test guideline:	Current guideline: not applicable
Previous evaluation:	yes, evaluated and accepted in DAR 2011
GLP/Officially recognised	No, not coron ted wader GCP/Officially recognises testing facilities
testing facilities:	No, not condicted wader GP/Officially reorganises testing facilities
Acceptability/Reliability:	Yes y Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

This modelling report was part of the previous submission. However the modelling endpoints have been superseded by new studies and new kinetic evaluations. Consequently the proof is now outdated and a summary of the results is now presented in this dossier. For procedural reasons it has to be included in the current dossier, however its now superseded.

Data Point:	ROP 9.2.5/02
Report Author:	
Donort Volen	2012
Report Pile:	FLY PECsw FOCO'S EUR. Predicted en monmental concentrations in surface
<b>\$</b>	water and sediment - Use in fruiting vegetables, e.g. tomatoes and strawberries, and
3	vines Euro - Flyopyram (AE C(06948)
Report No:	En \$3 12-0 \$3
Document Na:	<u>M</u> 428666701-1
Guideline(s) followed in	PPT\$ 90.11 Q (2008)
study:	
Deviation from current	Current guideline; bot apportable
test guideline:	
Previous evaluation:	Ses, exacuated and acorted
	in Altgendu@1 to DAR 2012
GLP/Officially Cognised	Nethot conducted under GLP/Officially recognised testing facilities
testing facilities:	
Acceptability Reliability:	Nes 2 9

This modelling report was part of the previous submission. However the modelling endpoints have been superseded by new studies and new kinetic evaluations. Consequently the report is now outdated and a summary of the results is not presented in this dossier. For procedural reasons it has to be included in the current dossier, however it is now superseded.



Data Point:	KCP 9.2.5/03
Report Author:	
Report Year:	2012
Report Title:	Fluopyram - Peer review of new active substances - Request for additional information - Environmental fate - EFSA letter ref D(2012/DIF/JS/al/62006/9,
	dated January 24, 2012
Report No:	M-428680-01-1
Document No:	<u>M-428680-01-1</u>
Guideline(s) followed in study:	not specified & S
Deviations from current test guideline:	Current guideline: not applicable
Previous evaluation:	yes, evaluated and accepted accepted accepted and accepted accepted accepted accepted accepted accepted and accepted acc
GLP/Officially recognised testing facilities:	in Addendum 1 to DAR 2V12  not applicable  A A A A A A A A A A A A A A A A A A A
Acceptability/Reliability:	Yes A O Q Q O Q

The document above was only included for transparency reasons since if was part of the first string process. It does not contain information relevant for the current active substance geneway process.

Important remark by the applicant: The modelling core information and the PEC<sub>sw</sub> and PEC<sub>sed</sub> values as presented below are inform values and are therefore subject to change until final modelling input parameters can be established. The applicant intends to provide final modelling core information and final PEC<sub>sw</sub> and PEC<sub>sed</sub> values latest by end of parch 2022.

The overall surface water assessment involving fluopoam and its metabolites consists of the following calculations

Data Point	KCR 2.5/050
Report Author:	
Report Year:	2021 2021
Report Year: Report Title:	Fluopycam (FLV) and conetabolite: PECsw, sed FOCUS EUR (tier 1) - Use in apples,
	spring cereals, winter cereals and vines in Europe
Report No:	EnSa-21-0067 O O
Document No:	<del>2-763400-01-10</del> 6 0
Guideline(s) followed in	none of the second of the seco
study:	
Deviations from current	Current guideling not appricable
test guideline:	
Previous evaluation;	No, not previously submitted
GLP/Officially ecognised	No, not conducted under GLP/Officially recognised testing facilities
testing facilities: 👟	
Acceptability/Reliability: C	Yes
GLP/Officially ecognised testing facilities:  Acceptability/Reliability:	



Data Point:	KCP 9.2.5/06
Report Author:	
Report Year:	2021
Report Title:	Fluopyram (FLU) and metabolite: PECsw,sed FOCUS EUR (tier 1) - Use in apples, spring cereals, winter cereals and vines in Europe
Report No:	EnSa-21-0069
Document No:	<u>M-763417-01-1</u>
Guideline(s) followed in study:	none
Deviations from current test guideline:	Current guideline: not applicable
Previous evaluation:	No, not previously submitted
GLP/Officially recognised testing facilities:	No, not conducted under God Officially recognise testing facilities
Acceptability/Reliability:	Yes & & & & & & & & & & & & & & & & & & &

Please note: The modelling reports are considering several ase scenarios Only those relevant for FLU SC 500 are presented here.

#### **Methods and Materials:**

Predicted environmental concentrations of the active substance fluoryram and its metabolites in surface water (PEC<sub>sw</sub>) and sediment (PEC<sub>sed</sub>) were calculated for the use in Europe, employing the tiered FOCUS Surface Water (SW) approach (FOCUS 2001, 2015). At relevant entry routes of a compound into surface water thrincipally combination of spray drift and ranoff/erosion or drain flow) were considered in these calculations.

The use of fluopyrum in apples (POCUS crop: pome some first, late) was assessed according to Good Agricultural Practice (CAP) in Europe. Detailed application parameters are presented in Table 9.2.5-4.

Table 925-4: Application pattern used for PEOsw calculation of fluopyram

	BBCH stage		EOCUS crop (crop group)	Season	Crop cover
Apples	71 - 89	3×75 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pome / stone Pruit, late applications (fruit crops / late)	Autumn (Oct Feb.) Summer (Jun Sep.)	Full canopy

Substance input parameter are summarised in Table 9.2.5- 2 and Table 9.2.5- 3.

