

# FINAL REGISTRATION REPORT

## **Part B**

### **Section 8**

#### **Environmental Fate**

Detailed summary of the risk assessment

Product code: CHR/H/IMA 40 SL

Product name(s):

Mazzam 40 SL

Zemax 40 SL

Chemical active substance(s):

Imazamox, 40 g/L

Central Zone

Zonal Rapporteur Member State: Poland

Co-Rapporteur Member State: Hungary, Romania

#### **CORE ASSESSMENT**

(authorization)

Applicant: Innvigo Sp. z o.o.

Submission date: 09.2022

**MS Finalisation date: 31/01/2025**

## Version history

When	What
January 2023	Dossier sent for evaluation
November 2023	Applicant update
December 2023	Applicant update
February 2024	Applicant update
April 2024	zRMS evaluation of dRR
July 2024	Final version prepared by zRMS after Commenting period
January 2025	zRMS update

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zRMS comments:

The text highlighted in grey was provided by the zRMS.

Additional comment (01.2025) is highlighted in yellow.

## **8 Fate and behaviour in the environment (KCP 9)**

Considering winter oilseed rape magnitude of residue studies we are obliged to rely upon following studies taking account that according to Regulation (EC) No 1107/2009 Article 59 Data protection: The period of data protection is 30 months starting at the date of renewal in accordance to art. 43 in that Member State. Renewal of the product in Poland was in 20.11.2017 (R-45/2017), therefore data protection is over, and other applicants can refer to studies performed during inclusion and extensions of uses of the product Clentiga 262.5 SC.

## 8.1 Critical GAP and overall conclusions

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha	Conclusion  Groundwater
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL	pea	F	Mono and dicots weeds	Spray	BBCH 12-16	1	N/A	a) 0,9	b) 0,036	200- 400	N/A		
2	HU, RO, SK	Soy	F	Mono and dicots weeds	Spray	Early postemergence BBCH 12-16	1	N/A	a) 1,0 - 1,2	b) 0,040 - 0,048	200- 300	N/A		
3														
4														
Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)														
Minor uses according to Article 51 (zonal uses)														
5	PL, HU, RO, SK	Beans	F	Mono and dicots weeds	Spray	Spring BBCH 10-16, weeds BBCH 10-13	a) 1	N/A	c) 0,6 – 0,9	d) 0,024 - 0,036	200- 400		*only for dry seeds use	
6	PL, HU, RO, SK	Broad bean	F	Mono and dicots weeds	Spray	Spring BBCH 10-16, weeds BBCH 10-13	b) 1	N/A	e) 0,6 - 0,9	f) 0,024 - 0,036	200- 400		*only for dry seeds use	
7	PL	Lentils	F	M8ono and	Spray	Spring BBCH	c) 1	N/A	g) 0,6 - 0,9	h) 0,024 -	200-		*only for dry	

	HU, RO, SK			dicots weeds		10-16, weeds BBCH 10-13				0,036	400		seeds use	
8	PL, HU, RO, SK	Lupine	F	Mono and dicots weeds	Spray	Spring BBCH 10-16, weeds BBCH 10-13	d) 1	N/A	i) 0,6 - 0,9	j) 0,024 - 0,036	200- 400		*only for dry seeds use	
9	PL, HU, RO, SK	Linseeds	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	k) 0,6 - 0,9	l) 0,024 - 0,036	200- 400		*only for seeds use	
10	PL, HU, RO, SK	Spring oilseed rape	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	m) 0,6 - 0,9	n) 0,024 - 0,036	200- 400		*only for seeds use	
11	PL, HU, RO, SK	Breadseed poppy	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	o) 0,6 - 0,9	p) 0,024 - 0,036	200- 400		*only for seeds use	
12	PL, HU, RO, SK	Sesame	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	q) 0,6 - 0,9	r) 0,024 - 0,036	200- 400		*only for seeds use	
13	PL, HU, RO, SK	Mustard	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	s) 0,6 - 0,9	t) 0,024 - 0,036	200- 400		*only for seeds use	
14	PL, HU, RO, SK	Sunflower	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	u) 0,6 - 0,9	v) 0,024 - 0,036	200- 400		*only for seeds use	
15	PL, HU, RO, SK	Soy	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	w) 0,6 - 0,9	x) 0,024 - 0,036	200- 400		*only for seeds use	
16	PL, HU,	Safflower	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	y) 0,6 - 0,9	z) 0,024 - 0,036	200- 400		*only for seeds use	

	RO, SK													
17	PL, HU, RO, SK	Borage	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	aa) 0,6 - 0,9	bb) 0,024 - 0,036	200-400		*only for seeds use	
18	PL, HU, RO, SK	Pumpkin	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	cc) 0,6 - 0,9	dd) 0,024 - 0,036	200-400		*only for seeds use	
19	PL, HU, RO, SK	Hemp	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	ee) 0,6 - 0,9	ff) 0,024 - 0,036	200-400		*only for seeds use	
20	PL, HU, RO, SK	Castor beans	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	gg) 0,6 - 0,9	hh) 0,024 - 0,036	200-400		*only for seeds use	
21	PL, HU, RO, SK	Cotton	F	Mono and dicots weeds	Spray	BBCH 10-18	1	N/A	ii) 0,6 - 0,9	jj) 0,024 - 0,036	200-400		*only for seeds use	
22	PL, HU, RO, SK	Tobacco <i>Nicotiana tabacum</i> (NIOTA)	F	Mono and dicots weeds	Spray	Spring BBCH 10-89	1	N/A	kk) 0,38-0,9	ll) 0,015 - 0,036	200-300			
23	PL, HU, RO, SK	Coniferous / deciduous forest nurseries, Ornamental shrubs	F	Mono and dicots weeds	Spray	Spring BBCH 10-89, the risk of infection, warning	1	N/A	mm)0,38-0,9	nn) 0,015 - 0,036	200-300			
24	PL, HU, RO, SK	<i>Salix viminalis</i> (SAXVI)	F	Mono and dicots weeds	Spray	BBCH 10-89, the risk of infection, warning	1	N/A	oo) 0,38-0,9	pp) 0,015 - 0,036	200-300			

		Wicker (1SAXG)												
25	PL, HU, RO, SK	Ornamental	F	Mono and dicots weeds	Spray	BBCH 10-89, the risk of infection, warning	1	N/A	qq) 0,38-0,9	ww) 0,015 - 0,036	200- 300			
<b>Minor uses according to Article 51 (interzonal uses)</b>														

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

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

#### Explanation for column 15 “Conclusion”

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

zRMS Comments:	The proposed mitigation measures will be decided at cMS level.
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**Table 8.1-2: Assessed (critical) uses during approval of imazamox concerning the Section Environmental Fate**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
1	ES, PT,	Sunflower	F	Broadleaf and	Spray	BBCH 12-	1	-	a) 1.25	a) 0.05	100-600	-	used with/without DASH



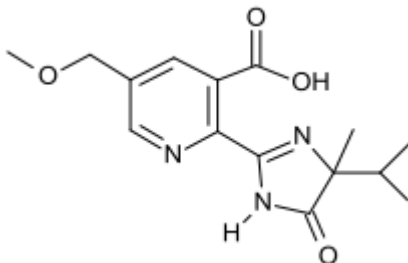
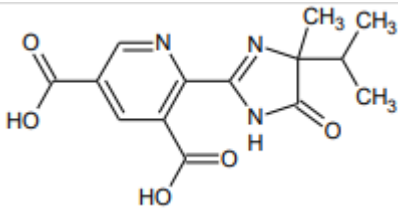
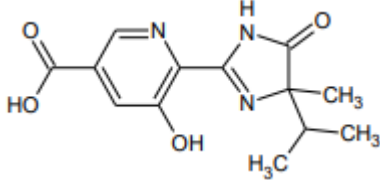
	FR, IT, GR, BG, HR			Grassweeds		18			b) 1.25	b) 0.05			EC (BAS 160 00S)
2	FR	Sunflower	F	Broadleaf and Grassweeds	Spray	BBCH 12- 18	2	3 weeks	a) 0.63 b) 1.25	a) 0.025 b) 0.05	100-300	-	Split application used with/without DASH EC (BAS 160 00S)
3	IT, GR, ES, BG, HR	Alfalfa	F	Broadleaf and Grassweeds	Spray	BBCH 12- 16	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-600	-	New emerged crop, spring treatment Alfalfa is typically harvested at BBCH growth stages 59- 75
4	IT, GR, ES, BG, HR	Alfalfa	F	Broadleaf and Grassweeds	Spray	BBCH 12- 16	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-600	-	Established crop, summer application
5	FR, IT	Soybean	F	Broadleaf and Grassweeds	Spray	BBCH 12- 14	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-400	-	
6	FR, IT	Soybean	F	Broadleaf and Grassweeds	Spray	BBCH 12- 14	2	3 weeks	a) 0.63 b) 1.25	a) 0.025 b) 0.05	100-400	-	Split application
7	CZ, SK, HU, RO,	Sunflower	F	Broadleaf and Grassweeds	Spray	BBCH 12- 18	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-600	-	used with/without DASH EC (BAS 160 00S)
8	RO, HU	Alfalfa	F	Broadleaf and Grassweeds	Spray	BBCH 12- 16	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-600	-	New emerged crop, spring treatment, to be used without external adjuvant Alfalfa is typically harvested at BBCH growth stages 59-75
9	RO, HU	Alfalfa	F	Broadleaf and Grassweeds	Spray	BBCH 12- 16	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-600	-	Established crop, summer application, to be used without external adjuvant Alfalfa is typically harvested at BBCH growth stages 59-75
10	RO, HU, SK	Soybean	F	Broadleaf and Grassweeds	Spray	BBCH 12- 14	1	-	a)1.25 b)1.25	a) 0.05 b) 0.05	100-400	-	to be used without external adjuvant

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

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

## 8.2 Metabolites considered in the assessment

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

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
Parent – imazamox	305.3 g/mol		N/A	PEC <sub>soil</sub> : Low risk for soil organisms PEC <sub>gw</sub> : Low risk to aquatic organisms in surface water, except in 2 scenarios for alfalfa and 1 scenario for winter oilseed rape PEC <sub>sw/sed</sub> : Low risk to aquatic organisms, except in 2 scenarios for alfalfa and 1 scenario for winter oilseed rape
CL 312622	305.3 g/mol		Soil: 43.6% Groundwater: 82.9% Surface water/Sediment: 13.6%	PEC <sub>soil</sub> : Low risk for soil organisms PEC <sub>gw</sub> : Low risk to aquatic organisms PEC <sub>sw/sed</sub> : Low risk to aquatic organisms
CL 354825	277.3 g/mol		Soil: 55.2% Groundwater: 77.8% Surface water/Sediment: 5.7%	PEC <sub>soil</sub> : Low risk for soil organisms PEC <sub>gw</sub> : Low risk to aquatic organisms PEC <sub>sw/sed</sub> : Low risk to aquatic organisms

### 8.3 Rate of degradation in soil (KCP 9.1.1)

Studies on degradation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. All necessary endpoints are evaluated in EFSA Journal 2016;14(4):4432

#### 8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

##### 8.3.1.1 Imazamox and its metabolites

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

Imazamox, Laboratory studies, aerobic conditions								
Soil type	Label	pH <sup>a)</sup> (x)	t.oC MWHC %	DT50 (d) DT90 (d)	DT50 (d) 20°C pF2/10kPa	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Sandy loam 1	pyr	6.8	25°C / 75% of 1/3 bar	28.3 / 437	248 d)	5.7	DFOP (k1 0.04827, k2 0.002982, g 0.6315)	EFSA Journal 2016; 14(4):4432
Sandy loam 2	pyr	6.6	25°C / 75% of 1/3 bar	13.4 / 375	295 d)	5.9	DFOP (k1 0.08081, k2 0.002501, g 0.7443)	EFSA Journal 2016; 14(4):4432
Silt loam	pyr	5.8	20°C / 45%	397 / 1000c)	389	2.1	SFO	EFSA Journal 2016; 14(4):4432
Silty clay loam	pyr	8.1	20°C, 10°C / 45%	10.8 / 45.2	106 d)	0.6	DFOP (k1 0.072357, k2 0.005896, g 0.914979)	EFSA Journal 2016; 14(4):4432
Sandy loam	imi	8.1	20°C / 50%	38.1 / 446	186 d)	1.2	DFOP (k1 0.0635538, k2 0.0037278, g 0.4722731)	EFSA Journal 2016; 14(4):4432
Loam	imi	7.1	20°C / 50%	22.7 / 343	117 d)	1.5	DFOP (k1 0.1229, k2 0.004838, g 0.4747)	EFSA Journal 2016; 14(4):4432
Geometric mean/Median (n=6)					200.8			
pH-dependency					No			

a) Measured in water

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

c) Reported value >1000 days; fixed to 1000 as a practical conservative approximation

d)  $\ln(2)/k_{\text{slow}}$

**Table 8.3-2: Summary of aerobic degradation rates for CL 312622 - laboratory studies**

CL 312622, Laboratory studies, dark aerobic conditions								
Soil type	pH a) (x)	t.oC MWHC %	DT50/DT90 (d)	f. f. kf / kdp	DT50 (d) 20°C pF2/10kPa	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Sandy loam 1	6.8	25°C / 75% of 1/3 bar	18.8 / 62.6	0.947	20.1	13.9	SFO	EFSA Journal 2016; 14(4):4432
Sandy loam 2	6.6	25°C / 75% of 1/3 bar	43.4 / 144	0.945	46.2	7.4	SFO	EFSA Journal 2016; 14(4):4432
Silt loam	6.5	20°C, 10°C / 45%	7.5 / 25.0	0.875	7.35	25.3	SFO	EFSA Journal 2016; 14(4):4432
Silty clay loam	8.1	20°C, 10°C / 45%	18.2 / 60.5	0.950	16.5	7.2	SFO	EFSA Journal 2016; 14(4):4432
Sandy loam	8.1	20°C / 50%	35.9 / 119	0.556	35.9	7.5	SFO	EFSA Journal 2016; 14(4):4432
Loam	7.1	20°C / 50%	67.4 / 224	0.556	55.0	3.9	SFO	EFSA Journal 2016; 14(4):4432
Geometric mean (n=6) (DT50)					24.6			
Arithmetic mean (n=6) (f.f)				0.829				
pH dependency				No				

a) Measured in water

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

c) Reported value >1000 days; fixed to 1000 days as a practical conservative approximation

d) Rate constant not robustly estimated; fixed to 1000 days as a practical conservative approximation

e) Calculated fixing the DT50 of CL 354825 to 1000 days

**Table 8.3-3: Summary of aerobic degradation rates for CL 354825 - laboratory studies**

CL 354825, Laboratory studies, dark aerobic conditions								
Soil type	pH a) (x)	t.oC MWHC %	DT50/DT90 (d)	f. f. kf / kdp	DT50 (d) 20°C pF2/10kPa	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Sandy loam 1	6.8	25°C / 75% of 1/3 bar	300 / 995	0.550	319	7.2	SFO	EFSA Journal 2016; 14(4):4432
Sandy loam 2	6.6	25°C /	1000c) /	0.844	1000 c)	9.9	SFO	EFSA Journal

CL 354825, Laboratory studies, dark aerobic conditions								
Soil type	pH a) (x)	t.oC MWHC %	DT50/DT90 (d)	f. f. kf / kdp	DT50 (d) 20°C pF2/10kPa	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/ Reference
		75% of 1/3 bar	1000c)	e)				2016; 14(4):4432
Silt loam	5.8	20°C / 45%	110 / 364	1.0	107	11.2	SFO	EFSA Journal 2016; 14(4):4432
Silt loam	6.5	20°C, 10°C / 45%	157 / 250	1.000	153	10.1	SFO	EFSA Journal 2016; 14(4):4432
Silty clay loam	8.1	20°C, 10°C / 45%	251 / 833	0.608	227	4.7	SFO	EFSA Journal 2016; 14(4):4432
Sandy loam	8.1	20°C / 50%	1000d) / 1000d)	0.829 e)	1000 d)	12.5	SFO	EFSA Journal 2016; 14(4):4432
Loam	7.1	20°C / 50%	1000d) / 1000d)	0.616 e)	1000 d)	14.2	SFO	EFSA Journal 2016; 14(4):4432
Geometric mean (n=7) (DT50)					382			
Arithmetic mean (n=7) (f.f)				0.778				
pH dependency				No				

a) Measured in water

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

c) Reported value >1000 days; fixed to 1000 days as a practical conservative approximation

d) Rate constant not robustly estimated; fixed to 1000 days as a practical conservative approximation

e) Calculated fixing the DT50 of CL 354825 to 1000 days

### 8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

**Table 8.3-4: Rate of degradation in soil (anaerobic) of active substance imazamox – laboratory studies; reference: EFSA Journal 2016;14(4):4432**

Parent	Dark anaerobic conditions						
Soil type	Label	pH <sup>a)</sup>	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	DT <sub>50</sub> (d) 20 °C <sup>b)</sup>	St. (χ <sup>2</sup> )	Method of calculation
Sandy loam	pyr	6.6	25°C / 75% of 1/3 bar	Imazamox is stable - no degradation was observed.			
Loam	imi	7.0 <sup>c)</sup>	20°C / 50%	Imazamox is stable - no degradation was observed.			
Loam	pyr	7.0 <sup>c)</sup>	20°C / 50%	Imazamox is stable - no degradation was observed.			

a) Measured in calcium chloride solution

b) Normalised using a Q10 of 2.58

c) Measured in water

**Table 8.3-5: Rate of degradation in soil (anaerobic) of metabolite CL 312622 – laboratory studies; reference: EFSA Journal 2016;14(4):4432**

Met 1					Dark anaerobic conditions			
Soil type	X10	pHa)	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	f. f. kf / kdp	DT50 (d) 20°C b)	St. (x2)	Method of calculation
No study available.								

a) Measured in [medium to be stated, usually calcium chloride solution or water]

b) Normalised using a Q10 of 2.58

#### 8.4 Field studies (KCP 9.1.1.2)

Field studies with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. All necessary endpoints are evaluated in EFSA Journal 2016;14(4):4432

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

##### 8.4.1.1 Imazamox; reference: EFSA Journal 2016;14(4):4432

Parent	Aerobic conditions							
Soil type (indicate if bare or cropped soil was used).	Location (country or USA state).	pH <sup>a)</sup>	Depth (cm) <sup>c)</sup>	DT <sub>50</sub> (d) actual	DT <sub>90</sub> (d) actual	St. ( $\chi^2$ ) <sup>g)</sup>	DT <sub>50</sub> (d) Norm <sup>b)</sup>	Method of calculation <sup>d)</sup>
Clay (bare soil)	UK1	7.2	0-10	31.1	103.4	20.4	9.98	SFO/SFO
Clay (bare soil)	UK2	8.2	0-5	13.0	43.3	-	-	SFO
Silt loam (bare soil)	FR1	5.7	0-10	16.5	54.9	15.4	30.7 <sup>e)</sup>	SFO/HS ( $k_1$ 0.074017, $k_2$ 0.022569, tb fixed to 8)
Silt loam (bare soil)	FR2	6.0	0-10	14.7	107.4	-	-	FOMC
Clay (bare soil)	FR3	7.8	0-10	11.6	38.5	-	-	SFO
Silt loam (pea, pre-emergent)	FR4b	8.1	0-20	16.4	54.6	-	-	SFO
Silt loam (bare soil)	FR5	8.7	0-5	9.6	31.8	-	-	SFO
Silt loam (bare soil)	FR6	7.5	0-20	12.7	42.1	11.2	1.82	SFO/SFO
Loam (bare soil)	FR7	8.1	0-20	6.9	22.8	-	-	SFO
Loamy sand (bare soil)	DE1	7.4	0-10	20.7	68.9	11.0	5.25 <sup>e)</sup>	SFO/HS ( $k_1$ 0.14033, $k_2$ 0.13204, tb fixed to 3.6)
Silt loam (soybean, post-emergent)	IT1	7.8	0-5	22.4	74.5	-	-	SFO
Silty clay (bare soil)	IT2	7.9	0-30	10.7	35.6	-	-	SFO
Clay (bare soil)	IT3	8.1	0-5	18.0	59.9	-	-	SFO
Silty clay loam (bare soil)	IT4	8.0	0-30	21.7	72.1	-	-	SFO
Silt (bare soil)	France	6.82/6.06	0-30	-	-	7.1	41.3	SFO
Loamy sand (bare soil)	Germany	6.02/5.11	0-60	-	-	6.0	21.9	SFO
Loamy sand (bare soil)	UK	7.28/6.54	0-20	-	-	6.6	26.7 <sup>f)</sup>	FOMC ( $\alpha$ 1.7915, $\beta$ 33.8737)