For the use in apples in addition to FOCUS Step 1-2 values, FOCUS Step 3 values were calculated for the active bestance fluorizem and its metabolites fluoryram-7-hydroxy (FLU-7-OH) and trifluoroacetic acid (TFA). 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 9.2.5-5.



Table 9.2.5- 5: Application dates of fluopyram for the FOCUS Step 3 calculations

Parameter	Apple,	early	Apple,	late 🔊
	Apple,	Curry	**	))
PAT start date	.1	L.4.		lute ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
rel./absolute	Absol	ute	Ābsol	lute প 🕵
Appl. method			4	
(appl. type)	Air blast (2 – appl. f	oliar linear, 4 cm)	Air blast 🔁 – appl. f	oliarQinear,🏈 cm)
No of appl.	1	(CA)	1	Folia Omear A cm)
PAT window		<b>*</b>	Q'	
range	30		l ≈ 36	
Appl. interval		.01		Q .0*
Scenarios	PAT	Application	ØÅT Ø	Application A
Section 103	start/end date	ate ate	start/end date	O Application
	(T 11 1 )		(Julian Gay)	, Sauc S
	(Julian day)		( Julian Gay)	
D3	07-Jul/06-Aug	Q&-Jul	@16-0@15-Nov	1840ct
Ditch	(188/218)		© 6289/3190×	
D4	11-Jul/10-Aug	11941 . V	Do-Oct 15-Nov	≈ 26-@n
Pond/Stream	(192/222)	48-Jul 5	(200/210)	20-6
r ond/sufeam	(192/222)		10 (40°) 1919	
D.5		9 09-10m 5		
D5	07-Jun/07 Jul	09- <b>Jo</b> n	26-Sep/26-Oct	°∕26-Sep
Pond/Stream	(158@88) 👟		(269/2799)	
				0
R1	07-Jul/06-Ang	y <sup>™</sup>	<sup>1</sup> 16- <b>Ø</b> ct/15-¶ov ∂	19-Oct
Pond/Stream	07-Jul/06-Ang (188/2 Ps) (2)		(289/6) (3	
R2	203-Aû€/02-Sien	O	16- <b>%</b> ep/16-0xt	09-Oct
Stream	(2) 5/245 Q		Q59/289)	
A			(23)/20%)	
D2 🔊		23 1	01-Qc+31-Oct	01-Oct
K3 ()	0/-Juny0/-Jal	ny 49*Jun ≈	(274/304)	01-061
Sueam	\$ \BO\1000' \X		(2/4/304) @n	
D 4 🙈				10.0
K44	U/-Jun/U/-Jul	O US-Jun	01-Oct/31-Oct	18-Oct
Stream	(158488) Q	11-July 23-Jun 23-Jun 08-Jun	(274/304)	
	(215/245) 07-Jun/07-Jul (158/188) 07-Jun/09-Jul (158/188)		¥	
\$	9' 4' <u>2</u> ~0'			
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	ď <u>*</u>			
	12°			
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#### **Findings:**

## FOCUS Step 1 and 2

The maximum PEC<sub>sw</sub> and PEC<sub>sed</sub> values for FOCUS Step 1 and 2 are given in the tables below for fluopyram and its metabolites fluopyram-7-hydroxy (FLU-7-OH) and trifluoroacetic acid (TFA) considering application in apples (FOCUS crop: apple).

#### Fluopyram

FOCUS Step 1, 2 PEC<sub>sw</sub> and PEC<sub>sed</sub> for fluopyram following single spiplication(s) of the state Table 9.2.5- 6: FLU SC 500 to apples (modelling usc apple -- autum) -- 1×75 g as ha)

			@n"	<b></b>	~ .O .~
Scenario FOCUS	Waterbody	Max PECsw (μg/L)*	Dominant entry route	21 PEC no wa	Max PECsect
Step 1	-	23.0	<b>RunOff</b>	\$ <b>2</b> 1.9 \$	51.2
Step 2					
Northern Europe	Oct Feb. (Autumn)	6.56	Drift C	5.69	\$14.6 \$\ \frac{\pi}{\pi}  \ \frac{\pi}{\pi}  \pi
Southern Europe	Oct Feb. (Autumn)	<b>5</b> (90 %*	Dirth y	5.68	\$ 13,71 *

Single applications are marked

FOCUS Step 1, 2 PECsw and PECsd for thopyram following single application(s) of Table 9.2.5-7: FLUSC 500 to apples (modelling use apple -- commer -- 1×75 g a.s./ha)

		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		0 4/3	,	
Scenario FOCUS	Waterbody	Max PECsw (µg/L)*	Dominant entry route RenOff	21d-PECsw,twa	Max PEC <sub>sed</sub> (μg/kg)*	
Step 1		23.0	RunOff O	<b>2</b> 1.9	51.2	
Step 2				<i>'O'</i>		
Northern Europe	Jun Sep. (Surpher)	4,57	Drift	4.29	10.0	*
Southern Europe	Jun Sep	5.24 5.24 1. 2000 1. 2	Drift	4.95	11.5	*
•	applications are marked there are the second	5.245 J				

TWA interval as required by otox



#### Fluopyram-7-hydroxy (FLU-7-OH)

Table 9.2.5- 8: FOCUS Step 1, 2 PEC<sub>sw</sub> and PEC<sub>sed</sub> for fluopyram-7-hydroxy following single application(s) of FLU SC 500 to apples (modelling use apple -- autumn -- 1×75 g a.s./ha)

					<u> </u>
Scenario FOCUS	Waterbody	Max PECsw (μg/L)*	Dominant entry route	21d-PEC wa (μg/L)	Max PECsed (μg/kg)*
Step 1	-	1.33	-	£32	1.33
Step 2			T.		
Northern Europe	Oct Feb. (Autumn)	0.232 *	\$ -	0.231	©.233 \$\frac{1}{2} \tag{\text{\$\color{1}}}
Southern Europe	Oct Feb. (Autumn)	0.186 * &		. 0.184 V	0,486 0*

<sup>\*</sup> Single applications are marked.