Parent	Aerobic conditions							
Soil type (indicate if bare or cropped soil was used).	Location (country or USA state).	pH <sup>a)</sup>	Depth (cm) <sup>c)</sup>	DT <sub>50</sub> (d) actual	DT <sub>90</sub> (d) actual	St. (X <sup>2</sup> ) <sup>g)</sup>	DT <sub>50</sub> (d) Norm <sup>b)</sup>	Method of calculation <sup>d)</sup>
Loam (bare soil)	Italy	8.60/7.69	0-20	-	-	8.1	113 <sup>e)</sup>	DFOP (k <sub>1</sub> 0.081488, k <sub>2</sub> 0.006114, g 0.429066)
Loam (bare soil)	Spain	7.55/7.14	0-20	-	-	14.0	12.4 <sup>f)</sup>	FOMC (α 2.4059, β 25.5671)
Geometric mean (if not pH dependent), n=9							16.7	
pH dependence				No				

a) Measured in water / calcium chloride solution

b) Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7, values are DegT50matrix

c) Depth over which residues were detected

d) Model for actual / normalised DT50

e) Calculated as  $\ln(2)/k_{slow}$

f) Calculated as  $DT_{90}/3.32$

g) For time-step normalised DT50

#### 8.4.2 Soil accumulation testing (KCP 9.1.1.2.2); reference: EFSA Journal 2016;14(4):4432

Soil accumulation and plateau concentration	CL 354825: Plateau concentration of 0.05 mg/kg reached after 14 years for sunflowers (covering soybean and alfalfa) and 0.026 mg/kg reached after 14 years for winter and oilseed rape (based on calculation)
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### 8.5 Mobility in soil (KCP 9.1.2)

Studies on mobility in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. All necessary endpoints are evaluated in EFSA Journal 2016;14(4):4432

#### 8.5.1 Imazamox and its metabolites



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

Imazamox – evaluated on EU level						
Soil type	OC %	pH (-) <sup>a)</sup>	K <sub>F</sub> (mL/g)	K <sub>foc</sub> (mL/g)	1/n	Reference
Sandy loam, Sassafras (USA)	0.85	6.0	0.27 b)	31.9b)	0.96	EFSA Journal 2016;14(4):4432
Silty clay loam, Beardon (USA)	2.59	7.4	0.11 b)	4.67 b)	0.96	EFSA Journal 2016;14(4):4432
Loam, Plano (USA)	1.37	5.9	0.20 b)	14.4 b)	0.91	EFSA Journal 2016;14(4):4432
Clay, 97-669 (UK)	1.8	7.9	0.07 b)	3.73 b)	0.93	EFSA Journal 2016;14(4):4432
Clay, 98-404 (UK)	2.4	7.5	0.22 b)	9.85 b)	0.91	EFSA Journal 2016;14(4):4432
Silty clay loam, 93-165 (Italy)	0.9	7.9	0.59	66.0	0.91	EFSA Journal 2016;14(4):4432
Clay, 95-013 (Italy)	1.0	8.2	0.48	48.0	0.85	EFSA Journal 2016;14(4):4432
Silty clay loam, 98-405 (Italy)	1.1	8.0	0.15 b)	13.6 b)	0.87	EFSA Journal 2016;14(4):4432
Sandy loam, Bruch West (Germany)	1.37	7.8	0.09 b)	6.50 b)	0.97	EFSA Journal 2016;14(4):4432
Silty clay loam, La Gironda Arahal (Spain)	3.84	8.1	0.07 b)	1.79 b)	0.98	EFSA Journal 2016;14(4):4432
Loamy sand, Li10 (Germany)	0.97	6.5	0.13 b)	13.4 b)	0.96	EFSA Journal 2016;14(4):4432
Loam, NJ (USA)	1.33	6.9	0.05 b)	4.10 b)	1.02	EFSA Journal 2016;14(4):4432
Median (n=12)			0.14	11.6	-	
Arithmetic mean (n=12)			-	-	0.936	
pH-dependency			No			

**Table 8.5-2: Summary of soil adsorption/desorption for CL 312622**

CL 312622 – evaluated on EU level						
Soil type	OC %	pH (-) <sup>a)</sup>	K <sub>F</sub> (mL/g)	K <sub>foc</sub> (mL/g)	1/n	Reference
Clay loam, Sharkey (USA)	1.88	5.9	1.05	55.9	0.90	EFSA Journal 2016;14(4):4432
Sandy loam, Sassafras (USA)	0.85	6.0	0.75	88.2	0.97	EFSA Journal 2016;14(4):4432
Silty clay loam, Beardon (USA)	2.59	7.4	0.64	24.7	0.94	EFSA Journal 2016;14(4):4432
Loam, Plano (USA)	1.37	5.9	0.75	54.7	0.96	EFSA Journal 2016;14(4):4432
Sandy loam, Bruch West (Germany)	1.37	7.8	0.06	4.62	1.03	EFSA Journal 2016;14(4):4432
Silty clay loam, La Gironda Arahal (Spain)	3.84	8.1	0.25	6.54	1.00	EFSA Journal 2016;14(4):4432
Loamy sand, Li10 (Germany)	0.97	6.5	0.05	4.92	0.98	EFSA Journal 2016;14(4):4432
Loam, NJ (USA)	1.33	6.9	0.07	5.23	1.01	EFSA Journal 2016;14(4):4432
Arithmetic mean (n=8)			0.453	30.6	0.974	
pH-dependency			No			

**Table 8.5-3: Summary of soil adsorption/desorption for CL 354825**

CL 354825– evaluated on EU level						
Soil type	OC %	pH (-) <sup>a)</sup>	K <sub>F</sub> (mL/g)	K <sub>foc</sub> (mL/g)	1/n	Reference
Clay loam, Sharkey (USA)	1.88	5.9	18.2	968	0.89	EFSA Journal 2016;14(4):4432
Sandy loam, Sassafras (USA)	0.85	6.0	5.96	701	0.79	EFSA Journal 2016;14(4):4432
Silty clay loam, Beardon (USA)	2.59	7.4	3.43	132	0.68	EFSA Journal 2016;14(4):4432
Loam, Plano (USA)	1.37	5.9	7.31	534	0.78	EFSA Journal 2016;14(4):4432
Sandy loam, Bruch West (Germany)	1.37	7.8	5.61	409	0.78	EFSA Journal 2016;14(4):4432
Silty clay loam, La Gironda Arahal (Spain)	3.84	8.1	1.97	51.3	0.71	EFSA Journal 2016;14(4):4432

CL 354825– evaluated on EU level						
Soil type	OC %	pH (-) <sup>a)</sup>	K <sub>F</sub> (mL/g)	K <sub>foc</sub> (mL/g)	1/n	Reference
Loamy sand, Li10 (Germany)	0.97	6.5	8.20	845	0.86	EFSA Journal 2016;14(4):4432
Loam, NJ (USA)	1.33	6.9	4.82	361.2	0.82	EFSA Journal 2016;14(4):4432
Arithmetic mean (n=8)			6.938	500.2	0.789	
pH-dependency			No			

### 8.5.2 Column leaching (KCP 9.1.2.1)

**Table 8.5-4. Mobility in soil column leaching active substance imazamox; reference: EFSA Journal 2016;14(4):4432**

Column leaching	Not studied - no data requested
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**Table 8.5-5. Mobility in soil column leaching transformation products; reference: EFSA Journal 2016;14(4):4432**

Column leaching	Not studied - no data requested
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### 8.5.3 Lysimeter and field leaching studies (KCP 9.1.2.2/9.1.2.3)

**Table 8.5-6 Lysimeter / field leaching studies on imazamox and its metabolites; reference: EFSA Journal 2016;14(4):4432**

<b>Lysimeter / field leaching studies</b>	<p>Location: North Rhine Westphalia (Germany)  Study type (e.g. lysimeter, field): lysimeter  Soil properties: texture sand soil, pH = 5.4 (CaCl<sub>2</sub>), OC= 1.4%, field capacity = 15.7%  Dates of application : June 1993  Crop : Pea (sown May 1993), winter wheat (planted September 1993), winter barley (planted September 1994) Interception estimated: minimal  Number of applications: 1 application  Duration: 2 years  Application rate: 50 g/ha  Average annual rainfall (mm): 1158 mm  Average annual leachate volume (mm): 868 mm (lysimeter 17); 889 mm (lysimeter 18)  % radioactivity in leachate (maximum/year): 15.3 % AR (1<sup>st</sup> year); 2.3% AR (2<sup>nd</sup> year)  Individual annual maximum concentrations (e.g. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> yr): 1<sup>st</sup> year: 1.68-2.22 µg/L active substance, 2<sup>nd</sup> year: 0.09-0.17 µg/L.  Individual annual average concentrations (e.g. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> yr): 1<sup>st</sup> year: 0.29-0.47 µg/L active substance, 2<sup>nd</sup> year: &lt;0.05 µg/L. Unidentified radioactivity 1<sup>st</sup> year: 0.23-0.30 µg/L parent equivalents, 2<sup>nd</sup> year: 0.07-0.08 µg/L, several trace level components.</p>
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	<p>CL 312622 not detected in soil and leachates (LOQ 0.01µg/L).</p> <p>CL 354825 detected in soil (down to 50 cm), not looked for in the leachates (could be present at mean concentrations &gt;&gt;0.05 µg/L).</p> <p>Amount of radioactivity in the soils at the end of the study = 37.0-39.6% AR; 1.2-2.8% AR as parent, 10.0-13.5% AR as CL 354825.</p>
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## 8.6 Degradation in the water/sediment systems (KCP 9.2, KCP 9.2.1, KCP 9.2.2, KCP 9.2.3)

Studies on degradation in water/sediment systems with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance. All necessary endpoints are evaluated in EFSA Journal 2016;14(4):4432

### 8.6.1 Imazamox and its metabolites

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

Imazamox distribution (max. water/sediment 48 % after 61 days); reference: EFSA Journal 2016;14(4):4432										
Water / sediment system	pH water phase	pH sed a)	t. °C	DT <sub>50</sub> /DT <sub>90</sub> whole sys.	St. (χ <sup>2</sup> )	DisT <sub>50</sub> /DisT <sub>90</sub> water	St. (χ <sup>2</sup> )	DT <sub>50</sub> /DT <sub>90</sub> sed	St. (χ <sup>2</sup> )	Method of calculation <sub>c</sub>
Silty clay loam (Mill stream pond)	8.19	7.4	20	155 / 516	2.1	76.4d	4.6	-	-	SFO / DFOP
Sand (Iron hatch runoff)	8.33	7.9	20	129 / 430	1.3	67.1d	1.5	-	-	SFO / HS
Sand (Golden Lake)	8.5	8.3	20	525d / >1000	0.9	441d	1.9	-	-	DFOP / DFOP
Clay loam (Goose River)	8.4	8.4	20	283d / 870	1.0	135d	1.5	-	-	HS / DFOP
Geometric mean at 20°C (n=4)				233		132		-		-

**Table 8.6-2: Summary of observed metabolites**

<b>CL 312622</b> Water/sediment system	Max. in water/sediment 8.7 %/5.0 % after 103 d (Total system: 13.7% after 103 d)	Reference: EFSA Journal 2016;14(4):4432
<b>CL 354825</b> Water/sediment system	Max. in water/sediment 1.3 %/5.2 % after 103 d (Total system: 5.7% after 103 d)	Reference: EFSA Journal 2016;14(4):4432

## 8.7 Predicted Environmental Concentrations in soil (PEC<sub>soil</sub>) (KCP 9.1.3)

Modelling Comments:	<p>Calculations of PEC<sub>s</sub> for active substance, its metabolites and were submitted and accepted. The agreed endpoints were used.</p> <p>The risk envelope approach was accepted.</p> <p><b>Imazamox</b> The PECs for active substance and its metabolites are based on the highest DT<sub>50</sub> from field studies and laboratory studies, respectively. The PECs accum for active substance is not required.</p> <p>The maximum PEC<sub>s</sub> values for active substance and its metabolites are presented in following table:</p> <table><tr><th>Crop</th><th>Imazamox</th><th>CL 312622</th><th>CL 354285</th><th>Formulation</th></tr><tr><td></td><td colspan="4">PECs mg/kg soil</td></tr><tr><td>Sunflower</td><td>0.0512</td><td>0.0116 0.0121*</td><td>0.0097 0.0463</td><td></td></tr></table> <p>For formulation PEC<sub>s</sub> was calculated by using the maximum application rate of the product of 1.2 L/ha (soya) and minimal interception of 20% (sunflower). This approach as a worse case was accepted. PEC<sub>s</sub> = 1.376 mg/kg.</p> <p>The relevant PEC<sub>s</sub> values will be used in risk assessment.</p>	Crop	Imazamox	CL 312622	CL 354285	Formulation		PECs mg/kg soil				Sunflower	0.0512	0.0116 0.0121*	0.0097 0.0463	
Crop	Imazamox	CL 312622	CL 354285	Formulation												
	PECs mg/kg soil															
Sunflower	0.0512	0.0116 0.0121*	0.0097 0.0463													

### 8.7.1 Justification for new endpoints

No new endpoints were established.

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

**Table 8.7-1: Input parameters related to application for PEC<sub>soil</sub> calculations**

Use No.	1	2
Crop	Peas	Sunflower (worst case scenario)
Application rate (g as/ha)	48 g as/ha	– 48 g as/ha
Number of applications/interval	1	1
Crop interception (%)	35%	20%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (tillage)	5 cm (tillage)
Use No.	3	4
Crop	Soybean	Benas
Application rate (g as/ha)	48 g as/ha	48 g as/ha
Number of applications/interval	1	1

Crop interception (%)	35%	25%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (tillage)	5 cm (tillage)
Use No.	5	6
Crop	Maize	Oilseed rape
Application rate (g as/ha)	48 g as/ha	48 g as/ha
Number of applications/interval	1	1
Crop interception (%)	25%	40%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (tillage)	5 cm (tillage)
Use No.	7	8
Crop	Apples	Cotton
Application rate (g as/ha)	48 g as/ha	48 g as/ha
Number of applications/interval	1	1
Crop interception (%)	60%	30%
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (tillage)	5 cm (tillage)
Use No.	9	
Crop	Tobacco	
Application rate (g as/ha)	48 g as/ha	
Number of applications/interval	1	
Crop interception (%)	50%	
Depth of soil layer (relevant for plateau concentration) (cm)	5 cm (tillage)	

**Table 8.7-2: Input parameter for active substance(s) and relevant metabolite(s) for PEC<sub>soil</sub> calculation**

Compound	Molecular weight (g/mol)	Max. occurrence (%)	DT50 (days)	Value in accordance to EU endpoint y/n/ Reference
imazamox	305.3	-	31.1 days Kinetics: SFO	EFSA Journal 2016;14(4):4432
CL 312622	305.3	43.6	67.4 days Kinetics: SFO	EFSA Journal 2016;14(4):4432
CL 354285	277.3	55.2	1000 days Default value	EFSA Journal 2016;14(4):4432

The calculation of PEC<sub>soil</sub> for imazamox and its metabolites was presented for worst case scenario (sunflower) which cover all intended uses presented in GAP table using sunflower as representative crop with worst case crop interception (20%) and the maximum dose (48 g as/ha):

### 8.7.2.1 Imazamox and its metabolites

Parent - imazamox

**Table 8.7-3:  $PEC_{soil}$  for imazamox on soybean/peas**

$PEC_{soil}$ (mg/kg)		Soybean/Peas	
		Actual	TWA
Initial		0.0416	-
Short term	24h	0.0407	0.0411
	2d	0.0398	0.0407
	4d	0.0381	0.0398
Long term	7d	0.0356	0.0385
	14d	0.0304	0.0357
	21d	0.0261	0.0332
	28d	0.0223	0.0309
	50d	0.0136	0.0251
	100d	0.0045	0.0167
Plateau concentration (5 cm) after year 10		<0.0001	-
$PEC_{accumulation}$ ( $PEC_{act} + PEC_{soil\ plateau}$ )		0.0416	

**Table 8.7-3:  $PEC_{soil}$  for imazamox on sunflower**

$PEC_{soil}$ (mg/kg)		Sunflower	
		Actual	TWA
Initial		0.0512	-
Short term	24h	0.0501	0.0506
	2d	0.0490	0.0501
	4d	0.0468	0.0490
Long term	7d	0.0438	0.0474
	14d	0.0375	0.0440
	21d	0.0321	0.0409
	28d	0.0274	0.0381
	50d	0.0168	0.0309
	100d	0.0055	0.0205
Plateau concentration (5 cm) after year 10		<0.0001	-
$PEC_{accumulation}$ ( $PEC_{act} + PEC_{soil\ plateau}$ )		0.0512	

**Table 8.7-5:  $PEC_{soil}$  for imazamox on oilseed rape**

$PEC_{soil}$ (mg/kg)		Oilseed rape	
		Actual	TWA
Initial		0.0384	-
Short term	24h	0.0376	0.0380
	2d	0.0367	0.0376
	4d	0.0351	0.0367
Long term	7d	0.0329	0.0356
	14d	0.0281	0.0330
	21d	0.0240	0.0307
	28d	0.0206	0.0286
	50d	0.0126	0.0232
	100d	0.0041	0.0154
Plateau concentration (5 cm) after year 10		<0.0001	-
$PEC_{accumulation}$ ( $PEC_{aer} - PEC_{soil\ plateau}$ )		0.0041	

**Table 8.7-6:  $PEC_{soil}$  for imazamox on beans/cabbage/maize**

$PEC_{soil}$ (mg/kg)		beans/cabbage/maize	
		Actual	TWA
Initial		0.0480	-
Short term	24h	0.0469	0.0475
	2d	0.0459	0.0469
	4d	0.0439	0.0459
Long term	7d	0.0411	0.0444
	14d	0.0351	0.0412
	21d	0.0301	0.0383
	28d	0.0257	0.0357
	50d	0.0157	0.0289
	100d	0.0052	0.0192
Plateau concentration (5 cm) after year 10		<0.0001	-
$PEC_{accumulation}$ ( $PEC_{aer} - PEC_{soil\ plateau}$ )		0.0480	

**Table 8.7-7:  $PEC_{soil}$  for imazamox on cotton/linseed**

$PEC_{soil}$
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(mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0448	—
Short term	24h	0.0438	0.0443
	2d	0.0428	0.0438
	4d	0.0410	0.0429
Long term	7d	0.0383	0.0415
	14d	0.0328	0.0385
	21d	0.0281	0.0358
	28d	0.0240	0.0333
	50d	0.0147	0.0270
	100d	0.0048	0.0179
Plateau concentration (5 cm) after year 10		<0.0001	—
$\text{PEC}_{\text{accumulation}} - \text{PEC}_{\text{soil plateau}}$		0.0448	

**Table 8.7-8:  $\text{PEC}_{\text{soil}}$  for imazamox on tobacco**

$\text{PEC}_{\text{soil}}$ (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0320	—
Short term	24h	0.0312	0.0316
	2d	0.0306	0.0313
	4d	0.0293	0.0306
Long term	7d	0.0274	0.0296
	14d	0.0234	0.0275
	21d	0.0200	0.0256
	28d	0.0171	0.0238
	50d	0.0105	0.0193
	100d	0.0034	0.0128
Plateau concentration (5 cm) after year 10		<0.0001	—
$\text{PEC}_{\text{accumulation}} - \text{PEC}_{\text{soil plateau}}$		0.0320	

**Table 8.7-9:  $\text{PEC}_{\text{soil}}$  for imazamox on apples**

$\text{PEC}_{\text{soil}}$ (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0256	—

Short term	24h	0.0250	0.0253
	2d	0.0245	0.0250
	4d	0.0234	0.0245
Long term	7d	0.0219	0.0237
	14d	0.0187	0.0220
	21d	0.0160	0.0204
	28d	0.0137	0.0190
	50d	0.0084	0.0154
	100d	0.0028	0.0102
Plateau concentration (5 cm) after year 10		<0.0001	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0256	

### PEC<sub>soil</sub> of metabolites

Metabolite CL 312622

**Table 8.7-10: PEC<sub>soil</sub> for CL 312622 on soybean/peas**

PEC <sub>soil</sub> (mg/kg)		Soybean/Peas	
		Actual	TWA
Initial		0.0094	-
Short term	24h	0.0094	0.0094
	2d	0.0094	0.0094
	4d	0.0094	0.0094
Long term	7d	0.0094	0.0094
	14d	0.0092	0.0094
	21d	0.0090	0.0094
	28d	0.0088	0.0093
	50d	0.0078	0.0092
	100d	0.0054	0.0086
Plateau concentration (5cm) after year 10		0.0004	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0098	

**Table 8.7-4: PEC<sub>soil</sub> for CL 312622 on sunflower**

PEC <sub>soil</sub> (mg/kg)	Sunflower

		Actual	TWA
Initial		0.0116	-
Short term	24h	0.0116	0.0116
	2d	0.0116	0.0116
	4d	0.0116	0.0116
Long term	7d	0.0115	0.0116
	14d	0.0114	0.0115
	21d	0.0111	0.0115
	28d	0.0108	0.0115
	50d	0.0096	0.0113
	100d	0.0066	0.0106
Plateau concentration (5cm) after year 10		0.0005	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0121	

**Table 8.7-12: PEC<sub>soil</sub> for CL 312622 on oilseed rape**

PEC <sub>soil</sub> (mg/kg)		Oilseed rape	
		Actual	TWA
Initial		0.0087	-
Short term	24h	0.0087	0.0087
	2d	0.0087	0.0087
	4d	0.0087	0.0087
Long term	7d	0.0086	0.0087
	14d	0.0085	0.0087
	21d	0.0083	0.0086
	28d	0.0081	0.0086
	50d	0.0072	0.0085
	100d	0.0050	0.0079
Plateau concentration (5cm) after year 10		0.0004	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0091	

**Table 8.7-13: PEC<sub>soil</sub> for CL 312622 on beans/cabbage/maize**

PEC <sub>soil</sub> (mg/kg)		Beans/cabbage/maize	
		Actual	TWA
Initial		0.0108	-

Short term	24h	0.0108	0.0108
	2d	0.0108	0.0108
	4d	0.0108	0.0108
Long term	7d	0.0108	0.0108
	14d	0.0106	0.0108
	21d	0.0104	0.0108
	28d	0.0101	0.0108
	50d	0.0090	0.0106
	100d	0.0072	0.0099
Plateau concentration (5cm) after year 10		0.0005	-
PEC <sub>accumulation</sub> (PEC <sub>aet</sub> - PEC <sub>soil-plateau</sub> )		0.0113	

**Table 8.7-14: ——— PEC<sub>soil</sub> for CL 312622 on cotton/linseed**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0101	-
Short term	24h	0.0101	0.0101
	2d	0.0101	0.0101
	4d	0.0101	0.0101
Long term	7d	0.0101	0.0101
	14d	0.0099	0.0101
	21d	0.0097	0.0101
	28d	0.0095	0.0100
	50d	0.0084	0.0099
	100d	0.0058	0.0093
Plateau concentration (5cm) after year 10		0.0005	-
PEC <sub>accumulation</sub> (PEC <sub>aet</sub> - PEC <sub>soil-plateau</sub> )		0.0106	

**Table 8.7-15: ——— PEC<sub>soil</sub> for CL 312622 on tobacco**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0072	-
Short term	24h	0.0072	0.0072
	2d	0.0072	0.0072
	4d	0.0072	0.0072

Long term	7d	0.0072	0.0072
	14d	0.0071	0.0072
	21d	0.0069	0.0072
	28d	0.0068	0.0072
	50d	0.0060	0.0071
	100d	0.0041	0.0066
Plateau concentration (5cm) after year 10		0.0003	-
PEC <sub>accumulation</sub> (PEC <sub>aet</sub> + PEC <sub>soil-plateau</sub> )		0.0076	

**Table 8.7-16: ——— PEC<sub>soil</sub> for CL 312622 on apples**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0058	-
Short term	24h	0.0058	0.0101
	2d	0.0058	0.0101
	4d	0.0058	0.0101
Long term	7d	0.0058	0.0101
	14d	0.0057	0.0101
	21d	0.0056	0.0101
	28d	0.0054	0.0100
	50d	0.0048	0.0099
	100d	0.0033	0.0093
Plateau concentration (5cm) after year 10		0.0003	-
PEC <sub>accumulation</sub> (PEC <sub>aet</sub> + PEC <sub>soil-plateau</sub> )		0.0061	

#### Metabolite CL 354825

**Table 8.7-17: ——— PEC<sub>soil</sub> for CL 354825 on soybean/peas**

PEC <sub>soil</sub> (mg/kg)		Soybean/Peas	
		Actual	TWA
Initial		0.0074	-
Short term	24h	0.0074	0.0074

Long term	2d	0.0074	0.0074
	4d	0.0074	0.0074
	7d	0.0074	0.0074
	14d	0.0074	0.0074
	21d	0.0074	0.0074
	28d	0.0074	0.0074
	50d	0.0074	0.0074
	100d	0.0072	0.0074
Plateau concentration (5cm) after year 10		0.0297	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0371	

**Table 8.7-5: PEC<sub>soil</sub> for CL 354825 on sunflower**

PEC <sub>soil</sub> (mg/kg)		Sunflower	
		Actual	TWA
Initial		0.0097	-
Short term	24h	0.0097	0.0097
	2d	0.0097	0.0097
	4d	0.0097	0.0097
Long term	7d	0.0097	0.0097
	14d	0.0097	0.0097
	21d	0.0097	0.0097
	28d	0.0097	0.0097
	50d	0.0097	0.0097
	100d	0.0095	0.0097
Plateau concentration (5cm) after year 10		0.0366	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0463	

**Table 8.7-19: PEC<sub>soil</sub> for CL 354825 on oilseed rape**

PEC <sub>soil</sub> (mg/kg)		Oilseed rape	
		Actual	TWA
Initial		0.0051	-
Short term	24h	0.0051	0.0051
	2d	0.0051	0.0051
	4d	0.0051	0.0051
Long term	7d	0.0051	0.0051

	14d	0.0051	0.0051
	21d	0.0051	0.0051
	28d	0.0051	0.0051
	50d	0.0051	0.0051
	100d	0.0050	0.0051
Plateau concentration (5cm) after year 10		0.0274	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0325	

**Table 8.7-20: PEC<sub>soil</sub> for CL 354825 on beans/cabbage/maize**

PEC <sub>soil</sub> (mg/kg)		Beans/cabbage/maize	
		Actual	TWA
Initial		0.0085	-
Short term	24h	0.0085	0.0085
	2d	0.0085	0.0085
	4d	0.0085	0.0085
Long term	7d	0.0085	0.0085
	14d	0.0085	0.0085
	21d	0.0085	0.0085
	28d	0.0085	0.0085
	50d	0.0085	0.0085
	100d	0.0083	0.0085
Plateau concentration (5cm) after year 10		0.0343	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> +PEC <sub>soil plateau</sub> )		0.0428	

**Table 8.7-21: PEC<sub>soil</sub> for CL 354825 on cotton/linseed**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0074	-
Short term	24h	0.0074	0.0074
	2d	0.0074	0.0074
	4d	0.0074	0.0074
Long term	7d	0.0074	0.0074
	14d	0.0074	0.0074
	21d	0.0074	0.0074
	28d	0.0074	0.0074

	50d	0.0074	0.0074
	100d	0.0073	0.0074
Plateau concentration (5cm) after year 10		0.0320	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0394	

**Table 8.7-22: PEC<sub>soil</sub> for CL 354825 on tobacco**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0057	-
Short term	24h	0.0057	0.0057
	2d	0.0057	0.0057
	4d	0.0057	0.0057
Long term	7d	0.0057	0.0057
	14d	0.0057	0.0057
	21d	0.0057	0.0057
	28d	0.0057	0.0057
	50d	0.0057	0.0057
	100d	0.0056	0.0057
Plateau concentration (5cm) after year 10		0.0229	-
PEC <sub>accumulation</sub> (PEC <sub>act</sub> + PEC <sub>soil plateau</sub> )		0.0286	

**Table 8.7-23: PEC<sub>soil</sub> for CL 354825 on apples**

PEC <sub>soil</sub> (mg/kg)		Cotton/linseed	
		Actual	TWA
Initial		0.0046	-
Short term	24h	0.0046	0.0046
	2d	0.0046	0.0046
	4d	0.0046	0.0046
Long term	7d	0.0046	0.0046
	14d	0.0046	0.0046
	21d	0.0046	0.0046
	28d	0.0045	0.0046
	50d	0.0045	0.0046
	100d	0.0044	0.0045
Plateau concentration (5cm)		0.0183	-



after year 10		
PEC <sub>accumulation</sub> (PEC <sub>act</sub> – PEC <sub>soil plateau</sub> )	0.0229	

### 8.7.2.2 PEC<sub>soil</sub> of CHR/H/IMA 40 SL

The PEC<sub>soil</sub> of formulation CHR/H/IMA 40SL was calculated using the following formula based on the worst case crop interception (20% and maximum application rate (1290 g/ha).

$$\text{PEC}_{\text{soil of formulation}} = \text{application rate} \cdot (1 - \text{crop interception}) / 100 \cdot d \cdot q$$

Density of formulation: 1.075 g/ ml

Application rate: 1290 g/ha

d: 5 cm

q: 1.5 g/ml

Crop interception: 20%

Active substance/ preparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.376	-	5	<0.0001	-

**Table 8.7-24: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on soybean/peas**

Determined from following formulas:

PEC<sub>soil</sub> = app. Rate · (1 – crop interception) / 750;

app. Rate = 1290 g/ha

d = 5 cm

q = 1.5 g/ml

Crop interception: 35% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>act</sub> (mg/kg)	PEC <sub>twa21 d</sub> (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>act</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.118	-	5	<0.0001	1.118

**Table 8.7-25: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on sunflower**

Determined from following formulas:

PEC<sub>soil</sub> = app. Rate · (1 – crop interception) / 750;

app. Rate = 1290 g/ha

d = 5 cm

q = 1.5 g/ml

Crop interception: 20% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.376	-	5	<0.0001	1.376

**Table 8.7-26: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on oilseed rape**

Determined from following formulas:  
 $PEC_{soil} = \text{app. Rate} \cdot (1 - \text{crop interception}) / 750$ ;  
 app. Rate= 1290 g/ha  
 d= 5 cm  
 q= 1.5 g/ml  
 Crop interception: 40% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.032	-	5	<0.0001	1.032

**Table 8.7-27: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on beans/cabbage/maize**

Determined from following formulas:  
 $PEC_{soil} = \text{app. Rate} \cdot (1 - \text{crop interception}) / 750$ ;  
 app. Rate= 1290 g/ha  
 d= 5 cm  
 q= 1.5 g/ml  
 Crop interception: 25% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.290	-	5	<0.0001	1.290

**Table 8.7-28: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on oilseed cotton/linseed**

Determined from following formulas:  
 $PEC_{soil} = \text{app. Rate} \cdot (1 - \text{crop interception}) / 750$ ;  
 app. Rate= 1290 g/ha  
 d= 5 cm  
 q= 1.5 g/ml  
 Crop interception: 30% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	1.204	-	5	<0.0001	1.204

**Table 8.7-29: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on tobacco**

Determined from following formulas:  
 $PEC_{soil} = \text{app. Rate} \cdot (1 - \text{crop interception}) / 750$ ;  
 app. Rate= 1290 g/ha  
 d= 5 cm  
 q= 1.5 g/ml  
 Crop interception: 50% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	0.860	-	5	<0.0001	0.860

**Table 8.7-30: PEC<sub>soil</sub> for CHR/H/IMA 40 SL on apple**

Determined from following formulas:  
 $PEC_{soil} = \text{app. Rate} \cdot (1 - \text{crop interception}) / 750$ ;  
 app. Rate= 1290 g/ha  
 d= 5 cm  
 q= 1.5 g/ml  
 Crop interception: 60% (worst case)

Active substance/ preparation	Application rate (g/ha)	PEC <sub>aet</sub> (mg/kg)	PEC <sub>twa</sub> 21 d (mg/kg)	Tillage depth (cm)	PEC <sub>soil,plateau</sub> (mg/kg)	PEC <sub>accu</sub> = PEC <sub>aet</sub> + PEC <sub>soil,plateau</sub> (mg/kg)
CHR/H/IMA 40 SL	1290	0.688	-	5	<0.0001	0.688

## 8.8 Predicted Environmental Concentrations in groundwater (PEC<sub>gw</sub>) (KCP 9.2.4)

ZRMS Comments:	<p>In submitted PEC<sub>gw</sub> assessment the recommended models by FOCUS Groundwater guidelines were used FOCUS-PEARL, FOCUS-PELMO and FOCUS MACRO. The crops were considered separately and were grouped. In general, corrected grouping was accepted. The spring OSR could be treated as surrogate crop for pumpkin for seeds.</p> <p>The median and arithmetic mean of Koc were used (in accordance with List of endpoints, EFSA, 2016, although the geometric mean of Koc is required in modelling</p>
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and represents a worse case. The use of geometric mean could be decided at cMS level. The relevant metabolite and parameters have been taken according to List of Endpoints Tier 1 with uptake factor PUF = 0 was accepted.

Tier 2. The crop uptake factor value of 0.5 for active substance and metabolite CL 312622 was used and of 0.0 for metabolite CL 354825 (all values agreed at the EU level). The uptake factor of 0.5 for active substance and metabolite CL 312622 was confirmed by study evaluated in Residue section (Vol. 3 B.7 (AS)) and semi-field hydroponic study in greenhouse and accepted at the EU level (Vol. 3 B.8 (AS); Keenan, 2013), respectively. No further studies are required.

In PECgw assessment the biennial and triennial applications for spring and winter OSR were considered.

The proposed risk envelope approach using the maximum application rate of 48 g a.s./ha and relevant interception for particular crops were accepted.

The Jokioinen scenario is not relevant for Central Zone and was not considered.

PECgw < 0.1 µg a.s./L for active substance are below the trigger value of 0.1 µg/L for following application timing:

**Tier 2. Imazamox; PUF = 0.5 for active substance and metabolite CL 312622**

Use	Application rate g a.s./ha	Application timing
Pea	40	triennial
Soya	48	triennial
Beans, broad beans, lentils, castor beans	44	triennial
Linseed	48	triennial
Spring oilseed rape, mustard, bread seed poppy, lupine, safflower, borage, hemp, sesame, pumpkin	48	triennial
Winter oilseed rape	36	triennial
Sunflower	48	biennial
Maize	44	triennial
Cotton	48	annual
Tobacco	48	annual
Coniferous / deciduous forest nurseries, Ornamental shrubs, Salix as pome fruits	28	triennial
Cabbage	48	biennial

**Poland. National assessment**

Taking into consideration the national requirements (relevant surrogate crops) the formulation could be applied every third year for all crops included in GAP table.

**Metabolites of imazamox.** PECgw values for both metabolites CL 312622 and CL 354825 are below the trigger value 0.75 µg/L.

The metabolite relevance has been discussed in Section 10.

**Risk envelopes used in PECgw calculations with maximum app rate 48 g as/ha for every crops as worst case scenario:**

- a) Winter oilseed rape ~~and~~ as surrogate scenario for spring oilseed rape– GAP – defined uses:

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape	Imazamox	24 – 48	Boom sprayer	1	N/A	Spring
Winter oilseedrape	Imazamox	24- 48	Boom sprayer	1	N/A	Spring

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape as surrogate crop for spring oilseed rape to fill lack of scenarios	Imazamox	24 – 48	Boom sprayer	1	N/A	Spring

- b) Peas ~~oilseed rape and surrogate scenario for spring oilseed rape~~– GAP – defined uses:

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Peas	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Pea	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16

**c) Bean and surrogate scenario for broad bean, lentils, lupine, castor beans– GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Bean	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16
Broad bean	Imazamox	24- 48	Boom sprayer	1	N/A	BBCH 10 – 16
Lentils	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16
Lupine	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16
Castor beans	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Bean	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16

**d) Sunflower – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Maize as surrogate crop according to national requirements in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16

**e) Soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean	Imazamox	24- 48	Boom sprayer	1	-	BBCH 10 – 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Peas according to national requirement in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16
Bean according to national requirement in Poland	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16

**f) Linseed / Hemp – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Linseed/Hemp	Imazamox	24- 48	Boom sprayer	1	-	BBCH 10 – 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Linseed/Hemp	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16

**g) Spring oilseed rape, Breadseed poppy, mustard, sesame, borage, pumpkin and lupine and surrogate scenarios for sunflower and soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
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Spring oilseedrape	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Mustard	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Breadseed poppy	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Sunflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Soyabean	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Cotton	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Sesame	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Safflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Borage	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16
Hemp	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16
Pumpkin	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Linseed/Hemp	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Lupine	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oil seed rape	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Cabbage as surrogate crop for cucurbitae vegetables according to national requirement in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16

**h) Tobacco – GAP – defined uses:**

Use	Active	Application	Application	Number of	Minimum	Application
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	substance	rate (g a.s /ha)	method	applications	application interval (days)	timing
Tobacco	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89
Cabbage as surrogate crop for tobacco < 50 cm	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89
Apple as surrogate crop for tobacco > 50 cm	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10-89

**i) Ornamentals – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Cabbage as surrogate crop for ornamentals < 50 cm according to national requirement in Poland	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89

**j) Forestry tree, Ornamental h > 50 cm, Salix, Wicker – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval	Application timing
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					(days)	
Ornamental	Imazamox	15– 48	Boom sprayer	1	-	BBCH 10 – 89
Coniferous / deciduous forest nurseries, Ornamental shrubs	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89
Salix viminalis (SAXVI)  Wicker (1SAXG)	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 – 89

Identifies representative use (risk envelope):

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Apple as surrogate crop according to national requirement in Poland	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10-89

**k) Cotton– GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Cotton	Imazamox	24– 48	Boom sprayer	1	-	BBCH 10 – 19

Identifies representative use (risk envelope):

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing

Cotton	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10-16
Spring oilseed rape as surrogate crop according to national requirement in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10-16

### 8.8.1 Justification for new endpoints

No new endpoints were established

#### 8.8.1.1 Active substance(s) and relevant metabolite(s) (KCP 9.2.4.1)

**Table 8.8-1: Input parameters related to application for PEC<sub>gw</sub> calculations**

Use No.	1	2
Crop	Peas	Sunflower
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox:24-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season
Relative application date	1 day after emergence	1 day after emergence
Crop interception (%)	35 %	20%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
Use No.	3	4
Crop	Soybean	Beans (field)
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox: 24-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season
Relative application date	1 day after emergence	1 day after emergence
Crop interception (%)	35%	25%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
Crop no.	5	6
Crop	Beans (vegetables)	Cabbage
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox: 15-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season

Relative application date	1 day after emergence	1 day after emergence
Crop interception (%)	25%	25%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
<b>Crop no.</b>	<b>7</b>	<b>8</b>
Crop	Maize	Spring oilseed rape
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox: 24-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season
Relative application date	1 day after emergence	1 day after emergence
Crop interception (%)	25%	40%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
<b>Crop no.</b>	<b>9</b>	<b>10</b>
Crop	Winter oilseed rape	Cotton
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox: 24-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season
Relative application date	Spring: Absolute date: 01.043-01.03	1 day after emergence
Crop interception (%)	80% 40%	30%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
<b>Crop no.</b>	<b>11</b>	<b>12</b>
Crop	Linseed	Tobacco
Application rate (g as/ha)	Imazamox: 24-48 g as/ha	Imazamox: 24-48 g as/ha
Number of applications/interval (d)	1 application per season	1 application per season
Relative application date	1 day after emergence	1 day after emergence
Crop interception (%)	30%	50%
Frequency of application	annual, biennial, triennial	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4
<b>Crop no.</b>	<b>13</b>	
Crop	Apples	
Application rate (g as/ha)	Imazamox: 15-48 g as/ha	
Number of applications/interval (d)	1 application per season	
Relative application date	1 day after emergence	
Crop interception (%)	60%	

Frequency of application	annual, biennial, triennial
Models used for calculation	FOCUS PEARL 5.5.5; FOCUS PELMO 6.6.4

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

Not relevant. There is only one relative application date for worst case shown in table above.