Table 9.2.5- 9: FOCUS Step 1, 2 PDCsw and PECs for floopyram-7-hydroxy to lowing single application(s) of PU SC 500 to apple modelling use apple Summer -- 1.75 g a.s./ha)

Scenario FOCUS	Waterbody 8	Max PECsy (µg/L)*	Dominant entry	21d-PECsw, wa	Max PEC <sub>sed</sub> (μg/kg)*
Step 1	- 😽	1.33	<u> </u>		1.33
Step 2					
Northern Europe	Jun. Sep. (Simmer)	093 *		0.092	0.093 *
Southern Europe	Pan Sep. (Sumprier)			0.138	0.140 *

<sup>\*</sup> Single applications are marked.

Trifluoroacetic, acid (FA)

Table 9.2.5-10: FOCUS Step 1.2 PEG and DEC<sub>sed</sub> for trifluoroacetic acid following single application (s) of FLH SC 500 to apples (modelling use apple -- autumn -- 1×75 g a.s./ha)

Scenario FOCUS	Waterbody		Dominant entry route	21d-PEC <sub>sw,twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (μg/kg)*
Step 1			-	1.06	< 0.001
Step 2					
Northern Europe	(Automn) &	0.186 *	-	0.184	<0.001 *
Scuthern Europe	Oct Feb:	0.149 *	-	0.147	<0.001 *

 <sup>\*</sup> Single applications are marked.

<sup>\*\*</sup> TWA interval as required by ecotox

<sup>\*\*</sup> TWA interval as required by esotox

<sup>\*\*</sup> TWA interval as required by ecotox



FOCUS Step 1, 2 PEC<sub>sw</sub> and PEC<sub>sed</sub> for trifluoroacetic acid following single Table 9.2.5- 11: application(s) of FLU SC 500 to apples (modelling use apple -- summer -- 1×75 g a.s./ha)

Scenario FOCUS	Waterbody	Max PECsw (μg/L)*	Dominant entry route	21d-PEC <sub>sw,twa</sub> (μg/L)**	Max Presed (μg/kg)*
Step 1	-	1.06	-	1.06	<0.001
Step 2			_		
Northern Europe	Jun Sep. (Summer)	0.074 *	\$ \$ \$	©0.074	C <0.001
Southern Europe	Jun Sep. (Summer)	0.111 *		0.111	0.00g v

\*\* Single applications are marked.
\*\* TWA interval as required by ecotox

FOCUS Step 3

The maximum PEC<sub>sw</sub> and PECQ values for FOCUS Step 3 are given in the tables below for fluopyram and its metabolites fluopyram-7 hydrox (FIQ-7-OH) and trifluoroacetic acid (TFA) considering application in apples (FOCUS crop: nome fone with late). The reported PEC— and considering application in apples (FOCUS crop: pome/stone that, late). The reported PEC<sub>sw</sub> and PEC<sub>sed</sub> values represent loadings variall resevant patry routes.

### Fluopyram

FOCUS Step 3 PECswand PECsed for fluopy am following single application(s) of Table 9.2.5- 12: FLUSC 500 to apples (modelling as apple -- early -- 0,075 kg a.s./ha)

Scenario FOCUS	Waterbody	Max PECsw (μg/L)*	Dominant entry	Ad-PECsw,twa (μg/L)**	Max PEC <sub>sed</sub> (μg/kg)*
Step 2				7	
D3	Deh 4	Ž.76 🔊 * 🤊	Spray drift	0.265	1.51 *
D4	Pond	0.65	Drainage	0.631	3.41 *
D4	Stream	22/17 ~ *	Spray drift	0.419	1.19 *
D5 4	Pond	\$0.423	Prainage	0.408	3.74 *
D5 🖑	Streamy	Q 2.98	Spray drift	0.148	0.954 *
R.	Pord	Ø.123 © **	Spray drift	0.106	0.511 *
R1	Stream	2.0%	Spray drift	0.021	0.182 *
R2	Stream	* <u>*</u> *84	Spray drift	0.015	0.211 *
R3 🖟	Stream O	\$\times 2.98  \tau \tau \tau \tau \tau \tau \tau \tau	Spray drift	0.053	0.619 *
R4	Stream ~	2.12 *	Spray drift	0.086	0.532 *

ingle application are marked.