### 8.8.1.2 Imazamox and its metabolites

**Table 8.8-3: Input parameters related to active substance imazamox and its metabolites for PEC<sub>gw</sub> calculations**

Compound	imazamox	CL 312622	CL 354825	Value in accordance with EU endpoint y/n/ Reference*
Molecular weight (g/mol)	305.3	305.3	277.3	EFSA Journal 2016;14(4):4432
Water solubility (mg/L):	626 000 at pH 7, 20°C	1000 at pH 7, 20°C	1000 at pH 7, 20°C	EFSA Journal 2016;14(4):4432
Saturated vapour pressure (Pa):	10 <sup>-9</sup> (at 20°C) (correct value would be 6.3 x 10 <sup>-11</sup> Pa)	10 <sup>-9</sup> (at 20°C)	10 <sup>-9</sup> (at 20°C)	EFSA Journal 2016;14(4):4432
DT <sub>50</sub> in soil (d)	16.7 d (geomean, normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).	24.6 d (geomean, normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).	382 d (geomean, normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).	EFSA Journal 2016;14(4):4432
Transformation rate	0.0415	0.0282- 0.0344	0.0018-0.0219	Determined by FOCUS PELMO 6.6.4
K <sub>foc</sub> (mL/g)/K <sub>fom</sub>	median 13.4 mL/g (correct value would be 11.6 mL/g), arithmetic mean 1/n= 0.938 (correct value would be 0.936)	arithmetic mean 30.6 mL/g	arithmetic mean 500 mL/g	EFSA Journal 2016;14(4):4432
1/n	0.938 (arithmetic mean) (correct value would be 0.936)	arithmetic mean 1/n= 0.974	arithmetic mean 1/n= 0.789	EFSA Journal 2016;14(4):4432
Plant uptake factor	0 (TIER 1) 0.5 (TIER 2)	0 (TIER 1) 0.5 (TIER 2)	0	EFSA Journal 2016;14(4):4432
Formation fraction	-	0.829 (from imazamox)	0.778 (from CL 312622)	EFSA Journal 2016;14(4):4432

For estimate the PEC<sub>gw</sub> of imazamox and its metabolites used two tiers in calculations:

- TIER 1 – used PUF 0 for imazamox and its metabolites as basic level of risk assessment
- TIER 2 – used PUF 0.5 for imazamox and CL 312622 according to EFSA Journal 2016;14(4):4432 as risk refinement in groundwater

### FOCUS PEARL Tier 1 – PUF 0

**Table 8.8-4: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.042795	0.197499	0.052973
	Hamburg	0.326349	0.948984	0.256317
	Jokioinen	0.245223	0.661052	0.069692
	Okehampton	0.159437	0.598143	0.147343

**Table 8.8-5: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.015703	0.101484	0.022198
	Hamburg	0.160932	0.481768	0.126375
	Jokioinen	0.124627	0.384930	0.040408
	Okehampton	0.086501	0.309455	0.075166

**Table 8.8-6: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.013105	0.070919	0.017748
	Hamburg	0.098526	0.286455	0.076156
	Jokioinen	0.087726	0.257456	0.027603
	Okehampton	0.058437	0.213632	0.042427

**Table 8.8-7: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.106740	0.532834	0.226133
	Sevilla	0.007050	0.071335	0.011236

**Table 8.8-8: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.052667	0.253122	0.100826
	Sevilla	0.003324	0.038587	0.004414

**Table 8.8-9: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.058732	0.225780	0.069629
	Sevilla	0.002012	0.023744	0.003374

**Table 8.8-10: PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean (Central Zone)	Piacenza	0.043922	0.260252	0.071248

**Table 8.8-11: PEC<sub>gw</sub> for imazamox and its metabolites on soybean (Central Zone) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean (Central Zone)	Piacenza	0.026551	0.163599	0.028670

**Table 8.8-12: PEC<sub>gw</sub> for imazamox and its metabolites on soybean (Central Zone) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean (Central Zone)	Piacenza	0.015737	0.099795	0.023747

**Table 8.8-13: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.360595	1.036186	0.279345
	Kremsmünster	0.222160	0.773882	0.254509
	Okehampton	0.216665	0.827930	0.231628

**Table 8.8-14: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.177756	0.519676	0.140629
	Kremsmünster	0.107183	0.374989	0.140849
	Okehampton	0.126627	0.397209	0.111118

**Table 8.8-15: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.109227	0.313816	0.083403
	Kremsmünster	0.074289	0.257271	0.076350



	Okehampton	0.092854	0.290017	0.067354
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**Table 8.8-16: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.042508	0.231217	0.029728
	Thiva	0.010419	0.134092	0.029416

**Table 8.8-17: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.023106	0.135696	0.011980
	Thiva	0.005034	0.049212	0.012999

**Table 8.8-18: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.015827	0.087827	0.008015
	Thiva	0.003205	0.039168	0.008019

**Table 8.8-19: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.199732	0.563056	0.058041
	Okehampton	0.198380	0.650225	0.175873
	Porto	0.065724	0.261030	0.029599

**Table 8.8-20: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring	Jokioinen	0.101380	0.319772	0.033406

oilseed rape	Okehampton	0.098217	0.323711	0.085394
	Porto	0.030882	0.145867	0.011870

**Table 8.8-21: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.071874	0.217591	0.022705
	Okehampton	0.062587	0.211288	0.047845
	Porto	0.020182	0.096302	0.008538

**Table 8.8-22: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.02036	0.1287	0.02823
	Hamburg	0.1021	0.2774	0.06067
	Kremsmünster	0.09316	0.2332	0.05844
	Okehampton	0.09268	0.2427	0.04457
	Piacenza	0.02796	0.09860	0.02015
	Porto	0.01451	0.08026	0.004547

**Table 8.8-23: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.010158	0.04892	0.00817
	Hamburg	0.03551	0.09353	0.01875
	Kremsmünster	0.03342	0.08273	0.01832
	Okehampton	0.03050	0.08250	0.01267
	Piacenza	0.01119	0.03840	0.006191
	Porto	0.005291	0.02682	0.001497

**Table 8.8-24: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)
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		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.110048	0.481706	0.130651
	Hamburg	0.257901	0.790995	0.208492
	Jokioinen	0.227799	0.682800	0.071347
	Kremsmünster	0.210085	0.709273	0.216107
	Porto	0.037299	0.201724	0.028962
	Sevilla	0.003419	0.042103	0.006765
	Thiva	0.118448	0.427122	0.165314

**Table 8.8-25: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.060705	0.252630	0.063581
	Hamburg	0.141820	0.414480	0.102994
	Jokioinen	0.123881	0.381457	0.041864
	Kremsmünster	0.094126	0.340376	0.127312
	Porto	0.017905	0.102790	0.012012
	Sevilla	0.002195	0.026435	0.002785
	Thiva	0.046952	0.199117	0.069628

**Table 8.8-26: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.044421	0.189383	0.043610
	Hamburg	0.092235	0.265832	0.062642
	Jokioinen	0.090910	0.263641	0.028004
	Kremsmünster	0.065572	0.229267	0.064138
	Porto	0.012419	0.074181	0.006928
	Sevilla	0.001131	0.015676	0.001962
	Thiva	0.032203	0.140516	0.041190

**Table 8.8-26: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)
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		Imazamox	CL 312622	CL 354825
	Okehampton	0.197007	0.695746	0.185281

**Table 8.8-27: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Okehampton	0.104007	0.352391	0.091455

**Table 8.8-28: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Okehampton	0.067513	0.237471	0.051460

**Table 8.8-29: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.221992	0.731150	0.293107
	Hamburg	0.534796	1.359452	0.481232
	Jokioinen	0.311252	0.778224	0.081885
	Kremsmünster	0.252010	0.696202	0.269469
	Okehampton	0.376663	0.754852	0.263334
	Piacenza	0.188053	0.590536	0.440079
	Porto	0.290317	0.384105	0.103274
	Sevilla	0.062635	0.355100	0.171919
	Thiva	0.052807	0.347193	0.222289

**Table 8.8-30: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.122401	0.364343	0.123367
	Hamburg	0.285505	0.709005	0.202977
	Jokioinen	0.173077	0.454125	0.049616

	Kremsmünster	0.147310	0.373183	0.118300
	Okehampton	0.197129	0.383238	0.116351
	Piacenza	0.114964	0.378693	0.250442
	Porto	0.156491	0.192942	0.043893
	Sevilla	0.035730	0.206752	0.077326
	Thiva	0.028783	0.180114	0.099250

**Table 8.8-31: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.082527	0.258227	0.072728
	Hamburg	0.205165	0.458881	0.125620
	Jokioinen	0.123492	0.320951	0.034766
	Kremsmünster	0.094426	0.246222	0.086816
	Okehampton	0.142361	0.275104	0.075311
	Piacenza	0.073435	0.320419	0.163799
	Porto	0.112753	0.139390	0.028825
	Sevilla	0.017545	0.126452	0.041786
	Thiva	0.022019	0.127555	0.051062

**Table 8.8-32: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.123435	0.559267	0.180304
	Hamburg	0.398919	1.055457	0.289267
	Kremsmünster	0.235130	0.804882	0.260361
	Okehampton	0.335658	0.909472	0.226136
	Piacenza	0.064161	0.380161	0.148568
	Porto	0.029859	0.206911	0.016901
	Sevilla	0.002921	0.036808	0.006221
	Thiva	0.035652	0.292113	0.112939

**Table 8.8-33: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
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		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.077735	0.315676	0.089274
	Hamburg	0.203563	0.562711	0.145722
	Kremsmünster	0.117270	0.405035	0.142025
	Okehampton	0.173397	0.485237	0.110133
	Piacenza	0.042214	0.239979	0.055643
	Porto	0.013892	0.095850	0.007559
	Sevilla	0.001649	0.022592	0.002777
	Thiva	0.018284	0.137778	0.048752

**Table 8.8-34: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.054531	0.212358	0.055282
	Hamburg	0.127437	0.342307	0.086938
	Kremsmünster	0.083497	0.275534	0.075750
	Okehampton	0.118584	0.347407	0.064767
	Piacenza	0.023980	0.144602	0.043477
	Porto	0.008460	0.061415	0.004622
	Sevilla	0.001077	0.015213	0.002448
	Thiva	0.012351	0.105022	0.031485

## FOCUS PEARL Tier 2 – PUF 0.5 for imazamox and metabolite CL 312622

**Table 8.8-38: ———— PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Hamburg	0.127437	0.342307	0.086938
	Kremsmünster	0.083497	0.275534	0.075750
	Okehampton	0.118584	0.347407	0.064767

**Table 8.8-39: ———— PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.024 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Hamburg	0.032865	0.094668	0.021633
	Kremsmünster	0.023384	0.086179	0.019511
	Okehampton	0.023836	0.081837	0.014001

**Table 8.8-41: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Porto	0.008460	0.061415	0.004622
	Thiva	0.012351	0.105022	0.031485

**Table 8.8-42: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.024 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Porto	0.003943	0.023121	0.001314
	Thiva	0.000597	0.008235	0.001121

**Table 8.8-44: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.030671	0.133806	0.028051
	Hamburg	0.066881	0.196245	0.042956
	Jokioinen	0.068538	0.202476	0.019923
	Kremsmünster	0.049035	0.173179	0.045747
	Porto	0.009133	0.048084	0.003870
	Sevilla	0.000397	0.006167	0.000727
	Thiva	0.019346	0.088864	0.022638

**Table 8.8-45: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.030 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.011728	0.06822	0.01020
	Hamburg	0.03751	0.09940	0.01771
	Jokioinen	0.07049	0.1712	0.01376
	Kremsmünster	0.02779	0.08950	0.01650
	Porto	0.009047	0.04189	0.002447
	Sevilla	0.000381	0.005158	0.000583
	Thiva	0.01852	0.07499	0.01569



**Table 8.8-47: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Jokioinen	0.059002	0.171876	0.016287
	Okehampton	0.043078	0.149667	0.031401
	Porto	0.013251	0.066144	0.005384

**Table 8.8-48: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.032 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Jokioinen	0.05807	0.1438	0.01134
	Okehampton	0.02978	0.09519	0.01477
	Porto	0.009315	0.04311	0.002193

**Table 8.8-51: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.072479	0.181998	0.082252
	Hamburg	0.310616	0.412876	0.137252
	Kremsmünster	0.135958	0.285990	0.094747
	Okehampton	0.165618	0.305106	0.070052
	Piacenza	0.243782	0.314270	0.122934
	Porto	0.154836	0.244548	0.031123

**Table 8.8-53: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.032283	0.133947	0.030973
	Hamburg	0.083098	0.218028	0.051994
	Kremsmünster	0.058650	0.204000	0.051868
	Okehampton	0.074664	0.230042	0.040413

	Piacenza	0.013929	0.086409	0.024162
	Porto	0.004137	0.032730	0.002005
	Sevilla	0.000128	0.002559	0.000383
	Thiva	0.004561	0.043299	0.009482

**Table 8.8-54: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.024 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.011315	0.053817	0.010664
	Hamburg	0.030571	0.093961	0.021927
	Kremsmünster	0.022782	0.089072	0.021016
	Okehampton	0.028755	0.100793	0.016453
	Piacenza	0.009593	0.047654	0.011142
	Porto	0.002712	0.020165	0.001060
	Sevilla	0.000092	0.001666	0.000365
	Thiva	0.001329	0.015305	0.002553

**Table 8.8-55: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.052410	0.164694	0.046632
	Hamburg	0.136002	0.301901	0.082490
	Jokioinen	0.084027	0.204942	0.022248
	Kremsmünster	0.059676	0.181885	0.061361
	Okehampton	0.102768	0.194393	0.056654
	Piacenza	0.041136	0.167181	0.092429
	Porto	0.096903	0.109065	0.021767
	Sevilla	0.006025	0.048769	0.016345
	Thiva	0.009514	0.057266	0.025066

**Table 8.8-56: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.015 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.01780	0.05180	0.008578
	Hamburg	0.04546	0.095327	0.01887

	Kreismünster	0.02034	0.05744	0.01166
	Okehampton	0.03469	0.06127	0.01140
	Piacenza	0.01381	0.05375	0.01880
	Porto	0.03335	0.03370	0.003953

**Table 8.8-27: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.032 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
PEAS	Châteaudun	0.007927	0.037778	0.005847
	Hamburg	0.04008	0.09960	0.02067
	Okehampton	0.02374	0.08594	0.01205

**Table 8.8-62: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.032 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.02691	0.09945	0.02375
	Sevilla	0.0005	0.006132	0.0007

**Table 8.8-66: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.030 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.02817	0.09913	0.01472

**Table 8.8-67: PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Tobacco	Piacenza	0.01041	0.05477	0.01385
	Thivia	0.0004	0.00568	0.0006

## FOCUS PELMO 6.6.4 – TIER 1 – PUF 0

**Table 8.8-28: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.001	0.006	0.002
	Hamburg	0.008	0.070	0.032
	Jokioinen	0.031	0.132	0.012
	Okehampton	0.018	0.130	0.067

**Table 8.8-29: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	<0.001	0.003	0.001
	Hamburg	0.003	0.022	0.013
	Jokioinen	0.013	0.055	0.005
	Okehampton	0.007	0.047	0.021

**Table 8.8-30: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.024	0.118	0.171
	Sevilla	<0.001	0.002	<0.001

**Table 8.8-31: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.011	0.055	0.052
	Sevilla	<0.001	0.001	<0.001

**Table 8.8-32: PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean	Piacenza	0.003	0.024	0.025

**Table 8.8-33: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.007	0.071	0.033
	Kremsmünster	0.018	0.123	0.059
	Okehampton	0.038	0.177	0.175

**Table 8.8-34: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.003	0.023	0.013
	Kremsmünster	0.006	0.044	0.020
	Okehampton	0.015	0.073	0.056

**Table 8.8-35: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
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		Imazamox	CL 312622	CL 354825
Beans	Porto	0.015	0.044	0.033
	Thiva	<0.001	0.002	<0.001

**Table 8.8-36::** PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.005	0.015	0.008
	Thiva	<0.001	0.001	<0.001

**Table 8.8-37:** PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.003	0.034	0.011
	Hamburg	0.008	0.070	0.032
	Jokioinen	0.027	0.128	0.012
	Kremsmünster	0.018	0.117	0.053
	Porto	0.020	0.047	0.040
	Sevilla	<0.001	0.001	<0.001
	Thiva	0.004	0.043	0.011

**Table 8.8-38:** PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.001	0.014	0.004
	Hamburg	0.003	0.023	0.011
	Jokioinen	0.012	0.049	0.005
	Kremsmünster	0.005	0.028	0.019
	Porto	0.007	0.015	0.009
	Sevilla	<0.001	<0.001	<0.001
	Thiva	0.001	0.008	0.003

**Table 8.8-39: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.011	0.065	0.035

**Table 8.8-64: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.147	0.383	0.082

**Table 8.8-40:: PEC<sub>gw</sub> for imazamox and its metabolites on summer oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Summer oilseed rape	Jokioinen	0.026	0.118	0.011
	Okehampton	0.029	0.193	0.143
	Porto	0.015	0.073	0.049

**Table 8.8-41: PEC<sub>gw</sub> for imazamox and its metabolites on summer oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 year**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Summer oilseed rape	Jokioinen	0.010	0.048	0.004
	Okehampton	0.012	0.075	0.042
	Porto	0.005	0.030	0.011

**Table 8.8-42: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape				



	Châteaudun	0.002	0.016	0.003
	Hamburg	0.003	0.024	0.016
	Kremsmünster	0.009	0.050	0.036
	Okehampton	0.013	0.073	0.043
	Piacenza	0.003	0.017	0.018
	Porto	0.002	0.017	0.004

**Table 8.8-43: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop: Winter oilseed rape	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Châteaudun	0.001	0.006	0.001
	Hamburg	0.003	0.024	0.016
	Kremsmünster	0.009	0.050	0.036
	Okehampton	0.013	0.073	0.043
	Piacenza	0.003	0.017	0.018
	Porto	0.002	0.017	0.004

**Table 8.8-44: PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Tobacco	Piacenza	0.004	0.045	0.060
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-45: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.033	0.226	0.362
	Hamburg	0.015	0.113	0.045
	Jokioinen	0.037	0.160	0.016
	Kremsmünster	0.034	0.199	0.128
	Okehampton	0.102	0.439	0.423
	Piacenza	0.107	0.306	0.569
	Porto	0.031	0.108	0.128

	Sevilla	0.023	0.051	0.016
	Thiva	0.002	0.030	0.058

**Table 8.8-46: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.014	0.083	0.107
	Hamburg	0.005	0.038	0.021
	Jokioinen	0.009	0.049	0.010
	Kremsmünster	0.012	0.071	0.044
	Okehampton	0.039	0.163	0.128
	Piacenza	0.040	0.089	0.156
	Porto	0.011	0.041	0.032
	Sevilla	0.002	0.015	0.002
	Thiva	0.001	0.011	0.010

### FOCUS PELMO 6.6.4 Tier 2 – PUF 0.5 for parent: imazamox and metabolite CL 312622

**Table 8.8-47: ———— PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	<0.001	0.001	<0.001
	Hamburg	0.001	0.010	0.005
	Jokioinen	0.008	0.037	0.003
	Okehampton	0.004	0.027	0.010

**Table 8.8-48: ———— PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.012	0.059	0.075
	Sevilla	<0.001	<0.001	<0.001

**Table 8.8-49: ———— PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean	Piacenza	0.002	0.017	0.014

**Table 8.8-50: ———— PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.011	0.011	0.005
	Kremsmünster	0.024	0.024	0.008
	Okehampton	0.058	0.058	0.042

**Table 8.8-51: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (vegetables)	Porto	0.005	0.012	0.006
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-52: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.001	0.008	0.002
	Hamburg	0.001	0.011	0.005
	Jokioinen	0.007	0.031	0.003
	Kremsmünster	0.003	0.024	0.010
	Porto	0.005	0.012	0.007
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	0.004	0.001

**Table 8.8-53: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.001	0.007	0.002
	Hamburg	0.002	0.014	0.008
	Kremsmünster	0.004	0.029	0.012
	Okehampton	0.009	0.052	0.015
	Piacenza	0.001	0.011	0.011
	Porto	<0.001	0.002	<0.001
	Sevilla	<0.001	<0.001	<0.001
	Thiva	<0.001	<0.001	<0.001

**Table 8.8-54: ——— PEC<sub>gw</sub> for imazamox and its metabolites on cotton (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cotton	Sevilla	0.005	0.026	0.002
	Thiva	0.002	0.017	0.002

**Table 8.8-55: ——— PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.006	0.039	0.020

**Table 8.8-56: ——— PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.006	0.032	0.003
	Okehampton	0.007	0.042	0.023
	Porto	0.004	0.020	0.007

**Table 8.8-57: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	<0.001	0.004	0.001
	Hamburg	0.002	0.013	0.008
	Kremsmünster	0.006	0.030	0.019
	Okehampton	0.008	0.047	0.023
	Piacenza	0.003	0.013	0.012
	Porto	0.001	0.011	0.003

**Table 8.8-58: PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Tobacco	Piacenza	0.002	0.021	0.027
	Thiva	<0.001	0.003	<0.001

**Table 8.8-59: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3 years with PUF 0.5 for parent and metabolite 1**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.008	0.047	0.060
	Hamburg	0.003	0.024	0.011
	Jokioinen	0.006	0.033	0.006
	Kremsmünster	0.007	0.044	0.025
	Okehampton	0.025	0.102	0.081
	Piacenza	0.029	0.057	0.097
	Porto	0.008	0.028	0.021
	Sevilla	0.001	0.007	0.001
	Thiva	<0.001	0.005	0.003

**FOCUS PEARL Tier 1 – PUF 0**

**Table 8.8-60: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.051949	0.209732	0.057129
	Hamburg	0.382570	0.984656	0.264077
	Jokioinen	0.284601	0.697057	0.073173
	Okehampton	0.183992	0.623668	0.153835

**Table 8.8-5: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.016472	0.076490	0.019028
	Hamburg	0.117368	0.301351	0.077933
	Jokioinen	0.105757	0.269001	0.029060
	Okehampton	0.065706	0.219106	0.044022

**Table 8.8-6: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.122761	0.559394	0.239193
	Sevilla	0.007693	0.074247	0.011676

**Table 8.8-7: PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean (Central Zone)	Piacenza	0.050155	0.270389	0.074068

**Table 8.8-8: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.424570	1.071965	0.287616
	Kremsmünster	0.246847	0.812249	0.268529
	Okehampton	0.249538	0.854545	0.244615