TWA interval as required by ecotox



Table 9.2.5- 13: FOCUS Step 3 PECsw and PECsed for fluopyram following single application(s) of FLU SC 500 to apples (modelling use apple -- late -- 0.075 kg a.s./ha)

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (μg/L)*		Dominant entry route	21d-PEC <sub>sw,twa</sub> (μg/L)**	Max PEC (μg/kg)
Step 3					ğ	
D3	Ditch	2.76	*	Spray drift	0.294	\$7.59 \$\frac{1}{2} * \$\tag{2}\$
D4	Pond	0.573	*	Drainage	0.555	2.91
D4	Stream	2.64	*	Spray drift	0.350	192 *
D5	Pond	0.783	*	Prainage	0.758	\$5.10 \( \text{\$\infty} \)
D5	Stream	2.98	*	Spray drift	©0.365Q	O 1.99 O
R1	Pond	0.123	*(	Spray drift	0.196	× 516 × *
R1	Stream	2.12	Q°	Spray dift	Ø.021 Ø	\$\ 0.28\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
R2	Stream	2.84	<b>⋽</b> **	Spray drift	A 0.03	0:\$00
R3	Stream	2.98		S ay drift	O Q.9777 E	* 0.619° *
R4	Stream	1,90	( ** T	Spray Frift	\$0.029\$\$\frac{1}{2}\$	0.2254 *

R4	Stream		Spray drift	₹0.0295°	0.2054 *
* Single	applications are marked	@ / ·			y <del>-</del>
	nterval as required by e	econox 🗸 🕏			<b>&amp;</b> ,
					O
	~				)
-	<b>-</b>	7 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			,
Fluopyran	n-7-hydroxy (FLU	J- <b>2-OH</b> )	Con for FLU-7-OH		
<b>Table 9.2.5</b>	- 14: FOO EUS SI	<b>Xp 3 PBCsw and PE</b>	Can for #12U-7-O44	tollowing single ap	plication(s) of
	<b>₽</b> ŁU S€ 50	00 to apples (model	ling use apple 🕝 ear	ly 0.075 kg a.s./h	a)
	~~~			7/ ~	
Scenario	Waterbody	· Max recs	Dominant entry	21 EPECsw,twa	Max PEC <sub>sed</sub>
FOCUS		(Prg/L)	route 3	(μg/L)**	(μg/kg)*
Step 3 %				Ø	
D3 🕰	Ditcle .	S <0.001		< 0.001	<0.001 *
D4	Pond V	\$3.042° *		0.041	0.117 *
D4	Stream	\$ 0.0 <b>46</b>	\$ -\$	0.027	0.039 *
D5	Por Por	(* <u>)</u> 0.044	~ ~ <del>-</del>	0.043	0.181 *
D5 #	Stream	\$0.034	<u> </u>	0.015	0.039 *
R1 🗳	Pond	♥ <0.001	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	< 0.001	<0.001 *
r.J	Stream	\$0.002\(\tilde{\pi}\) *\(\frac{1}{2}\)	<del>-</del>	< 0.001	<0.001 *
R2	Stream	\$\ 0.0 <b>\</b>	-	< 0.001	0.003 *
R3	Stream	Ø.020 <b>₹</b>	-	0.001	0.006 *
R4 🖔	Stream	\$\int_0.009\$\int_* *	-	< 0.001	0.003 *
* Single	applications are marke	¥.			
** TWA i	nterval as required by	ecotox			



FOCUS Step 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for FLU-7-OH following single application(s) of Table 9.2.5- 15: FLU SC 500 to apples (modelling use apple -- late -- 0.075 kg a.s./ha)

Scenario FOCUS	Waterbody	Max PEC <sub>s</sub> (μg/L)*	sw	Dominant entry route	21d-PEC <sub>sw,twa</sub> (μg/L)**	Max PECed (μg/kg)*
Step 3					Ž,	
D3	Ditch	< 0.001	*	-	<0.001	<b>9</b> .001 * * @
D4	Pond	0.036	*	-(C)	0.035	~ 0.098 ~ <del>*</del>
D4	Stream	0.039	*	Ţ	0.023	0.033 **
D5	Pond	0.040	*	₫ -	0.038	<b>3</b> .170,
D5	Stream	0.061	*	- ~	90.017Q	0.033
R1	Pond	< 0.001	*&	,	<0.001	≈ <b>0</b> .001√ *
R1	Stream	< 0.001	Q°		F 89.001 0	\$<0.00 <b>\)</b> *°
R2	Stream	0.008	**		<0.00	0.003 **
R3	Stream	0.004		<u> </u>	O 50.001 F	*0.001° *
R4	Stream	0.001	K/*	J J	×0.0015	<0.001 *

Single applications are marked.

## Trifluoroacetic acid (TFA)

recid (TFA)

FOCUS Step 3 PECsw and PECsa for TFA following single application(s) of FLU SC 500 to apples (modelling use apple - carly - 0.075 kg a.s./ha) Table 9.2.5- 16:

Scenario FOCUS	Waterbody	Max PECsy (Fig/L)	Dominant entry	216 PECsw,twa  @(µg/L)**	Max PEC <sub>sed</sub> (μg/kg)*	
Step 3 %						
D3 🕰	Ditcl® 🦃	0.793		0.792	0.516 *	
D4	Pood ~	\$7.948\sqrt{\sqrt{\cong}} *\tilde{\cong}		0.943	0.561 *	
D4	Stream	\$\tag{90.439}	\$ -\$	0.402	0.216 *	
D5	Potod O	1 💚 (())	~ ~-	1.29	0.816 *	
D5 &	Stream	\$\int_0.539\$\tag{\tag{\tag{\tag{\tag{\tag{\tag{	*	0.511	0.243 *	
R1 🛇	^ (O) A	Q.001 * .	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	< 0.001	<0.001 *	
r.j	Stream	\$\sqrt{0.001}\circ\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right\right	-	< 0.001	<0.001 *	
R2	Stream	<0.00/1	-	< 0.001	<0.001 *	
R3	Stream S		-	< 0.001	<0.001 *	
R4 🗳	Stream &	\$\tag{0.002} *	-	< 0.001	<0.001 *	

TWA interval as required by ecotox

Single applications are marked.
TWA interval as required by ecotox



Table 9.2.5- 17: FOCUS Step 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for TFA following single application(s) of FLU SC 500 to apples (modelling use apple -- late -- 0.075 kg a.s./ha)

Scenario FOCUS	Waterbody	Max PECsw (μg/L)*		Dominant entry route	21d-PEC <sub>sw,twa</sub> (μg/L)**	Max PEC (μg/kg)
Step 3					ğ	
D3	Ditch	0.643	*	-	0.643	<b>4</b> 31 * * *
D4	Pond	0.848	*	-(C)	0.844	~ 0.492y
D4	Stream	0.415	*	\$	0.373	0.089 *
D5	Pond	1.02	*	40° -	1.01	<b>₹</b> .627,○ **
D5	Stream	0.400	*		©0.346Q	0.185
R1	Pond	< 0.001	*﴿,	\$\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	<0.001	×0.001 × *
R1	Stream	< 0.001	Q"		F 20.001 0	*° (0.004)
R2	Stream	<0.001	* %		≤0.0€¥	<0.001  *
R3	Stream	<0.001			O 50.001 D	₹0.00b *
R4	Stream	<0.001	*	ŢŢ	\$0.00£	<0.001 *

\*\* Single applications are marked.
\*\* TWA interval as required by econox

FOCUS Step 4

The maximum PEC value for FOCUS Step 4 are given in the tables below for fluopyram and its metabolite fluopyram-7-bydroxy (FLUO)-OH) considering application in apples (FOCUS crop: pome/stone fruit late). The reported PEC sw values represent loadings via all relevant entry routes.