**Table 8.8-9: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop:	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.129754	0.329955	0.085662
	Kremsmünster	0.088226	0.269133	0.080044
	Okehampton	0.104860	0.304733	0.070776

**Table 8.8-10: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.049363	0.244033	0.031915
	Thiva	0.011794	0.139691	0.031035



**Table 8.8-11: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans	Porto	0.018255	0.092494	0.008694
	Thiva	0.003744	0.040990	0.008512

**Table 8.8-12: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.229026	0.592996	0.060644
	Okehampton	0.225385	0.677597	0.185797
	Porto	0.075999	0.277664	0.032421

**Table 8.8-13: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.087319	0.227264	0.023933
	Okehampton	0.071282	0.221308	0.050574
	Porto	0.023401	0.102998	0.009299

**Table 8.8-14: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.103993	0.477001	0.154126
	Hamburg	0.393417	0.962677	0.306581
	Kremsmünster	0.285050	0.719660	0.302878
	Okehampton	0.367726	0.937693	0.291340
	Piacenza	0.093775	0.331779	0.132957
	Porto	0.084910	0.322441	0.051734

**Table 8.8-15: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.038765	0.161297	0.048170
	Hamburg	0.148650	0.361682	0.094945
	Kremsmünster	0.104655	0.257412	0.097201
	Okehampton	0.123940	0.296651	0.085184
	Piacenza	0.045610	0.150531	0.039975
	Porto	0.031914	0.121777	0.013002

**Table 8.8-16: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.127590	0.508314	0.139483
	Hamburg	0.307206	0.828094	0.215250
	Jokioinen	0.273303	0.704555	0.074165
	Kremsmünster	0.241804	0.738935	0.230588
	Porto	0.044889	0.212141	0.031314
	Sevilla	0.003952	0.043787	0.007124
	Thiva	0.127365	0.437005	0.168259

**Table 8.8-17: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.052552	0.200852	0.046196
	Hamburg	0.109613	0.280172	0.065158
	Jokioinen	0.112148	0.273674	0.029150
	Kremsmünster	0.078007	0.246088	0.068239
	Porto	0.014548	0.078403	0.007589
	Sevilla	0.001329	0.016249	0.002049
	Thiva	0.037605	0.145390	0.042157

**Table 8.8-18: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.223703	0.733556	0.194938

**Table 8.8-19: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.326395	0.967824	0.411968
	Hamburg	0.802070	1.832352	0.673037
	Jokioinen	0.119605	1.052129	0.119605
	Kremsmünster	0.372894	0.942275	0.384082
	Okehampton	0.552126	0.978836	0.363758
	Piacenza	0.275040	0.835895	0.620250
	Porto	0.434385	0.485843	0.142169
	Sevilla	0.093592	0.462510	0.243313
	Thiva	0.076361	0.461385	0.321058

**Table 8.8-20: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.146247	0.584242	0.187633
	Hamburg	0.471347	1.085541	0.295564
	Kremsmünster	0.267792	0.843556	0.273607
	Okehampton	0.377631	0.942044	0.232055
	Piacenza	0.074311	0.399467	0.155998
	Porto	0.033801	0.215585	0.017593
	Sevilla	0.003407	0.037718	0.006362
	Thiva	0.041383	0.303224	0.118973

**Table 8.8-21: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.064320	0.222990	0.057460
	Hamburg	0.149955	0.357780	0.089160
	Kremsmünster	0.095036	0.287829	0.079405
	Okehampton	0.133617	0.356907	0.066749
	Piacenza	0.027417	0.149701	0.044718
	Porto	0.010314	0.062650	0.004891
	Sevilla	0.001232	0.015499	0.002507
	Thiva	0.014389	0.109940	0.033619

**Table 8.8-22: PEC<sub>gw</sub> for imazamox and its metabolites on cotton (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Sevilla	0.024402	0.182250	0.042263
	Thiva	0.021012	0.127615	0.048123

**Table 8.8-23: PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Piacenza	0.041794	0.238900	0.078402
	Thiva	0.005146	0.071071	0.014535

**FOCUS PEARL Tier 2 – PUF 0.5 for imazamox and metabolite CL 312622**

**Table 8.8-24: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Hamburg	0.252488	0.652380	0.166209
	Kremsmünster	0.154114	0.545548	0.163366
	Okehampton	0.139804	0.468876	0.123478

**Table 8.8-25: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Hamburg	0.079906	0.200228	0.050447
	Kremsmünster	0.055780	0.180203	0.049660
	Okehampton	0.056078	0.168518	0.037128

**Table 8.8-26: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Porto	0.028731	0.144358	0.012746
	Thiva	0.004663	0.058568	0.010250

**Table 8.8-27: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Porto	0.009544	0.049685	0.004109
	Thiva	0.001393	0.017258	0.002759

**Table 8.8-28: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.087210	0.355111	0.086430
	Hamburg	0.208926	0.570512	0.143287
	Jokioinen	0.207313	0.543457	0.052094
	Kremsmünster	0.178179	0.569203	0.159899
	Porto	0.031556	0.149206	0.016895
	Sevilla	0.001539	0.016811	0.002634
	Thiva	0.073772	0.266894	0.088054

**Table 8.8-29: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.035617	0.140161	0.029144
	Hamburg	0.077506	0.204019	0.043927
	Jokioinen	0.084109	0.206623	0.020354
	Kremsmünster	0.057456	0.183709	0.048199
	Porto	0.010854	0.050398	0.004260
	Sevilla	0.000451	0.006225	0.000766
	Thiva	0.022124	0.090508	0.022628

**Table 8.8-30: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Jokioinen	0.186495	0.463559	0.043478
	Okehampton	0.150671	0.468297	0.117388
	Porto	0.050117	0.187868	0.018881

**Table 8.8-31: PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Jokioinen	0.069448	0.173701	0.016890
	Okehampton	0.048117	0.154029	0.032411
	Porto	0.015162	0.069898	0.005815

**Table 8.8-32: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.079606	0.346046	0.098702
	Hamburg	0.293083	0.718821	0.222791
	Kremsmünster	0.222585	0.566952	0.229793
	Okehampton	0.269177	0.704703	0.217626
	Piacenza	0.074342	0.252855	0.094961
	Porto	0.060841	0.236851	0.032822

**Table 8.8-33: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PEARL 5.5.5); dosage 0.040 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.024674	0.100203	0.024269
	Hamburg	0.091127	0.238910	0.056415
	Kremsmünster	0.065954	0.166461	0.057619
	Okehampton	0.073670	0.178600	0.049023
	Piacenza	0.029843	0.096516	0.023384
	Porto	0.019386	0.075963	0.006594



**Table 8.8-34: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.082997	0.356843	0.100640
	Hamburg	0.289490	0.688838	0.174699
	Kremsmünster	0.189964	0.597274	0.181445
	Okehampton	0.230228	0.622266	0.139365
	Piacenza	0.038839	0.220065	0.081997
	Porto	0.014861	0.111714	0.006932
	Sevilla	0.000538	0.006723	0.000905
	Thiva	0.014869	0.119787	0.034709

**Table 8.8-35: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.037178	0.138385	0.031647
	Hamburg	0.095251	0.221905	0.052002
	Kremsmünster	0.065157	0.210312	0.053296
	Okehampton	0.081803	0.231687	0.040564
	Piacenza	0.015496	0.087987	0.024427
	Porto	0.004582	0.032814	0.002055
	Sevilla	0.000131	0.002442	0.000378
	Thiva	0.005078	0.044010	0.009676

**Table 8.8-36: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PEARL 5.5.5); dosage 0.03 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.036597	0.105970	0.026006
	Hamburg	0.093480	0.193367	0.048413
	Jokioinen	0.061045	0.132400	0.012832
	Kremsmünster	0.042149	0.117657	0.035208
	Okehampton	0.071662	0.124122	0.032449
	Piacenza	0.028444	0.109711	0.053524
	Porto	0.069868	0.068243	0.012018
	Sevilla	0.004015	0.030661	0.008842
	Thiva	0.006564	0.036990	0.013387

**Table 8.8-37: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.032737	0.138232	0.033499
	Hamburg	0.220286	0.583451	0.146161
	Jokioinen	0.229023	0.529746	0.050128
	Okehampton	0.097618	0.362580	0.077925

**Table 8.8-38: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 3 years with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.010713	0.048214	0.010883
	Hamburg	0.070104	0.173949	0.043856
	Jokioinen	0.083486	0.203498	0.019728
	Okehampton	0.034336	0.123710	0.022795

**Table 8.8-39: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.067452	0.295454	0.131944
	Sevilla	0.002228	0.026107	0.003554

**Table 8.8-40:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.040 kg as/ha per 1 year with PUF 0.5

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.111706	0.398104	0.088097

**Table 8.8-41:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 1 year with PUF 0.5

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.135192	0.480876	0.114320

**Table 8.8-42:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PEARL 5.5.5); dosage 0.048 kg as/ha per 2 years with PUF 0.5

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.069710	0.244534	0.057781

### FOCUS PELMO 6.6.4 – TIER 1 – PUF 0

**Table 8.8-43: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4)dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.034	0.167	0.047
	Hamburg	0.230	0.811	0.227
	Jokioinen	0.396	1.024	0.082
	Okehampton	0.318	0.935	0.221

**Table 8.8-44: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.013	0.086	0.019
	Hamburg	0.122	0.409	0.115
	Jokioinen	0.231	0.519	0.050
	Okehampton	0.167	0.478	0.108

**Table 8.8-45: PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> years**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.012	0.064	0.016
	Hamburg	0.089	0.300	0.082
	Jokioinen	0.168	0.367	0.033
	Okehampton	0.114	0.322	0.065

**Table 8.8-46: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.286	0.808	0.504
	Sevilla	0.016	0.105	0.008

**Table 8.8-47: PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.149	0.460	0.223
	Sevilla	0.010	0.060	0.004

**Table 8.8-48:** PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3<sup>rd</sup> years

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.113	0.302	0.140
	Sevilla	0.006	0.036	0.002

**Table 8.8-49:** PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean	Piacenza	0.075	0.344	0.110

**Table 8.8-50:** PEC<sub>gw</sub> for imazamox and its metabolites on soybean (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Soybean	Piacenza	0.042	0.209	0.047

**Table 8.8-51:** PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.223	0.818	0.223
	Kremsmünster	0.343	1.019	0.300
	Okehampton	0.361	1.138	0.327

**Table 8.8-52: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.128	0.407	0.112
	Kremsmünster	0.153	0.505	0.174
	Okehampton	0.218	0.573	0.147

**Table 8.8-53: PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.090	0.302	0.079
	Kremsmünster	0.115	0.351	0.094
	Okehampton	0.142	0.381	0.095

**Table 8.8-54: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (vegetables)	Porto	0.125	0.429	0.074
	Thiva	0.012	0.142	0.029

**Table 8.8-55: PEC<sub>gw</sub> for imazamox and its metabolites on beans (vegetables) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (vegetables)	Porto	0.053	0.211	0.029
	Thiva	0.005	0.052	0.013

**Table 8.8-56: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.121	0.546	0.173
	Hamburg	0.225	0.803	0.234
	Jokioinen	0.444	0.966	0.084
	Kremsmünster	0.312	0.904	0.263
	Porto	0.137	0.398	0.085
	Sevilla	0.007	0.059	0.005
	Thiva	0.126	0.469	0.179

**Table 8.8-57: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.065	0.282	0.082
	Hamburg	0.124	0.419	0.114
	Jokioinen	0.226	0.488	0.051
	Kremsmünster	0.139	0.467	0.161
	Porto	0.055	0.183	0.034

	Sevilla	0.004	0.036	0.002
	Thiva	0.050	0.182	0.075

**Table 8.8-58: PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.050	0.201	0.057
	Hamburg	0.087	0.270	0.074
	Jokioinen	0.166	0.342	0.032
	Kremsmünster	0.098	0.308	0.080
	Porto	0.049	0.129	0.020
	Sevilla	0.002	0.020	0.001
	Thiva	0.036	0.127	0.044

**Table 8.8-59: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.137	0.570	0.205
	Hamburg	0.308	0.977	0.257
	Kremsmünster	0.370	1.105	0.317
	Okehampton	0.472	1.109	0.243
	Piacenza	0.131	0.577	0.243
	Porto	0.043	0.250	0.020
	Sevilla	0.006	0.048	0.003
	Thiva	0.031	0.267	0.073

**Table 8.8-60: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.058	0.289	0.093
	Hamburg	0.172	0.501	0.129



	Kremsmünster	0.188	0.569	0.184
	Okehampton	0.241	0.625	0.120
	Piacenza	0.089	0.360	0.099
	Porto	0.020	0.129	0.008
	Sevilla	0.004	0.031	0.002
	Thiva	0.013	0.112	0.031

**Table 8.8-61: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.050	0.210	0.067
	Hamburg	0.119	0.349	0.088
	Kremsmünster	0.132	0.395	0.096
	Okehampton	0.192	0.461	0.073
	Piacenza	0.055	0.230	0.070
	Porto	0.012	0.085	0.005
	Sevilla	0.002	0.016	0.001
	Thiva	0.010	0.094	0.017

**Table 8.8-62: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.386	1.043	0.274

**Table 8.8-63: PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.208	0.550	0.129

**Table 8.8-65: PEC<sub>gw</sub> for imazamox and its metabolites on summer oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Summer oilseed rape	Jokioinen	0.404	0.950	0.077
	Okehampton	0.396	1.131	0.307
	Porto	0.195	0.587	0.113

**Table 8.8-66: PEC<sub>gw</sub> for imazamox and its metabolites on summer oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Summer oilseed rape	Jokioinen	0.212	0.478	0.047
	Okehampton	0.228	0.563	0.141
	Porto	0.093	0.332	0.040

**Table 8.8-67: PEC<sub>gw</sub> for imazamox and its metabolites on summer oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
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Summer oilseed rape		80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
	Jokioinen	0.162	0.331	0.031
	Okehampton	0.155	0.400	0.089
	Porto	0.064	0.222	0.026

**Table 8.8-68:** PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Tobacco	Piacenza	0.133	0.567	0.241
	Thiva	0.004	0.061	0.011

**Table 8.8-69:** PEC<sub>gw</sub> for imazamox and its metabolites on tobacco (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Tobacco	Piacenza	0.076	0.308	0.096
	Thiva	0.002	0.020	0.005

**Table 8.8-70:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.519	1.599	0.916
	Hamburg	0.329	1.022	0.251
	Jokioinen	0.518	1.083	0.080
	Kremsmünster	0.455	1.405	0.455
	Okehampton	0.829	1.867	0.544
	Piacenza	0.606	1.276	0.987
	Porto	0.257	0.760	0.212
	Sevilla	0.183	0.883	0.184
	Thiva	0.114	0.698	0.478

**Table 8.8-71:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
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		<b>Imazamox</b>	<b>CL 312622</b>	<b>CL 354825</b>
<b>Apples</b>	<b>Châteaudun</b>	0.276	0.963	0.465
	<b>Hamburg</b>	0.158	0.548	0.141
	<b>Jokioinen</b>	0.259	0.629	0.054
	<b>Kremsmünster</b>	0.227	0.684	0.258
	<b>Okehampton</b>	0.432	0.927	0.249
	<b>Piacenza</b>	0.308	0.637	0.422
	<b>Porto</b>	0.124	0.334	0.085
	<b>Sevilla</b>	0.115	0.508	0.067
	<b>Thiva</b>	0.061	0.368	0.241

**Table 8.8-72: PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

<b>Crop</b>	<b>Scenario</b>	<b>80<sup>th</sup> Percentile PEC<sub>gw</sub> at 1 m Soil Depth (µg/L)</b>		
		<b>Imazamox</b>	<b>CL 312622</b>	<b>CL 354825</b>
<b>Apples</b>	<b>Châteaudun</b>	0.197	0.574	0.266
	<b>Hamburg</b>	0.108	0.322	0.089
	<b>Jokioinen</b>	0.158	0.420	0.043
	<b>Kremsmünster</b>	0.172	0.461	0.149
	<b>Okehampton</b>	0.294	0.630	0.154
	<b>Piacenza</b>	0.212	0.396	0.253
	<b>Porto</b>	0.089	0.239	0.052
	<b>Sevilla</b>	0.059	0.292	0.036
	<b>Thiva</b>	0.045	0.296	0.110

**Table 8.8-73: PEC<sub>gw</sub> for imazamox and its metabolites on cotton (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cotton	Sevilla	0.062	0.280	0.022
	Thiva	0.023	0.143	0.034

**Table 8.8-74: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.100	0.420	0.100
	Hamburg	0.412	1.145	0.300
	Kremsmünster	0.359	1.054	0.396
	Okehampton	0.633	1.467	0.438
	Piacenza	0.178	0.550	0.258
	Porto	0.196	0.647	0.076

**Table 8.8-75: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.044	0.233	0.052
	Hamburg	0.292	0.656	0.146
	Kremsmünster	0.185	0.516	0.188
	Okehampton	0.297	0.672	0.196
	Piacenza	0.100	0.321	0.120
	Porto	0.105	0.336	0.044

**Table 8.8-76: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.037	0.170	0.040
	Hamburg	0.179	0.449	0.099
	Kremsmünster	0.127	0.360	0.124
	Okehampton	0.200	0.467	0.119
	Piacenza	0.067	0.224	0.075
	Porto	0.074	0.223	0.020

**FOCUS PELMO 6.6.4 Tier 2 – PUF 0.5 for parent: imazamox and metabolite CL 312622**

**Table 8.8-77:** PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.020	0.087	0.023
	Hamburg	0.085	0.346	0.077
	Jokioinen	0.257	0.630	0.045
	Okehampton	0.164	0.511	0.103

**Table 8.8-78:** PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.007	0.049	0.009
	Hamburg	0.045	0.166	0.040
	Jokioinen	0.141	0.322	0.028
	Okehampton	0.086	0.274	0.050

**Table 8.8-79:** PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.007	0.038	0.007
	Hamburg	0.035	0.132	0.029
	Jokioinen	0.114	0.226	0.018
	Okehampton	0.057	0.179	0.030

**Table 8.8-80:** PEC<sub>gw</sub> for imazamox and its metabolites on peas (with FOCUS PELMO 6.6.4); dosage 0.040 kg as/ha per every 3<sup>rd</sup> year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Peas	Châteaudun	0.006	0.031	0.005

	Hamburg	0.029	0.109	0.024
	Jokioinen	0.093	0.187	0.014
	Okehampton	0.047	0.148	0.023

**Table 8.8-81:** PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.132	0.380	0.185
	Sevilla	0.003	0.021	0.001



**Table 8.8-82:** PEC<sub>gw</sub> for imazamox and its metabolites on sunflower (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Sunflower	Piacenza	0.067	0.205	0.087
	Sevilla	0.002	0.015	0.001

**Table 8.8-83:** PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.083	0.357	0.079
	Kremsmünster	0.169	0.527	0.118
	Okehampton	0.247	0.715	0.187

**Table 8.8-84:** PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.047	0.165	0.039
	Kremsmünster	0.075	0.255	0.072
	Okehampton	0.144	0.389	0.083

**Table 8.8-85:** PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.038	0.135	0.029
	Kremsmünster	0.056	0.177	0.039
	Okehampton	0.108	0.285	0.060

**Table 8.8-86:** PEC<sub>gw</sub> for imazamox and its metabolites on beans (field) (with FOCUS PELMO 6.6.4); dosage 0.044 kg as/ha per every 3<sup>rd</sup> year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Beans (field)	Hamburg	0.034	0.123	0.026
	Kremsmünster	0.052	0.162	0.035
	Okehampton	0.099	0.260	0.053

**Table 8.8-87:** PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.066	0.290	0.079
	Hamburg	0.098	0.375	0.092
	Jokioinen	0.259	0.565	0.044
	Kremsmünster	0.187	0.559	0.123
	Porto	0.113	0.245	0.053
	Sevilla	0.002	0.018	0.002
	Thiva	0.058	0.236	0.070

**Table 8.8-88:** PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.032	0.148	0.036
	Hamburg	0.051	0.175	0.044
	Jokioinen	0.127	0.290	0.027
	Kremsmünster	0.077	0.255	0.080
	Porto	0.042	0.122	0.023
	Sevilla	0.001	0.009	0.001
	Thiva	0.022	0.087	0.029

**Table 8.8-89:** PEC<sub>gw</sub> for imazamox and its metabolites on cabbage (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Cabbage	Châteaudun	0.026	0.108	0.026
	Hamburg	0.038	0.124	0.031
	Jokioinen	0.096	0.192	0.017
	Kremsmünster	0.057	0.178	0.039
	Porto	0.035	0.095	0.014
	Sevilla	<0.001	0.005	<0.001
	Thiva	0.016	0.063	0.017

**Table 8.8-90:** PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.060	0.266	0.078
	Hamburg	0.112	0.401	0.097
	Kremsmünster	0.181	0.532	0.129
	Okehampton	0.240	0.646	0.116
	Piacenza	0.048	0.249	0.086
	Porto	0.021	0.107	0.006
	Sevilla	0.001	0.010	0.001
	Thiva	0.008	0.079	0.011

**Table 8.8-91:** PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.025	0.124	0.034
	Hamburg	0.059	0.182	0.049
	Kremsmünster	0.091	0.291	0.081
	Okehampton	0.136	0.357	0.059
	Piacenza	0.038	0.159	0.034

	Porto	0.009	0.049	0.002
	Sevilla	0.001	0.006	<0.001
	Thiva	0.003	0.029	0.005

**Table 8.8-92: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.025	0.108	0.026
	Hamburg	0.045	0.143	0.034
	Kremsmünster	0.068	0.204	0.040
	Okehampton	0.101	0.253	0.036
	Piacenza	0.024	0.107	0.028
	Porto	0.005	0.036	0.002
	Sevilla	<0.001	0.003	<0.001
	Thiva	0.002	0.025	0.003

**Table 8.8-93: PEC<sub>gw</sub> for imazamox and its metabolites on maize (with FOCUS PELMO 6.6.4); dosage 0.044 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Maize	Châteaudun	0.023	0.099	0.023
	Hamburg	0.041	0.131	0.031
	Kremsmünster	0.062	0.187	0.036
	Okehampton	0.092	0.232	0.033
	Piacenza	0.022	0.098	0.025
	Porto	0.005	0.033	0.002
	Sevilla	<0.001	0.002	<0.001
	Thiva	0.002	0.023	0.003

**Table 8.8-94:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.191	0.569	0.127

**Table 8.8-95:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.110	0.293	0.061

**Table 8.8-96:** PEC<sub>gw</sub> for imazamox and its metabolites on linseed (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per other 3 years with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Linseed	Okehampton	0.079	0.206	0.041

**Table 8.8-97:** PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.253	0.569	0.043
	Okehampton	0.206	0.610	0.144
	Porto	0.118	0.358	0.052

**Table 8.8-98:** PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
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		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.130	0.289	0.026
	Okehampton	0.128	0.303	0.067
	Porto	0.057	0.202	0.019

**Table 8.8-99:** PEC<sub>gw</sub> for imazamox and its metabolites on spring oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> years with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Spring oilseed rape	Jokioinen	0.099	0.209	0.017
	Okehampton	0.085	0.220	0.044
	Porto	0.041	0.134	0.013

**Table 8.8-100:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.281	0.864	0.455
	Hamburg	0.165	0.539	0.112
	Jokioinen	0.322	0.630	0.039
	Kremsmünster	0.268	0.792	0.216
	Okehampton	0.483	1.115	0.301
	Piacenza	0.387	0.697	0.540
	Porto	0.162	0.438	0.117
	Sevilla	0.095	0.320	0.047
	Thiva	0.045	0.257	0.137

**Table 8.8-101:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other years with PUF 0.5 for every other year for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.147	0.460	0.229

	Hamburg	0.078	0.276	0.063
	Jokioinen	0.149	0.366	0.027
	Kremsmünster	0.127	0.374	0.132
	Okehampton	0.255	0.539	0.136
	Piacenza	0.188	0.381	0.223
	Porto	0.077	0.203	0.046
	Sevilla	0.050	0.180	0.016
	Thiva	0.021	0.143	0.066

**Table 8.8-102:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.105	0.305	0.128
	Hamburg	0.055	0.184	0.042
	Jokioinen	0.093	0.243	0.021
	Kremsmünster	0.099	0.262	0.073
	Okehampton	0.171	0.384	0.088
	Piacenza	0.130	0.226	0.141
	Porto	0.055	0.146	0.029
	Thiva	0.016	0.113	0.029
	Sevilla	0.022	0.098	0.009

**Table 8.8-103:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.038 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.082	0.239	0.094
	Hamburg	0.043	0.144	0.031
	Jokioinen	0.073	0.191	0.016
	Kremsmünster	0.077	0.206	0.053
	Okehampton	0.134	0.303	0.065

	Piacenza	0.101	0.178	0.106
	Porto	0.043	0.115	0.020
	Sevilla	0.018	0.077	0.006
	Thiva	0.013	0.089	0.022

**Table 8.8-104:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.036 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.077	0.226	0.088
	Hamburg	0.041	0.136	0.029
	Jokioinen	0.069	0.181	0.015
	Kremsmünster	0.072	0.195	0.049
	Okehampton	0.127	0.286	0.061
	Piacenza	0.096	0.169	0.100
	Porto	0.040	0.109	0.019
	Sevilla	0.017	0.073	0.006
	Thiva	0.012	0.084	0.020

**Table 8.8-105:** PEC<sub>gw</sub> for imazamox and its metabolites on apples (with FOCUS PELMO 6.6.4); dosage 0.028 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolite CL 312622

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Apples	Châteaudun	0.059	0.175	0.063
	Hamburg	0.032	0.105	0.021
	Jokioinen	0.053	0.140	0.010
	Kremsmünster	0.055	0.150	0.035
	Okehampton	0.097	0.222	0.044
	Piacenza	0.073	0.131	0.073
	Porto	0.031	0.084	0.013
	Sevilla	0.013	0.056	0.004
	Thiva	0.009	0.065	0.013



**Table 8.8-106: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per 1 year with PUF 0.5 for parent and metabolites**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.054	0.235	0.046
	Hamburg	0.258	0.715	0.150
	Kremsmünster	0.187	0.560	0.174
	Okehampton	0.370	0.860	0.235
	Piacenza	0.141	0.380	0.155
	Porto	0.134	0.429	0.043

**Table 8.8-107: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every other year with PUF 0.5 for parent and metabolites**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.025	0.125	0.024
	Hamburg	0.165	0.353	0.074
	Kremsmünster	0.088	0.285	0.082
	Okehampton	0.187	0.433	0.107
	Piacenza	0.067	0.229	0.072
	Porto	0.073	0.227	0.026

**Table 8.8-108: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.048 kg as/ha per every 3 year with PUF 0.5 for parent and metabolites**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.020	0.095	0.019
	Hamburg	0.116	0.240	0.051
	Kremsmünster	0.065	0.194	0.058
	Okehampton	0.133	0.294	0.065
	Piacenza	0.048	0.162	0.045
	Porto	0.052	0.151	0.012

**Table 8.8-109: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.038 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolites**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.015	0.074	0.014
	Hamburg	0.091	0.189	0.039
	Kremsmünster	0.048	0.144	0.039
	Okehampton	0.104	0.232	0.048
	Piacenza	0.037	0.127	0.033
	Porto	0.040	0.119	0.009

**Table 8.8-110: PEC<sub>gw</sub> for imazamox and its metabolites on winter oilseed rape (with FOCUS PELMO 6.6.4); dosage 0.036 kg as/ha per every 3<sup>rd</sup> with PUF 0.5 for parent and metabolites**

Crop	Scenario	80 <sup>th</sup> Percentile PEC <sub>gw</sub> at 1 m Soil Depth (µg/L)		
		Imazamox	CL 312622	CL 354825
Winter oilseed rape	Châteaudun	0.015	0.070	0.013
	Hamburg	0.086	0.179	0.036
	Kremsmünster	0.048	0.144	0.039
	Okehampton	0.098	0.219	0.045
	Piacenza	0.035	0.120	0.030
	Porto	0.038	0.113	0.008

For protection of groundwater CHR/H/IMA 40 SL can be use in

a) Central Zone:

- Peas at maximum rate 48 g as/ha every third year in Poland and 40 g as/ha in other countries
- Beans at maximum rate 48 g as/ha every third year
- Soybean at maximum rate 48 g as/ha every year
- Sunflower at maximum rate at 48 g as/ha every third year in Poland or 48 g as/ha every other year in other countries
- Cotton at maximum rate 48 g as/ha every year
- Spring oilseed rape, mustard, breadseed poppy, sesame, safflower, borage, hemp, at maximum rate dose 38 g as/ha every third years
- Pumpkin at maximum rate 48 g as/ha every third year
- Tobacco at maximum rate 48 g as/ha every third year in Poland
- , Ornamental > 50 cm at maximum rate 28 g as/ha every third year
- Ornamental < 50 cm at maximum rate 48 g as/ha every third year

- Sunflower at maximum rate at 48 g as/ha every third year
- Soyabean at maximum rater at 48 g as/ha every third year
- Beans, broad beans, lentils, castor beans at maximum rate at 44 g as/ha every other year
- Spring oilseed rape, mustard, breadseed poppy, lupine, safflower, borage, hemp, sesame at maximum rate 36 g as/ha every third year
- Ornamental <50 cm, Pumpkin at maximum rate 48 g as/ha every third year
- Salix, Ornamental > 50 cm at maximum 28 g as/ha every every third year
- Peas at maximum rate 40 g as/ha every other tear
- Linseed at maximum rate 48 g as/ha every third year
- Cotton at maximum rate 48 g as/ha every year
- Tobbaco at maximum rate 48 g as/ha every year

**b) Poland:**

- Sunflower at maximum rate at 48 g as/ha every third year
- Soyabean at maximum rater at 48 g as/ha every third year
- Beans, broad beans, lentils, castor beans at maximum rate at 48 g as/ha every other year
- Spring oilseed rape, mustard, breadseed poppy, linseed, lupine, cotton, safflower, borage, hemp, sesame at maximum rate 38 g as/ha in Poland every third year
- Tobbaco, Ornamental <50 cm, Pumpkin at maximum rate 48 g as/ha every third year
- Salix, Ornamental> 50 cm at maximum 38 g as/ha every every third year
- Peas at maximum rate 48 g as/ha every third year

## 8.9 Predicted Environmental Concentrations in surface water (PEC<sub>sw</sub>) (KCP 9.2.5)

<p>ZRMS Comments:</p>	<p>The submitted PEC<sub>sw</sub>/sed assessment was accepted.</p> <p>The median and arithmetic mean of Koc were used (in accordance with List of endpoints, EFSA, 2016, although the geometric mean of Koc is required in modelling and represents a worse case. The use of geometric mean could be decided at cMS level.</p> <p>The relevant metabolite and parameters have been taken according to List of Endpoints.</p> <p>The calculations have been done in accordance with FOCUS Surface water guidelines. Models Step 1 &amp; 2, and Step 3, and Step 4 have been used.</p> <p>Relevant metabolites of active substance were taken into consideration in Step 1 and 2.</p> <p>The proposed pattern uses for winter and spring oilseed rape were taken into consideration.</p> <p>The AppDate model was used for application window setting.</p> <p>Drift, drainage and runoff as the exposure routes were considered.</p> <p>All relevant scenarios for Central Zone and scenarios required in Poland were taken into consideration.</p> <p><b>Imazamox</b></p> <p>For PEC<sub>sw</sub> of active substance assessment the Step 1 and 2 and Step 3 and Step 4 were taken into consideration.</p>
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The D1 and D2 scenarios were not considered as non-relevant for Central Zone.  
In PEC<sub>sw</sub> assessment a higher application rate of 48 g a.s./ha was used.  
The RAC of 2.2 µg/L was taken as a trigger value.  
The mitigation measures were proposed, if relevant.

The proposed mitigation measures are presented in the table below:

Use	Application rate g a.s./ha	max PEC <sub>sw</sub> µg/L	Mitigation measures
Pea	48	2.071 R4 stream*	none
Soya	48	1.767 R3 stream*	none
Beans, broad beans, lentils, castor beans	48	2.029 R4 stream*	none
Spring oilseed rape, mustard, bread seed poppy, lupine, pumpkin, safflower, borage, hemp, sesame, linseed, pumpkin	48	0.3444 D3 ditch*	none
Sunflower	48	2.060 R3 stream*	none
Cotton	48	0.2532 D6 ditch*	none
Tobacco	48	0.3426 R3 stream*	none
Maize	48	1.008 R4 stream	10 m VFS
Coniferous / deciduous forests, nurseries, ornamental shrubs, ornamentals, salix, wicker all at h < 50 cm	48	1.076 R3 stream	10 m VFS + 10 m NSS
Coniferous / deciduous forests, nurseries, ornamental shrubs, ornamentals, salix, wicker all at h > 50 cm	48	0.5146 R3 stream*	20 m VFS + 20 m NSS

\* Step 3 value

**Metabolites of imazamox.** The relevant metabolites CL 312622 and CL 354825 were taken into consideration. The risk envelope approach for all crops is proposed to present the max PEC<sub>sw</sub> values based on PEC<sub>sw</sub> assessment in Step 1:

Metabolite	Step 1	
	PEC <sub>sw</sub> µg/L	PEC <sub>sed</sub> µg/kg
CL 312622	9.43	2.87
CL 354825	5.33	27.20

	<p><b>Formulation.</b> The PEC<sub>sw</sub> for formulation was submitted and accepted.</p> <p>The PEC<sub>sw</sub> values for active substance, its metabolites and formulation will be used for further risk assessment.</p>
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### 8.9.1 Justification for new endpoints

There are no new endpoints established. All of used endpoint were evaluated at the EU level.

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

**Table 8.9-1: Input parameters related to application for PEC<sub>sw/sed</sub> calculations**

Plant protection product	CHR/H/IMA 40 SL	CHR/H/IMA 40 SL
Use No.	1	2
Crop	Peas	Sunflower
Application rate (kg as/ha)	Imazamox; 48 g/L	Imazamox; 48 g/L
Number of applications/interval (d)	1	1
Application window	30 days (AppDate application was used)	30 days (AppDate application was used)
Application method	Spray	Spray
CAM (Chemical application method)	Cannopy	Cannopy
Soil depth (cm)	5 – 20	5 - 20
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1
Plant protection product	CHR/H/IMA 40 SL	CHR/H/IMA 40 SL
Use No.	3	4
Crop	Soybean	Maize
Application rate (kg as/ha)	Imazamox; 48 g/L	Imazamox; 48 g/L
Number of applications/interval (d)	1	1
Application window	30 days (AppDate application was used)	30 days (AppDate application was used)
Application method	Spray	Spray
CAM (Chemical application method)	Cannopy	Cannopy
Soil depth (cm)	5 – 20	5 - 20
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1
Plant protection product	CHR/H/IMA 40 SL	CHR/H/IMA 40 SL

Use No.	5	6
Crop	Oilseed rape spring	Oilseed rape winter-Cabbage
Application rate (kg as/ha)	Imazamox; 48 g/L	Imazamox; 48 g/L
Number of applications/interval (d)	1	1
Application window	30 days (AppDate application was used)	30 days (AppDate application was used)
Application method	Spray	Spray
CAM (Chemical application method)	Cannopy	Cannopy
Soil depth (cm)	5 – 20	5 - 20
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1
Plant protection product	CHR/H/IMA 40 SL	CHR/H/IMA 40 SL
Use No.	7	8
Crop	Cotton	Tobacco
Application rate (kg as/ha)	Imazamox; 48 g/L	Imazamox; 48 g/L
Number of applications/interval (d)	1	1
Application window	30 days (AppDate application was used)	30 days (AppDate application was used)
Application method	Spray	Spray
CAM (Chemical application method)	Cannopy	Cannopy
Soil depth (cm)	5 – 20	5 - 20
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1
Plant protection product	CHR/H/IMA 40 SL	CHR/H/IMA 40 SL
Use No.	9	10
Crop	Pome fruits	Field beans
Application rate (kg as/ha)	Imazamox; 48 g/L	Imazamox; 48 g/L
Number of applications/interval (d)	1	1
Application window	30 days (AppDate application was used)	30 days (AppDate application was used)
Application method	Spray	Spray
CAM (Chemical application method)	Cannopy	Cannopy
Soil depth (cm)	5 - 20	5 - 20
Models used for calculation	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1	FOCUS SWASH v3.1, FOCUS PRZM v3.3.1, FOCUS MACRO v5.5.3, FOCUS TOXWA v3.3.1

**Table 8.9-2: FOCUS Step 3 Scenario related input parameters for PEC<sub>sw/sed</sub> calculations for the application of IMAZAMOKS 40 SL**

Crop	Scenario	Application window used in modelling
Sunflower	D5	2 May – 1 June
	R1	2 May – 1 June
	R3	16 April – 16 May
	R4	31 March – 30 April
Soybean	R3	15 May – 14 June
	R4	18 March – 17 April
Cotton	D6	21 April – 21 May
Legumes	D3	16 April – 16 May
	D4	24 April – 24 May
	D5	16 March – 15 April
	D6	21 April-21 May
	R1	16 April – 16 May
	R2	21 April – 21 May
	R3	22 April – 22 May
	R4	22 April – 22 May
Maize	D3	6 May – 5 June
	D4	11 May – 10 June
	D5	11 May – 10 June
	D6	21 April-21 May
	R1	4 May – 3 June
	R2	2 May – 1 June
	R3	2 May – 1 June
	R4	11 April – 11 May
Oilseed rape spring	D1	20 May – 19 June
	D3	11 April – 11 May
	D4	2 May – 1 June
	D5	16 March – 15 April
	R1	11 April – 11 May
<del>Oilseed rape</del> winter	<del>D2</del>	<del>16 September – 16 October</del>
	<del>D3</del>	<del>3 September – 3 October</del>
	<del>D4</del>	<del>4 September – 4 October</del>
	<del>D5</del>	<del>21 September – 21 October</del>
	<del>R1</del>	<del>5 September – 5 October</del>
	<del>R3</del>	<del>6 October – 5 November</del>
Pome fruit	D3	16 April – 16 May
	D4	21 April – 21 May

Crop	Scenario	Application window used in modelling
	D5	2 April – 2 May
	R1	16 April – 16 May
	R2	16 March – 15 April
	R2	2 April – 2 May
Tobacco	R3	21 May – 20 June
Vegetable leafy	D3	26 April – 26 May
	D4	11 May – 10 June
	D5	2 April – 2 May
	R1	21 April – 21 May
	R3	2 March – 1 April
	R4	2 March – 1 April
Field beans	D3	1 May – 31 May
	D4	16 April – 16 May
	R1	11 April – 11 May
	R3	3 April – 3 May
	R4	3 April – 3 May

**Risk envelopes used in PECsw calculations with maximum app rate 48 g as/ha for every crops as worst case scenario:**

**~~l) Winter oilseed rape and surrogate scenario for spring oilseed rape – GAP – defined uses:~~**

Use	Active substance	Application rate (g a.s./ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape	Imazamox	24–48	Boom sprayer	1	N/A	Spring
Winter oilseedrape	Imazamox	24–48	Boom sprayer	1	N/A	Spring

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s./ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Winter oilseedrape	Imazamox	24–48	Boom sprayer	1	N/A	Spring

The calculation in winter oilseed rape are not provided and necessary, because spring oilseed rape cover all scenarios in adequate minor crops according to polish national requirements.