#### Fluopyram

walnes for fluopyram, following single application of FLU SC 500 to apples according to surface water Step 4 (modelling use apple -- early -- 0.075 kg a.s./ha)

PECsw (μg/L)	Scenario				Step 4 flu	uopyram		
Nozzle	Vegetated ( strip (m)	Note	Avone 5	None	None	10 m	20 m	
reduction	No spray	\$ 0 m €	, 5 <b>m</b>	₩ 0 m	20 m	10 m	20 m	
None	buff&v(m)	2 <sub>6</sub> .946	<sub>@1</sub> 1.86 🌊	0.832	0.257	0.832	0.257	
50 %	\$ 4	J.38 Z	0.930	0.416	0.128	0.416	0.128	
75 %		Ø.38 Z 0.689	<b>20.4</b> 65	0.208	0.064	0.208	0.064	
90 %		0376	0.186	0.083	0.026	0.083	0.026	
None	D4 Pánd	D.651	0.655	0.638	0.627	0.638	0.627	
\$50 % Q		0.634	0.636	0.628	0.622	0.628	0.622	
75 %Õ		0.626	0.627	0.623	0.620	0.623	0.620	
90 %		0.621	0.621	0.619	0.618	0.619	0.618	
None	D4 Stream	2.77	2.16	0.965	0.669	0.965	0.669	



PEC <sub>sw</sub> (μg/L)	Scenario				Step 4 fl	uopyram			٥
Nozzle	Vegetated strip (m)	None	None	None	None	10 m	20 m	(	
reduction	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	<b>№</b> m	\ \times \ \ \times \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
50 %		1.38	1.08	0.669	0.669	0.669	> 0.669		
75 %		0.692	0.669	0.669	<b>©</b> .669	0.669	0.669		
90 %		0.669	0.669	0.669	0.669	9 <del>8</del> 69	0.669		
None	D5 Pond	0.423	0.427	0.41	0.406	0.415	0.406	, <sup>2</sup>	
50 %		0.411	0.413	9,2007	0.403	0.407	®403 (	) b	_W
75 %		0.405	0.406	0.403	0.409	<b>30,403</b>	Ø 0.400		Ï
90 %		0.402	0.402	0.40	<b>6,400</b>	0.401°	0.4000	e .4	
None	D5 Stream	2.99	2.33	°√1904 ×	0.377	1404	<b>3</b> 0.377		Ø.
50 %	1	1.49	<b>J</b> 77	0.520	0.207	Ø.520¸≈	0.37	& ·	
75 %		0.746	<b>3</b> .58 <b>2</b>	0.377	~ <b>©</b> :377	0.37	Q\$77		)
90 %		0.377	0.379	0.377	0.37%	0077	ĈÕ.377.Ŝ		
None	R1 Pond	0.123	£141 a	0.07	0,636	\$0.078	0,036	( <sub>1</sub> )	
50 %		Ø.962 <sub>_</sub>	~0.074C	0,039	8.018 <sub>e</sub>	0.039	0.006	Ö	
75 %	1	0.031	0,035	<b>2</b> 0.020	0.010	<b>90.0</b> 20	≫0.009©		
90 %	*	0.043	0.014	0.000	0505	0.008	0,004		
None	R1 Stream	<b>2</b> .07 ×	£ 1.62.	0,723	0.3640	0.223	©.223		
50 %		( 1.040)	0.809	0.364	0.364	_0.362 @	0.112		
75 %		0.\$18	0.405	0.364	60364	© 0.187,	0.078		
90 %		<b>@</b> .364 ©	0.364	£364	0.364	0,1,53	0.078		
None 🐧	R2 Stream	2.84	<b>2</b> 21 %	<b>0</b> .989®	0,3,05	<b>3</b> 9.989	0.305		
50 %	l Ĉ	<b>2</b> .72	\$1.11 \(	0.495	£153 Ô	y 0.495	0.153		
75 %		~0.709\	0.553		0.152	0.247	0.076		
90 %		0.284	©221 <sub>~</sub>	© 0.152	<b>0</b> ≥152	0.099	0.036		
None	R3 Stream	2898	2.33	1-504	<b>3</b> .336	1.04	0.321		
50 %	Ŏ Ď	0 1.49	1,76	Ø.520		0.520	0.161		
75 %		0.296	<b>70</b> 7.582 ⋅	0.336	0.336	0.260	0.080		
75 % \$\frac{1}{2}		Q 26	0.336	<b>43</b> 36	0.336	0.149	0.077		
None	R4 Stream 4	2.12	1065	1.08	1.08	0.738	0.243		
50 %		1.68	@1.08 &	1.08	1.08	0.471	0.243		
75 %	S A	Ø1.08 Ø	2 1.08 1.08 1.08 1.08 1.08 1.08	1.08	1.08	0.471	0.243		
90 %		1.08	≈ <b>©</b> 08	1.08	1.08	0.471	0.243		
	R4 Stream	Ž Ž							

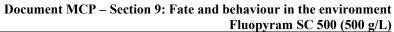




Table 9.2.5- 19: PEC<sub>sw</sub> values for fluopyram, following single application of FLU SC 500 to apples according to surface water Step 4 (modelling use apple -- late -- 0.075 kg a.s./ha)

PECsw	Scenario				Sten 4 fl	uopyram			, Ø	
(µg/L)	Sechario				эсер ч п	uopyram	~			F
Nozzle	Vegetated strip (m)	None	None	None	None	10 m	₹0 m	4		
reduction	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m			?
None	D3 Ditch	2.76	1.86	0.832	0.257	0.832	0.257	39	X)	ć
50 %		1.38	0.931	0.41	0.128	§0.416	0.128	Q ,		1
75 %		0.690	0.465	0.298	0.064	0.208	£0064			
90 %		0.276	0.186	0.083	0.026	0,083	© 0.026	*\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Š	
None	D4 Pond	0.573	0.581 (	0.5 <b>5</b>	<b>Q</b> :534	\$0.5520°	0.534	L 2	. 0	
50 %		0.545	0.549	,0. <b>3</b> 35 ,	©0.526®	0.535	<b>Q</b> .526			
75 %		0.531	0.\$33	<b>0</b> .526	0.522	Ø <sub>4</sub> 526 %	0.522	w .	Š	
90 %		0.523	<b>3</b> .524	√ 0.5 <b>2</b> ¥	<b>3</b> 19	( 0.52 <b>)</b>	0 <b>H</b> 9			
None	D4 Stream	2.64	2.06	0.921	0.572	02/21	£.579£			
50 %		1.32	<sub>4</sub> 1903	©0.579	0.500	JO.579	0.57	(n)		
75 %		<b>9:6</b> 60	°>0.579	0.5%	%.579 @	× 0.579	0.579	O <sup>V</sup>		