**m) Peas ~~oilseed rape and surrogate scenario for spring oilseed rape~~ – GAP – defined uses:**

Use	Active	Application	Application	Number of	Minimum	Application
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	substance	rate (g a.s /ha)	method	applications	application interval (days)	timing
Peas	Imazamox	24 - 48	Boom sprayer	1	N/A	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Pea	Imazamox	24 - 48	Boom sprayer	1	N/A	BBCH 10 - 16

**n) Bean and surrogate scenario for broad bean, lentils, lupine, castor beans– GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Bean	Imazamox	24 - 48	Boom sprayer	1	N/A	BBCH 10 -16
Broad bean	Imazamox	24- 48	Boom sprayer	1	N/A	BBCH 10 - 16
Lentils	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16
Lupine	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16
Castor beans	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Field Bean	Imazamox	24 - 48	Boom sprayer	1	N/A	BBCH 10 - 16

**o) Sunflower – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Sunflower	Imazamox	24 - 48	Boom sprayer	1	-	BBCH 10 -16

**Identifies representative use (risk envelope):**

Use	Active	Application	Application	Number of	Minimum	Application
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	substance	rate (g a.s /ha)	method	applications	application interval (days)	timing
Sunflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Maize as surrogate crop according to national requirements in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16

**p) Soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean	Imazamox	24- 48	Boom sprayer	1	-	BBCH 10 - 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Soyabean	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16
Peas according to national requirement in Poland	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16

**q) Linseed / Hemp – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Linseed/Hemp	Imazamox	24- 48	Boom sprayer	1	-	BBCH 10 - 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Linseed/Hemp	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16

**r) Spring oilseed rape, Breadseed poppy, mustard, sesame, borage, pumpkin and lupine surrogate scenarios for sunflower and soyabean – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16
Mustard	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16
Breadseed poppy	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16
Sunflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Soyabean	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Cotton	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Sesame	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Safflower	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 – 16
Borage	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16
Hemp	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 -16
Pumpkin	Imazamox	24 – 48	Boom sprayer	1	-	BBCH 10 - 16
Lupine	Imazamox	24 – 48	Boom sprayer	1	N/A	BBCH 10 – 16

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Spring oilseedrape	Imazamox	24 - 48	Boom sprayer	1	-	BBCH 10 - 16
Vegetable leafy as surrogate crop for cucurbitae vegetable according to national requirements in Poland	Imazamox	24 - 48	Boom sprayer	1	-	BBCH 10 – 16

zRMS Comments:	In case of r) defined uses all crops are dedicated for seeds, so only spring OSR is a relevant surrogate crop.
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**s) Tobacco – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 - 89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Tobacco	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10 - 89
Vegetable leafy as surrogate crop for tobacco <50 cm according to national requirement in Poland	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10 - 89

**t) Ornamentals – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10 - 89

**Identifies representative use (risk envelope):**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
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Vegetable leafy as surrogate crop for ornamental < 50 cm according to national requirement in Poland	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10 - 89
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**u) Forestry tree, Ornamental h > 50 cm, Salix, Wicker – GAP – defined uses:**

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Ornamental	Imazamox	15– 48	Boom sprayer	1	-	BBCH 10 - 89
Coniferous / deciduous forest nurseries, Ornamental shrubs	Imazamox	15 – 48	Boom sprayer	1	-	BBCH 10 - 89
Salix viminalis (SAXVI)  Wicker (1SAXG)	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10 - 89

Identifies representative use (risk envelope):

Use	Active substance	Application rate (g a.s /ha)	Application method	Number of applications	Minimum application interval (days)	Application timing
Apple as surrogate crop according to national requirement in Poland	Imazamox	15 - 48	Boom sprayer	1	-	BBCH 10-89

zRMS Comments:	In case of cabbage as a surrogate crop – it is relevant for tobacco and ornamentals at h < 50 cm. For higher plants (h > 50 cm) the pome fruits is a surrogate crop.
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### 8.9.2.1 Imazamox and its metabolites

**Table 8.9-3: Input parameters related to active substance imazamox and its metabolites for PEC<sub>sw/sed</sub> calculations STEP 1/2 and 3(/4) (if necessary)**

Compound	imazamox	CL 312622	CL 354825	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	305.3	305.3	277.3	EFSA Journal 2016;14(4):4432
Saturated vapour pressure (Pa)	not required for Step 1+2/10 <sup>-9</sup> Pa (correct value would be 6.3 x 10 <sup>-11</sup> Pa)	Not required (Step 3 not performed)	Not required	EFSA Journal 2016;14(4):4432
Water solubility (mg/L)	6.26 x 10 <sup>5</sup> at pH 7, 20°C	1000 at pH 7, 20°C	1000 at pH 7, 20°C	EFSA Journal 2016;14(4):4432
Diffusion coefficient in water (m <sup>2</sup> /d)	not required for Step 1+2/ 4.3 x 10 <sup>-5</sup>	Not required	Not required	Default values
Diffusion coefficient in air (m <sup>2</sup> /d)	not required for Step 1+2/0.43	Not required	Not required	Default values
K <sub>foc</sub> (mL/g)	26.8/13.4 (step 3) For step 1-2: 26.8 (correct value would be 11.6 mL/g) For step 3: 13.4 (correct value would be 11.6 mL/g)	30.6	500	EFSA Journal 2016;14(4):4432
Freundlich Exponent 1/n	0.938 (correct value would be 0.936 mL/g)	0.974	0.789	EFSA Journal 2016;14(4):4432
Plant Uptake	0	0	0	EFSA Journal 2016;14(4):4432
Wash-Off factor from Crop (1/mm)	not required for Step 1+2/ 0.05 (MACRO) 0.50 (PRZM)	Not required	Not required	Default values
DT <sub>50,soil</sub> (d)	Steps 1-2: 12.4 days (field value. In accordance with FOCUS, pseudo-SFO). Step3: 16.7 days (field value. In accordance with FOCUS, pseudo-SFO).	25.3 days (laboratory value. In accordance with FOCUS, SFO)	383 days(laboratory value. In accordance with FOCUS, SFO)	EFSA Journal 2016;14(4):4432

Compound	imazamox	CL 312622	CL 354825	Value in accordance to EU endpoint y/n/ Reference
DT <sub>50,water</sub> (d)	233 d	1000 (default)	1000 (default)	EFSA Journal 2016;14(4):4432
DT <sub>50,sed</sub> (d)	1000 d (default)	1000 (default)	1000 (default)	EFSA Journal 2016;14(4):4432
DT <sub>50,whole system</sub> (d)	233 d (geomean from sediment water studies)	1000 (default)	1000 (default)	EFSA Journal 2016;14(4):4432
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil:43.6% Water/sediment system: 13.6%	Soil: 55.2% Water/sediment system: 5.7%	EFSA Journal 2016;14(4):4432
Formation fraction in soil:	-	0.436	0.552	

### Regulatory acceptable concentration (RAC):

Parent (imazamox): ~~0.99~~ 2.2 µg/L (~~Lemna gibba – E<sub>50</sub>C<sub>50</sub> 0.0099 mg/L~~)

Metabolite 1 (CL 312622): 30 µg/L (~~Lemna gibba – NOErC 0.3 mg/L~~)

Metabolite 2 (CL 354825): 1050 µg/L (~~Lemna gibba – EyC50 10.5 mg/L~~)

### PEC<sub>sw/sed</sub>

**Table 8.9-4: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to soybean**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
<b>FOCUS</b>					
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2	-----				
Northern Europe	March-May	1.66-2.57	Drainage/Run-off	1.61-2.41	0.44-0.30
Southern Europe	March-May	2.90-4.70	Drainage/Run-off	2.81-4.42	0.77-0.54
Step 3					
R3	stream	1.573-1.767	Run-off	0.05063-0.05719	0.2661-0.1449
R4	stream	0.1738-0.1738	Run-off	0.001493-0.001493	0.01445-0.007662

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-4a:** Global maximum PEC<sub>sw</sub> values for clethodim-imazamox following one applications of CHR/H/IMA 40 SL to soybean according to the central zone GAP according to surface water Step 4 FOCUS 4 PEC<sub>sw</sub> for imazamox following single application(s) of CHR/H/IMA to soybean

PEC <sub>sw</sub> (µg/L)	Scenario		
Nozzle reduction	Vegetative strip (m)	None 10	None
	No spray buffer (m)	10 0.75	20
None	R3 stream	0.7124 0.8002	—
None	R4 stream	0.3284	—

**Table 8.9-5:** FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to sunflower

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2	-----				
Northern Europe	March-May	2.40 2.57	Drainage/Run-off	2.33-2.41	0.64-0.30
Southern Europe	—	—	—	—	—
Step 3					
D5	pond	0.02268 0.02670	Drainage	0.02129 0.02536	0.06323 0.02760
D5	stream	0.2183 0.2193	Drainage	0.008322 0.01031	0.02250 0.01142
R1	pond	0.01318 0.01354	Run-off	0.01195 0.01252	0.02302 0.01002
R1	stream	0.7412-0.7848	Run-off	0.01651-0.01760	0.1167-0.06061
R3	stream	0.2456-2.060	Run-off	0.004305-0.09985	0.02901-0.2347
R4	stream	0.8473-1.978	Run-off	0.03177-0.07624	0.1797-0.2024

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> does not exceed RAC in any scenario. Therefore, calculation of Step 4 is not necessary.

**Table 8.9-6:** FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to peas (legumes)

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2	-----				
Northern	March-May	1.66-2.43	Drainage/Run-off	1.61-2.29	0.44-0.28



Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Europe					
Southern Europe	-	-	-	-	-
Step 3					
D3	ditch	0.2713–0.2815	Drainage	0.03246–0.04266	0.1106–0.05831
D4	pond	0.07152–0.1044	Drainage	0.07091–0.1036	0.2883–0.1346
D4	stream	0.2295–0.2386	Drainage	0.03005–0.04425	0.1170–0.05149
D5	pond	0.01495–0.01709	Drainage	0.01389–0.01617	0.03600–0.01590
D5	stream	0.2112–0.2119	Drainage	0.002873–0.003818	0.01101–0.006796
R1	pond	0.01018–0.01018	Run-off	0.009058–0.009234	0.01742–0.007521
R1	stream	0.1741–0.1741	Run-off	0.001577–0.001577	0.01507–0.007933
R3	stream	0.2463–0.2463	Run-off	0.004420–0.004424	0.03093–0.01519
R4	stream	2.102–2.071	Run-off	0.07967–0.07916	0.4371–0.2096

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-7: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to spring oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89–16.20	Drainage/Run-off	15.39–15.21	4.24–1.87
Step 2	-----				
Northern Europe	March-May	1.91–2.03	Drainage/Run-off	1.85–1.91	0.51–0.24
Southern Europe	-	-	-	-	-
Step 3					
D1	ditch	0.4109–0.4265	Drainage	0.3515–0.3631	0.2883–0.2923
D1	stream	0.2696–0.2696	Drainage	0.09305–0.1078	0.1014–0.1103
D3	ditch	0.3248–0.3444	Drainage	0.03587–0.05536	0.05402–0.07290
D4	pond	0.05003–0.07815	Drainage	0.04942–0.07729	0.06408–0.09450
D4	stream	0.2594–0.2665	Drainage	0.02310–0.03560	0.02549–0.03541
D5	pond	0.01638–0.01918	Drainage	0.01630–0.01821	0.01591–0.01816
D5	Stream	0.2436–0.2445	Drainage	0.003200–0.004539	0.007158–0.008122
R1	pond	0.01048–0.01048	Run-off	0.009509–0.009515	0.008005–0.008231
R1	stream	0.2005–0.2005	Run-off	0.001766–0.001766	0.009299–0.008958

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> does not exceed RAC in any scenario. Therefore, calculation of Step 4 is not necessary.

**Table 8.9-8: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to winter oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d-PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	—	15.89	Drainage/Run-off	15.39	4.24
Step 2	—				
Northern Europe	October-February	4.13	Drainage/Run-off	4.00	1.11
Southern Europe	—	—	—	—	—
Step 3					
D2	ditch	6.527	Drainage	2.366	1.327
D2	Stream	4.093	Drainage	1.331	0.7954
D3	Ditch	0.6333	Drainage	0.3899	0.5351
D4	pond	0.6406	Drainage	0.6294	0.7072
D4	stream	0.4702	Drainage	0.3663	0.2588
D5	pond	0.2950	Drainage	0.2937	0.3479
D5	stream	0.2840	Run-off	0.1369	0.1133
R1	Pond	0.01048	Run-off	0.009481	0.007961
R1	stream	0.2013	Run-off	0.002016	0.009923
R3	stream	0.6269	Run-off	0.02212	0.005729

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> in D2 ditch and stream scenarios exceeds RAC. Therefore, calculation of Step 4 is necessary.

**Table 8.9-8a: Global maximum PEC<sub>sw</sub> values for imazamox following one applications of CHR/H/IMA 40 SL to winter oilseed rape according to the central zone GAP according to surface water Step 4**

PEC <sub>sw</sub> (µg/L)	Scenario		
Nozzle reduction	Vegetative strip (m)	10	20
	No-spray buffer (m)	10	20
None	D2 ditch	6.638	6.637

PEC <sub>sw</sub> (µg/L)	Scenario		
Nozzle reduction	Vegetative strip (m)	10	20
	No spray buffer (m)	10	20
50%	D2-stream	3.319	3.319
75%		1.659	1.659
90%		0.664	0.664
None		4.165	4.165
50%		2.082	2.082
75%		1.041	1.041
90%		0.416	0.416

**Table 8.9-8: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to cotton**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2	---				
Northern Europe	March-May	2.16-2.30	Drainage/Run-off	2.09-2.16	0.58-0.27
Southern Europe	-	-	-	-	-
Step 3					
D6	ditch	0.2495-0.2532	Drainage	0.006393-0.01955	0.01773-0.02732

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-9: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2	-----				
Northern Europe	March-May	2.40-2.57	Drainage/Run-off	2.33-2.41	0.64-0.30
Southern Europe	-	-	-	-	-

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 3					
R3	stream	0.3067 0.3426	Run-off	0.01719 0.01872	0.03498 0.03752

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> does not exceed RAC in any scenario. Therefore, calculation of Step 4 is not necessary.

**Table 8.9-10: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to maize**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	15.89-16.20	Drainage/Run-off	15.39-15.21	4.24-1.87
Step 2					
Northern Europe	March-May	2.28-2.43	Drainage/Run-off	2.21-2.29	0.61-0.28
Southern Europe	-	-	-	-	-
Step 3					
D3	ditch	0.2760 0.2860	Drainage	0.03839 0.04847	0.05679-0.06575
D4	pond	0.05452- 0.07537	Drainage	0.05376 0.07438	0.06985-0.09026
D4	stream	0.2254-0.2300	Drainage	0.02567- 0.03500	0.02593-0.03419
D5	pond	0.02993 0.03491	Drainage	0.02848- 0.03332	0.03326- 0.03730
D5	stream	0.2208-0.2223	Drainage	0.01270-0.01532	0.01355- 0.01496
D6	ditch	0.2529	Drainage	0.01463	0.02793
R1	pond	0.01430- 0.01634	Run-off	0.01292-0.01484	0.01108- 0.01199
R1	stream	0.4967-0.5119	Run-off	0.01011-0.01163	0.03165- 0.03138
R2	stream	1.500	Run-off	0.04509	0.1475
R3	stream	1.751-1.916	Run-off	0.05708 0.06400	0.1489-0.1566
R4	stream	2.241- 2.218	Run-off	0.08949- 0.08939	0.2376- 0.2265

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> in R2-stream, R4 stream scenarios exceeds RAC. Therefore, calculation of Step 4 is necessary.

**Table 8.9-10a:** Global maximum PEC<sub>sw</sub> values for imazamox following one applications of CHR/H/IMA 40 SL to maize according to the central zone GAP according to surface water Step 4 FOCUS 4 PEC<sub>sw</sub> for imazamox in only scenario R4 stream following single application(s) of CHR/H/IMA to maize

PEC <sub>sw</sub> (µg/L)	Scenario		
Nozzle reduction	Vegetative strip (m)	None-10	None
	No spray buffer (m)	10-0.75	20
None	R2 stream	0.6620	0.3429
None	R3 stream	0.7912-0.8665	0.4141
None	R4 stream	1.019- 1.008	0.5339

**Table 8.9-11:** FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to pome fruit

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
FOCUS					
Step 1	—	17.96-20.43	Drainage/Run-off	17.33-19.12	4.78-2.35
Step 2	-----				
Northern Europe	March-May	4.41-6.70	Drainage/Run-off	4.25-6.28	4.17-0.77
Southern Europe	-	-	-	-	-
Step 3					
D3	ditch	3.734- 3.736	Drainage	0.2117- 0.2133	0.3731-0.3612
D4	pond	0.2317- 0.2327	Drainage	0.2132-0.2143	0.1744- 0.1666
D4	stream	3.529- 3.529	Drainage	0.01552- 0.01240	0.07685- 0.07561
D5	pond	0.2316-0.2320	Drainage	0.2148- 0.2153	0.1856-0.1763
D5	stream	3.700- 3.700	Drainage	0.01221- 0.008860	0.07025-0.06855
R1	pond	0.2266-0.2266	Run-off	0.2052-0.2053	0.1554-0.1479
R1	stream	3.015- 3.015	Run-off	0.02429-0.02429	0.1262-0.1220
R2	stream	3.994	Run-off	0.01626	0.1094
R3	stream	4.265- 4.265	Run-off	0.08017-0.08021	0.2401- 0.2315
R4	stream	3.032-3.032	Run-off	0.04785-0.04490	0.1396-0.1347

\* single applications should be marked.

\*\* two-time as required by ecotox

Max PEC<sub>sw</sub> in D3 ditch, D4 stream, D5 stream, R1 stream, R3 stream and R4 stream scenarios exceeds RAC. Therefore, calculation of Step 4 is necessary.

**Table 8.9-11a: Global maximum PEC<sub>sw</sub> values for imazamox following one applications of CHR/H/IMA 40 SL to pome fruit according to the central zone GAP according to surface water Step 4**

PEC <sub>sw</sub> (µg/L)	Scenario		
Nozzle reduction	Vegetative strip (m)	10	20
	No spray buffer (m)	10	20
None	D3 ditch	<del>1.805</del> 1.807	<del>0.4175</del> 0.4191
None	D4 stream	<del>1.863</del> 1.864	<del>0.4282</del> 0.4288
None	D5 stream	<del>1.953</del> 1.953	<del>0.4478</del> 0.4480
None	R1 stream	<del>1.591</del> 1.591	<del>0.3637</del> 0.3637
None	R2 stream	<del>2.107</del>	<del>0.4818</del>
None	R3 stream	<del>2.250</del> 2.250	<del>0.5146</del> 0.5146
None	R4 stream	<del>1.600</del> 1.600	<del>0.3659</del> 0.3659

**Table 8.9-12: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to field beans**

Scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
FOCUS					
Step 1	---	16.20	Drainage/Run-off	15.21	1.87
Step 2	---				
Northern Europe	March-May	2.43	Drainage/Run-off	2.29	0.28
Southern Europe	-	-	-	-	-
Step 3					
D3	ditch	0.2800	Drainage	0.04278	0.05843
D4	pond	0.06345	Drainage	0.06277	0.07799
D4	stream	0.2217	Drainage	0.02799	0.02986
R1	pond	0.01018	Run-off	0.009526	0.008150
R1	stream	0.2274	Run-off	0.005898	0.01755
R3	stream	0.3942	Run-off	0.02257	0.04676
R4	stream	2.029	Run-off	0.08104	0.2074

**Table 8.9-13: FOCUS Step 1,2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for imazamox following single/multiple application(s) of CHR/H/IMA to vegetable leafy**

Scenario  FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominant entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	16.20	Drainage/Run-off	15.21	1.87
Step 2					
Northern Europe	March-May	2.43	Drainage/Run-off	2.29	0.28
Southern Europe	-	-	-	-	-
Step 3					
D3	ditch	0.3341	Drainage	0.04648	0.06509
D4	pond	0.1230	Drainage	0.1220	0.1220
D4	stream	0.2763	Drainage	0.06336	0.06969
R1	pond	0.01048	Run-off	0.009653	0.007951
R1	stream	0.2007	Run-off	0.004081	0.01002
R3	stream	2.378	Run-off	0.07764	0.2062
R4	stream	0.2004	Run-off	0.001759	0.008936

Max PEC<sub>sw</sub> in R3 stream scenarios exceeds RAC. Therefore, calculation of Step 4 is necessary.

**Table 8.9-13a:** Global maximum PEC<sub>sw</sub> values for imazamox following one applications of CHR/H/IMA 40 SL to cabbage according to the central zone GAP according to surface water Step 4 FOCUS 4 PEC<sub>sw</sub> for imazamox in only scenario R3 stream following single application(s) of CHR/H/IMA to cabbage

PEC <sub>sw</sub> (µg/L)	Scenario	
Nozzle reduction	Vegetative strip (m)	10-20
	No spray buffer (m)	10
None	R3 stream	0.6403 0.3630 1.076

Metabolites of imazamox

**Table 8.9-14: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to soybean**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	<del>8.79</del> 8.31	<del>2.71</del> 2.70
Step 2	---				
Northern Europe	March-May	1.30	Drainage/Run-off	1.22	0.40
South Europe	March-May	2.54	Drainage/Run-off	2.39	0.78
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

PEC<sub>sw</sub> of metabolite CL 312622 in Step 1 is lower than RAC therefore calculation of Steps 2, 3 and 4 is not necessary.

**Table 8.9-15: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.30	Drainage/Run-off	1.22	0.40
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-16: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to peas (legumes)**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2					
Northern Europe	March-May	1.22	Drainage/Run-off	1.50	0.37
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.



\*\* two-time as required by ecotox

**Table 8.9-17: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to spring oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.61	Drainage/Run-off	1.51	0.49
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-18: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to cotton**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.14	Drainage/Run-off	1.08	0.35
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-19: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.30	Drainage/Run-off	1.22	0.40
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-20: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to pome fruit**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	9.43	Drainage/Run-off	9.27	2.87
Step 2	---				
Northern Europe	March-May	1.85	Drainage/Run-off	1.74	0.56
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-21: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to field beans**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.22	Drainage/Run-off	1.15	0.37
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-22: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to maize**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.22	Drainage/Run-off	1.15	0.37
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-23: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 312622 following single application of CHR/H/IMA to cabbage**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	8.85	Drainage/Run-off	8.31	2.70
Step 2	---				
Northern Europe	March-May	1.22	Drainage/Run-off	1.15	0.37
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-5: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to any crop\*\*\***

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	—	5.33	Drainage/Run-off	5.29	26.60
Step 2	Not required — Max PEC <sub>sw</sub> of CL 354825 is lower than RAC				

\* single applications should be marked.

\*\* two time as required by ecotox

\*\*\* PE<sub>sw/sed</sub> of metabolite CL354825 in Step 1 is independent of the crop.

PEC<sub>sw</sub> of metabolite CL 354825 in Step 1 is lower than RAC therefore calculation of Steps 2, 3 and 4 is not necessary.