90 %		0.579	0.5	<b>6</b> .579	Ø 0.579 🖁	<b>Q.3</b> 79	~0.579©			
None	D5 Pond 🖔	0.783	0.783	0.783	0:Q83	0.783	0.783			
50 %		<b>\$</b> 783 4	\$0.783 <sup>©</sup>	0,\$83	°>0.783°	0.783	~0,783			
75 %		ر 0.78 <b>3</b>	0.783	783	0.783	0.783	0.783			
90 %		0.783	0.783	7 0.7 <b>83</b>	0.783	Ø 0.783Ç	0.783			
None	95 Stream	Ø2.98 €	2.36	<b>1</b> 44	→ 1.14 <b>→</b>	1.14	1.14			
50 % 💍		1.49%	<u>k</u> 17 /	≫1.14 ®	1.14	<b>4</b> .14	1.14			
75 %		<del>1</del> 04	Ø1.14	1.14	1.14	7.14	1.14			
90 🔊		\$1.14 <u>(</u>	1.14	~4.14 <sub>(4</sub>	1.14	1.14	1.14			
None	RIPond	0.123	0,¥41	® 0.0780°	0.036	0.078	0.036			
50 %		0.962	0.07 N	0,639	<b>9</b> .018	0.039	0.018			
75 % ≈	φ°°,	0.031	0.035	©0.020	0.009	0.020	0.009			
90 % 📣	۵	0.00	0.014.	0.008	0.005	0.008	0.004			
Non	R1 Stream	2/12	1.65	Q <del></del> 38	0.228	0.738	0.228			
569%		\$1.06\pi'	0.826	Ø.369	0.114	0.369	0.114			
75 %	0	0,529	0.413	0.185	0.079	0.185	0.057			
90 %	4 4	Ø.212.7	0.165	0.079	0.079	0.074	0.023			_
None S	R2 Stream	2.84,	~ <b>3</b> L1	0.989	0.442	0.989	0.305			
50 %		15 42	1.11	0.495	0.442	0.495	0.153			
75		<b>2</b> 0.709	0.553	0.442	0.442	0.247	0.104			
1901% B		9 0.442	0.442	0.442	0.442	0.200	0.104			
None	R3 Stream	2.98	2.33	1.04	0.706	1.04	0.321			
50 %		1.49	1.16	0.706	0.706	0.520	0.161			_
75 %		0.746	0.706	0.706	0.706	0.308	0.158			_



PECsw (μg/L)	Scenario		Step 4 fluopyram								
Nozzle	Vegetated strip (m)	None	None	None	None	10 m	20 m	l		F	
reduction	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	<b>2</b> 0 m	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
90 %		0.706	0.706	0.706	0.706	0.308	» 0.158				
None	R4 Stream	1.90	1.48	0.663	<b>©</b> .392	0.665	0.205		Q.	. C	
50 %		0.950	0.742	0.392	0.392	<b>9</b> 331	0.102			1	
75 %		0.475	0.392	0.39	0.392	0.176	0.092	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
90 %		0.392	0.392	9392	0.392	0.18	®092 (	)	W.		

# Fluopyram-7-hydroxy (FLU-7-OH)

Table 9.2.5- 20: PEC<sub>sw</sub> values for FLU-7-OH, following single application of FLU-C 500 to apples according to surface water Step 4 (modelling use apple early 0.075 kg a.s./ha)

PEC <sub>sw</sub> (μg/L)	Scenario	Q,			Step FI	.u-9- он			
Nozzle	Vegetated strip (m)	None 🖔	$\sim$	None 1	None None	10 m	20 m	O	
reduction	No spray buffer (16)  D3 Dach	<0.007	5 m 5	1000	. Ø m ⟨¢	10 m	20 m		
None	D3 Dach	ر<0.00 \$	<0,001	<b>≈</b> 0.001 €	<0.001	<0.001	₹0.001		
50 %		<0.001	<0.001 <sup>^</sup>	×<0.00)	< 0001	€0.0 <b>01</b>	< 0.001		
75 %		€0.001 €	<0.000	< 0.00	S0.00 <u>1</u>	<0.001	< 0.001		
90 %		<0.00g	<0.001	×0.001	<0.001	<b>40</b> .001	< 0.001		
None	D4 Pond	0.042	<b>Ø</b> .042	0.042	0.042 ^	90.042	0.042		
50 %		×9.042 <sub>4</sub>	0.040	90,042	0.042	0.042	0.042		
75 %		0.04	0.942	0.042	0.042	0.042	0.042		
90 %		_ ≥0° - ′	©0.042			0.042	0.042		
None *	D4 Stream	€0.046°	0.046	*0,046	0.046	0.046	0.046		
50 % 🕰	. 7	0.0	@ V VA	0.04 <b>©</b>	0.046	0.046	0.046		
75 %		ØQ46	0.046	0.046	0.046	0.046	0.046		
200%		$\sqrt[4]{0.046}$	0.026	<b>%</b> .046	0.046	0.046	0.046		
None	D5 Pond ®	0.034	0.044	0.044	0.044	0.044	0.044		
50 %	Da Folid	<b>@</b> 044_~	) 0.04°C	0.044	0.044	0.044	0.044		
75 %		0.044	Q <b>§4</b> 4	0.044	0.044	0.044	0.044		
90 % 💇	5 Stream	0,044	0.044	0.044	0.044	0.044	0.044		
Note	5 Stream	<b>29</b> .034	0.034	0.034	0.034	0.034	0.034		
90 % Ø		¥ 0.034	0.034	0.034	0.034	0.034	0.034		
75 %		0.034	0.034	0.034	0.034	0.034	0.034		
90 %		0.034	0.034	0.034	0.034	0.034	0.034		
None	R1 Pond	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		



PEC <sub>sw</sub> (μg/L)	Scenario	Step 4 FLU-7- OH							
Nozzle	Vegetated strip (m)	None	None	None	None	10 m	20 m		
reduction	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	<b>№</b> 0 m	4	
50 %		< 0.001	< 0.001	< 0.001	< 0.001	<0.001	> < 0.001		
75 %		< 0.001	< 0.001	< 0.001	<b>©</b> 0.001	<0.001	< 0.001		
90 %		< 0.001	< 0.001	<0.001	<0.001	<0.001	<0.00		~
None	R1 Stream	0.002	0.002	0.00	0.002	o.001°	<0.001	~ E	
50 %		0.002	0.002	9,002	0.002	<0.001	<b>₹</b> 001 (	) b	
75 %		0.002	0.002	( 0.002 <sub>()</sub>	0.00	Ø.001	Ø<0.0		Z
90 %		0.002	0.002	0.00%	0,002	×0.000	<070001	le .4	_ 0
None	R2 Stream	0.009	0.009	•Q. <b>9</b> 09 ∧	$\sqrt[9]{0.009}$	0.004	Ø.002		
50 %		0.009	0,509	0.009	0.009	Ø.004¸≈	0.002	A 1	
75 %		0.009	<b>3</b> 0.00%	0.000	0.009	0.000			
90 %		0.009		0.009	0.003	0004	0.002		
None	R3 Stream	0.030	× •	പ്~റ റാമ∾്	0.520	₹Ø.009°	0.005	\& .	
50 %		Ø.920 <sub>/2</sub>	0.020	0.020	7.020 C	0.009	0.005	O	
75 %		(j) 0.020	0.030	<b>20</b> .020 "	0.020	<b>900</b> 009	≫0.00 <i>5</i> ©		
90 %	*	0.020	0.020	0.026	9920 <sub>(/</sub>	0.009	0.005		
None	R4 Stream	<b>10</b> 009 ×	J 0.009	0.009	رُّــــــــــــــــــــــــــــــــــــ	0.004	©.002		
50 %		(, 0.00 <b>0</b> )	0:009	0.0025°	0.009	0.004	, 0.002		
75 %		0.409	0.009	0.009	Ø009 <u></u>	© 0.00A	0.002		
90 %		<b>@</b> .009 (	0.069	<b>\$</b> 009	©0.009	0,004	0.002		

Table 9.2.5- 21: PECsw varies for FLU-7-OH, following single application of FLU SC 500 to apples according to surface water Step 4 (modelling use apple -- late -- 0.075 kg a.s./ha)

PECsw					Step 4 FI			
	Scenario 2				Step 4 FL	LU-7- OH		
Nozza radystion	Vegetated strip (m)		None	Nane	None	10 m	20 m	
reduction	No xpray buffer (m)	O m	2 9	\$10 m	20 m	10 m	20 m	
None	B3 Ditch	<b>30</b> .001 ~	\$<0.0 <b>0</b> \$	< 0.001	< 0.001	< 0.001	< 0.001	
50 %		©0.001	<00001	< 0.001	< 0.001	< 0.001	< 0.001	
75 % 👸		<0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
90	2 A	~©0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
NY 2 - (7	// D ( AD V 1 %	9 0.036	0.036	0.036	0.036	0.036	0.036	
50 % \$\frac{1}{50}		0.036	0.036	0.036	0.036	0.036	0.036	
75 🕰		0.036	0.036	0.036	0.036	0.036	0.036	
90 %		0.036	0.036	0.036	0.036	0.036	0.036	



PEC <sub>sw</sub> (μg/L)	Scenario	Step 4 FLU-7- OH							
Nozzle	Vegetated strip (m)	None	None	None	None	10 m	20 m		
reduction	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	<b>2</b> 0 m	\ \frac{\partial}{\partial}	
None	D4 Stream	0.039	0.039	0.039	0.039	0.039	> 0.039		
50 %		0.039	0.039	0.039	<b>©</b> .039	0.03	0.039		
75 %		0.039	0.039	0.039	0.039	<b>959</b> 39	0.039		~
90 %		0.039	0.039	0.03	0.039	0.039	0.039	~ E	
None	D5 Pond	0.040	0.040	<b>9.04</b> 0	0.040	0.040	®040_0	) Ø	
50 %		0.040	0.040	(,0.040 <sub>0</sub>	0.040	\$\int_000040 \times	Ø 0.040		W <sup>y</sup>
75 %		0.040	0.040	0.04	<b>9</b> ,040 [	0.0400	0.040	4 4	
90 %		0.040	0.040	√Q.940 ^	$\sqrt[9]{0.040}$	0.040	<b>3</b> 0.040		
None	D5 Stream	0.061	0,661	0.061	0.061	Ø:061, %	0.06	A n	
50 %		0.061	<b>3</b> .06 K	0.061	~ <b>0</b> :061	0.060	<b>Q</b>		9
75 %		0.061	0.069	0.061	0.061	0.061	©0.06 <u>1</u> \$		
90 %		0.061	<b>.</b> 0.061 4	0.064	0.00	√9.061°	0,061	<i>Q</i> .	
None	R1 Pond	≤0,001 <sub>0</sub>	₹0.0 <b>0</b> €	< 0.001	₹0.001 <sub>€</sub>	<0.0 <b>0</b> )1	0.001	O <sup>v</sup>	
50 %		©<0.00	<0.001	<b>20</b> .001	©<0.001	<b>Q</b> .001	×0.00		
75 %	<b>*</b>	<0.001	<0.001	<0.00	< 5001 <sub>(c</sub>	<0.00₹	<0.001		
90 %		<b>6</b> 0.001 ×	J<0.001	<0.001	Ç¥0.001©	<0.001	<b>20</b> .001		
None	R1 Stream	(<0.000)	<0.001	₹0.0016	<0,0001	<0.001	, <0.001		
50 %		<0:001	<0.001	<0.001	<b>&lt;0</b> .001	\(\sqrt{0.00}\)	< 0.001		
75 %		©0.001 ©	<0. <b>©Q</b> 1	<b>3.001</b>	©<0.00 <del>4</del>	< 0,001	< 0.001		
90 % 🐧		<0.00	<0.001	₹0.001®	<0,001	<b>3</b> 0.001	< 0.001		
None	R2 Stream	0.008	©0.008 °	0.008	2008 C	<sup>∀</sup> 0.004	0.002		
50 %		<b>0.008</b>	0.068	₹0008 (Ç	0.00	0.004	0.002		
75 %		0.008	*0°,008 *	$0.008^{\circ}$	Ø <u></u> 008	0.004	0.002		
90 %		60008	0.008	0.008	<b>3</b> .008	0.004	0.002		
None "	R3 Stream	0.00 <b>4</b>		Ø.004		0.002	< 0.001		
50 % 🚕		0.004	0.004	0.004	0.004	0.002	< 0.001		
50 % A		å0.004~	0.004	<b>4000</b> 04	0.004	0.002	< 0.001		
20%		0.0040	0.004	0.004	0.004	0.002	< 0.001		
None	R4 Stream	, Ĉi	©0.0014	0.001	0.001	< 0.001	< 0.001		
50 %	A L	<b>3</b> .001	0.001	0.001	0.001	< 0.001	< 0.001		
75 %		0.001	<b>≈</b> ©001	0.001	0.001	< 0.001	< 0.001		
90 %		00001	0.001	0.001	0.001	< 0.001	< 0.001		
	R4 Stream	Z <sup>y</sup>							



#### **CP 9.3** Fate and behaviour in air

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

For information on route and rate of degradation in air and transport via air please refer to Document MCA, Sections 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 ac CP 9.4 Estimation of concentrations for other routes of exposure.

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