**Table 8.9-24: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to soybean**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.77	Drainage/Run-off	0.74	3.84
South Europe	March-May	1.53	Drainage/Run-off	1.46	7.62
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-25: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to sunflower**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.77	Drainage/Run-off	0.74	3.84
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-26: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to peas (legumes)**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.72	Drainage/Run-off	0.69	3.61
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-27: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to spring oilseed rape**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.59	Drainage/Run-off	0.55	2.90
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-28: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to cotton**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.68	Drainage/Run-off	0.64	3.37
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-29: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to tobacco**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.77	Drainage/Run-off	0.74	3.84
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-30: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to pomefruit**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, tva</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.55	Drainage/Run-off	5.12	27.20
Step 2	---				
Northern Europe	March-May	0.92	Drainage/Run-off	0.86	4.49
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-31: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to field beans**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.72	Drainage/Run-off	0.69	3.61
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-32: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to maize**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.72	Drainage/Run-off	0.69	3.61
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

**Table 8.9-33: FOCUS Step 1, 2 and 3 PEC<sub>sw</sub> and PEC<sub>sed</sub> for CL 354825 following single application of CHR/H/IMA to cabbage**

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)*	Dominat entry route	21 d- PEC <sub>sw, twa</sub> (µg/L)**	Max PEC <sub>sed</sub> (µg/kg)*
Step 1	---	5.33	Drainage/Run-off	5.00	26.55
Step 2	---				
Northern Europe	March-May	0.72	Drainage/Run-off	0.69	3.61
Step 2	Not required — Max PEC <sub>sw</sub> of CL 312622 is lower than RAC				

\* single applications should be marked.

\*\* two-time as required by ecotox

For protection of surface water CHR/H/IMA 40 SL can be use in appropriate buffe zone at maximum rate dose 48 g as/ha::

- Sunflower , Soyabean, Beans, broad beans, lentils, castor beans, spring oilseed rape, mustard, breadseed poppy, lupine, safflower, borage, hemp, sesame, pumpkin, peas, linseed, cotton, tobacco – no buffer zone is required
- Ornamental <50 cm – 10 meters vegetative and no-spray buffer zone because of worst case scenario – R3 stream
- Salix, Ornamental > 50 cm - 20 meters vegetative and no-spray buffer zone because of worst case scenario – R3 stream

#### b) Poland:

- Sunflower , Soyabean, Beans, broad beans, lentils, castor beans, spring oilseed rape, mustard, breadseed poppy, lupine, safflower, borage, hemp, sesame, pumpkin, peas, linseed, cotton, tobacco, ornamental <50 cm – no buffer zone is required
- Salix, Ornamental > 50 cm - 10 meters vegetative and no-spray buffer zone because of worst case scenario – D3, D4, R1 stream

### 8.9.2.2 PEC<sub>sw/sed</sub> of CHR/H/IMA 40 SL

#### Cotton

Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 
 Crop:

Number of Applications: 
 Waterbody:

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

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

Width: 
 Depth: 
 Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.30"/>	<input type="text" value="2.30"/>	
% of application rate:	<input type="text" value="2.1349"/>	<input type="text" value="1.2221"/>	<input type="text" value="1.5936"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

## Legumes:

### Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 
 Crop:

Number of Applications: 
 Waterbody:

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

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

Width: 
 Depth: 
 Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.30"/>	<input type="text" value="2.30"/>	
% of application rate:	<input type="text" value="2.1349"/>	<input type="text" value="1.2221"/>	<input type="text" value="1.5936"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

Save Screen

Print

Close



## Maize:

Calculation of drift loading into surface water
 ✕

**Input**

Application Rate (g ai/ha): 
 Crop:

Number of Applications: 
 Waterbody:

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

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

Width: 
 Depth: 
 Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters    A:     B:     C:     D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.30"/>	<input type="text" value="2.30"/>	
% of application rate:	<input type="text" value="2.1349"/>	<input type="text" value="1.2221"/>	<input type="text" value="1.5936"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

Save Screen
 Print
 Close

## Oilseed rape spring

### Calculation of drift loading into surface water

**Input**

Application Rate (g ai/ha):  Crop:   
 Number of Applications:  Waterbody:   
 Use FOCUS (step 3) or mitigation distances (m)?

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

Width:  Depth:  Length:   
 Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:   
 Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.  

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.00"/>	<input type="text" value="2.00"/>	
% of application rate:	<input type="text" value="2.7593"/>	<input type="text" value="1.4010"/>	<input type="text" value="1.9274"/>

**Output: Drift loading onto water body**

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

**Data sources:**  
 Spray drift data are from BBA, (2000) and AgDRIFT 1.1i, (1999).  
 Calculations of percentile drift are from spreadsheet of Travis, (1998).  
 Regressions of drift curves and spreadsheet calculations are by Russell and Yon, (2000 and 2001).

## Oilseed rape winter

Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 
 Crop:

Number of Applications: 
 Waterbody:

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

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

Width: 
 Depth: 
 Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.00"/>	<input type="text" value="2.00"/>	
% of application rate:	<input type="text" value="2.7593"/>	<input type="text" value="1.4010"/>	<input type="text" value="1.9274"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

## Pome fruit

Calculation of drift loading into surface water



**Input**

Application Rate (g ai/ha): 
 Crop:

Number of Applications: 
 Waterbody:

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

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

Width: 
 Depth: 
 Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="3.50"/>	<input type="text" value="4.50"/>	
% of application rate:	<input type="text" value="26.0015"/>	<input type="text" value="21.5239"/>	<input type="text" value="23.5987"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

## Soybeans

### Calculation of drift loading into surface water

✕

**Input**

Application Rate (g ai/ha): 
Crop:

Number of Applications: 
Waterbody:

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

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

Width: 
Depth: 
Length:

Distance: Crop <--  --> Top of bank <--  --> Water

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

Regression parameters A:  B:  C:  D:

Distance for change in regression (m)

**Output: Drift deposition in water body per drift event**

Drift percentile per event  based on a total of  applications.

	at edge nearest field	farthest from field	areic mean
Distance from crop: (m)	<input type="text" value="1.30"/>	<input type="text" value="2.30"/>	
% of application rate:	<input type="text" value="2.1349"/>	<input type="text" value="1.2221"/>	<input type="text" value="1.5936"/>

**Output: Drift loading onto water body**

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

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

**Data sources:**

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

## **Sunflowers**

### **Tobacco**



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

**Table 8.10-1 Summary of atmospheric degradation and behaviour**

Compound	Imazamox
Direct photolysis in air	No studied – no data requested
Photochemical oxidative degradation in air	DT50 of 4.7 h derived by the Atkinson model OH (12h) concentration assumed = $1.5 \times 10^6$ molecules/cm <sup>3</sup>
Volatilisation	from plant surfaces (BBA guideline): Not studied - no data requested  from soil surfaces (BBA guideline): Not studied - no data requested
Metabolites	No studies – no data requested

The vapour pressure at 20 °C of the active substance imazamox is  $< 10^{-5}$  Pa. Hence the active substance imazamox is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance active substance 1 due to volatilization with subsequent deposition do not has to be considered.



## Appendix 1 Lists of data considered in support of the evaluation

### List of data submitted by the applicant and relied on

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

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

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Owner</b>
KCA 9.1.1/1	Ta C.T.	1997a	AC 299, 263: Aerobic soil metabolism American Cyanamid Co.; Ewing NJ; United States of America ID-620-018 <none> unpublished	N	BASF
KCA 9.1.1/2	Ta C.	2012 a	Aerobic soil metabolism of 14Cimidazolinone BAS 720 H 2011/7002438 BASF Crop Protection, Research Triangle Park NC, United States of America yes Unpublished	N	BASF

KCA 9.1.1/3	Ta C.T.	1995c	AC 299, 263: Aerobic soil metabolism American Cyanamid Co.; Princeton NJ; United States of America ID-620-008 <none> unpublished	N	BASF
KCA 9.1.1/4	Ta C.T., Lewis C.J.	1997a	AC 299, 263: Soil degradation study Covance Laboratories; Harrogate North Yorkshire HG3 1PY; United Kingdom ID-620-027 <none> unpublished	N	BASF
KCA 9.1.1/5	Ta C.T.	1995a	AC 299,263: Anaerobic soil metabolism American Cyanamid Co.; Princeton NJ; United States of America ID-620-009 Yes unpublished	N	BASF

KCA 9.1.1/6	Ta C.T.	1995b	AC 299, 263: Photodegradation on soil American Cyanamid Co.; Princeton NJ; United States of America ID-620-004 Yes unpublished	N	BASF
KCA 9.1.1/7	Wu S-S. et al.	2013	Anaerobic soil metabolism of 14C-BAS 720 H 2013/7001808 Symbiotic Research LLC, Mount Olive NJ, United States of America yes Unpublished	N	BASF
KCA 9.1.1/8	McCall W.S. Blood A.	2013 a	BAS 720 H Imazamox: Soil photolysis 2012/7003612 BASF Crop Protection, Research Triangle Park NC, United States of America yes Unpublished	N	BASF

KCA 9.1.1/9	Ta C.T.	1995c	AC 299, 263: Aerobic soil metabolism American Cyanamid Co.; Princeton NJ; United States of America ID-620-008 <none> unpublished	N	BASF
KCA 9.1.2/1	Cronin J.A.	1997c	AC 299, 263 40g ai/L SL (SF 09464): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, autumn application - North France, 1996-1997 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-022 <none> unpublished	N	BASF
KCA 9.1.2/2	Beigel C.	2001	Calculation of DT50 values of Imazamox soil metabolites CL312622 and CL354825 in three soils BASF Corp. Agro Research; Princeton NJ; United States of America ID-620-059 No, not subject to GLP regulations Unpublished	N	BASF

KCA 9.1.2/3	Donaldson F.P.	2013	Kinetic evaluation of the aerobic degradation of BAS 720 H (imazamox) and its metabolites using FOCUS guidance to derive persistence and modeling endpoints 2013/7001767 BASF Crop Protection, Research Triangle Park NC, United States of America no Unpublished	N	BASF
KCA 9.1.2/4	Cronin J.A.	1997	AC 299, 263 40g ai/L SL(SF 09464): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, autumn application - North France, 1996-1997 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-021 <none> unpublished	N	BASF
KCA 9.1.2/5	Cronin J.A.	1997	AC 299, 263 120g ai/L SL (RLF 12132): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, spring application - North France, 1995-1996 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-020 <none> Unpublished	N	BASF
KCA 9.1.2/6	Cronin J.A.	1997	AC 299, 263 40g ai/L SL (SF 09464): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, autumn application - North France, 1996-1997 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-022 <none> Unpublished	N	BASF
KCA 9.1.2/7	Cronin J.A.	1997	AC 299, 263 120g ai/L SL: Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, spring application - North France, 1994-1995 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-023 <none> Unpublished	N	BASF
KCA 9.1.2/8	Cronin J.A.	1997	AC 299, 263 40g ai/L SL (SF 09464): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, spring application - North France, 1997 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-029 <none> Unpublished	N	BASF

KCA 9.1.2/9	Farrell K.J.	1997	AC 299, 263 and related compound CL 312, 622 ROD study in soil Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-035 <none> unpublished	N	BASF
KCA 9.1.2/10	Farrell K.J.	1997	AC 299, 263 and related compounds CL 312, 622 ROD study in soil Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-030 <none> Unpublished	N	BASF
KCA 9.1.2/11	Farrell K.J.	1997	AC 299, 263 and related compound CL 312, 622 residue study in soil (Soybean) Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-032 <none> Unpublished	N	BASF
KCA 9.1.2/12	Cronin J.A.	1997	AC 299263 40g ai/l sl (SF09464): rate of dissipation study on AC 299263 CL 312622 and CL 354825 in soil autumn application United kingdom 1996-1997 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-026 Yes Unpublished	N	BASF
KCA 9.1.2/12	Cronin J.A.	1999	AC 299263 40 g a.i./L SL (SF09464) Rate of dissipation study on AC 299263 CL 312622 and CL 354825 in soil - United kingdom 1997-1998 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-042 Yes Unpublished	N	BASF
KCA 9.1.2/13	Cronin J.A.	1999	AC 299263 40 g a.i./L SL (SF09464): Rate of dissipation study on AC 299263, CL 312622 and CL 354825 in soil - Germany 1997-1998 American Cyanamid Co.; Princeton NJ; United States of America ID-620-041 Yes Unpublished	N	BASF

KCA 9.1.2/14	Trewhitt J.A.	2000	Imazamox (AC 299, 263) 40g a.s./L SL (SF 09464): Rate of dissipation study on AC 299, 263, CL 312, 622 and CL 354, 825 in soil, spring application - South France, 1999 (Amendment included - in the first place) Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-055 <none> Unpublished	N	BASF
KCA 9.1.2/15	Young H.	1998	AC 299263 40 g a.i./l sl (sf09464): Rate of dissipation study on AC 299263 CL 312622 and CL 354825 in soil Italy 1998 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-038 Yes Unpublished	N	BASF
KCA 9.1.2/16	Holzer S.	2013	Field soil dissipation study of BAS 720 H (Imazamox) in the formulation BAS 720 06 H on bare soil at 2 different sites in Southern Europe, 2011-2012 2013/1211059 SGS Institut Fresenius GmbH, Taunusstein, Germany Fed. Rep. yes Unpublished	N	BASF
KCA 9.1.2/17	Holzer S.	2013	1st addendum to report - Field soil dissipation study of BAS 720 H (Imazamox) in the formulation BAS 720 06 H on bare soil at 2 different sites in Southern Europe, 2011-2012 2013/1347977 SGS Institut Fresenius GmbH, Taunusstein, Germany Fed. Rep. yes Unpublished	N	BASF
KCA 9.1.2/18	Holzer S.	2013	Field soil dissipation study of BAS 720 H (Imazamox) in the formulation BAS 797 00 H on bare soil at 3 different sites in Northern Europe, 2011-2012 2013/1229816 SGS Institut Fresenius GmbH, Taunusstein, Germany Fed. Rep. yes Unpublished	N	BASF



KCA 9.1.2/19	Trewhitt J.A.	1999	Imazamox (AC 299263) 40g a.i./L SL (SF09464) Rate of dissipation study on AC 299263, CL 312622 and CL 354825 in soil spring application south france 1999 Cyanamid Agriculture Ltd.; Gosport Hampshire PO13 0AS; United Kingdom ID-620-050 Yes Unpublished	N	BASF
KCA 9.1.2/20	Khunachak A.	1995	Freezer storage stability of CL 299, 263 and related compound, CL 312, 622 (soil metabolite of AC 299, 263), in soil American Cyanamid Co.; Princeton NJ; United States of America ID-326-006 <none> Unpublished	N	BASF
KCA 9.1.2/21	Khunachak A.	1995	CL 354, 825: Freezer storage stability of CL 354, 825 residues in soil - Interim report American Cyanamid Co.; Princeton NJ; United States of America ID-326-021 <none> Unpublished	N	BASF
KCA 9.1.2/22	Holzer S.	2013	Chiral analyses of field soil specimens from existing Imazamox field studies 2013/1235109 SGS Institut Fresenius GmbH, Taunusstein, Germany Fed. Rep. yes Unpublished	N	BASF
KCA 9.1.2/23	Knoch E.	2013	Determination of the storage stability of Imazamox (BAS 720 H) and its two metabolites, namely CL 312622 and CL 354825 in soil 2013/1397723 SGS Institut Fresenius GmbH, Taunusstein, Germany Fed. Rep. yes Unpublished	N	BASF
KCA 9.1.2/24	Donaldson F.P.	2013	Kinetic evaluation of fifteen field dissipation trials for BAS 720 H (Imazamox) conducted from 1993-1999 2013/7001766 BASF Crop Protection, Research Triangle Park NC, United States of America no Unpublished	N	BASF

KCa 9.1.2/25	Donaldson F.P.	2013	Kinetic evaluation of five field dissipation trials for BAS 720 H (Imazamox) conducted from 2011-2012 2013/7001768 BASF Crop Protection, Research Triangle Park NC, United States of America no Unpublished	N	BASF
KCA 9.1.2/26	Mangels G.	1994	AC 299263: Adsorption/desorption American Cyanamid Co.; Princeton NJ; United States of America ID-620-002 Yes Unpublished	N	BASF
KCA 9.1.2/27	Mangels G.	1997	AC 299263: adsorption on soils from field dissipation studies in Europe American Cyanamid Co.; Princeton NJ; United States of America ID-620-028 Yes Unpublished	N	BASF
KCA 9.1.2/28	Kuhn P.	1996	AC 299,263: Adsorption / desorption on Japanese soils American Cyanamid Co., Ewing NJ, United States of America ID-620-014 No Unpublished	N	BASF
KCA 9.1.2/29	Heim L.G., Ta C.T.	1998	Imazamox (AC 299263) Adsorption on soils from the United Kingdom American Cyanamid Co.; Princeton NJ; United States of America ID-620-040 Yes unpublished	N	BASF
KCA 9.1.2/30	Heim L.G., Ta C.T.	1998	Imazamox (AC 299263) Adsorption on soils from Italy American Cyanamid Co.; Princeton NJ; United States of America ID-620-039 Yes Unpublished	N	BASF
KCA 9.1.2/31	Kurth H.-H., Ta C.T.	2000	Imazamox (AC 299263): Adsorption to Italian soils Fraunhofer-Institut fuer Umweltchemie und Oekotoxikologie; Schmallenberg; Germany Fed.Rep. ID-620-052 Yes Unpublished	N	BASF

KCA 9.1.2/32	Reynolds O., Ta C.	1999	Imazamox (AC299263) adsorption on a soil from Germany American Cyanamid Co.; Princeton NJ; United States of America ID-620-048 Yes Unpublished	N	BASF
KCA 9.1.2/33	Vasques A.C.	2012	Adsorption / desorption behavior of 14C-BAS 720 H and metabolites 14C-CL312622 and 14C-CL354825 on different US and european soils 2012/3004061 BASF SA, Guaratingueta, Brazil yes Unpublished	N	BASF
KCA 9.1.2/34	Kuhn P.	1995	CL 312,622: Adsorption / desorption on soils American Cyanamid Co.; Princeton NJ; United States of America ID-620-012 Yes Unpublished	N	BASF
KCA 9.1.2/35	Kuhn P.	1995	CL 354,825: Adsorption / desorption on soils American Cyanamid Co.; Ewing NJ; United States of America ID-620-013 Yes Unpublished	N	BASF
KCA 9.1.2/36	Vasques A.C.	2012	Adsorption / desorption behavior of 14C-BAS 720 H and metabolites 14C-CL312622 and 14C-CL354825 on different US and european soils 2012/3004061 BASF SA, Guaratingueta, Brazil yes Unpublished	N	BASF
KCA 9.1.2/37	O'Brien L. & Wang J.	2015	[14C]-CL 354825 (Metabolite of BAS 720 H): Adsorption on Soils at Different Depths 2015/7006043 Interim report	N	BASF

KCA 9.1.2/38	Beigel C.	2002	Response to the question from ANNEX3 to concise outline report of ECCO 106 peer review meeting for Imazamox Section 2, environmental fate and behavior, concerning unknow radactivity and the presence of CL 354825 in the leachate of Imazamox Lysimeter study ENV 93-05 (Hassink 1997) BASF Corp. Agro research, Princeton NJ, United States of America 2002/5004224 No Unpublished	N	BASF
KCA 9.1.2/39	Hassink J.	1997	Outdoor lysimeter study on AC 299,263 (ENV 93-05) Fraunhofer-Institut fuer Umweltchemie und Oekotoxikologie; Schmallingenberg; Germany Fed.Rep. ID-620-019 <none> Unpublished	N	BASF
KCA 9.1.2/40	Pugsley R. et al.	1997	Przm-3 leaching assessment of AC 299263 and its major soil degradates CL 312622 and CL 354825 associated with use on winter oil seed rape peas and maize in France American Cyanamid Co.; Princeton NJ; United States of America ID-620-036 Yes Unpublished	N	BASF
KCA 9.2/1	Holman J.	1997	Hydrolysis of AC 299, 263 American Cyanamid Co.; Ewing NJ; United States of America ID-322-002 Yes Unpublished	N	BASF
KCA 9.2/2	Holman J.	1997	Hydrolysis of CL 312, 622 (soil metabolite of AC 299, 263) American Cyanamid Co.; Ewing NJ; United States of America ID-322-003 <none> Unpublished	N	BASF
KCA 9.2/3	Ta C.T.	1996	Hydrolysis of CL 354, 825 (soil metabolite of AC 299, 263) American Cyanamid Co.; Ewing NJ; United States of America ID-322-004 <none> Unpublished	N	BASF

KCA 9.2/4	An D., Ta C.	1995	Aqueous photolysis of AC 299,263 (incl. amendment 1) American Cyanamid Co.; Princeton NJ; United States of America ID-324-002 Yes Unpublished	N	BASF
KCA 9.2/5	Knoch E.	1996	Determination of the direct phototransformation of AC299263 in a buffered medium at pH 7 Institut Fresenius Chemische und Biologische Laboratorien GmbH; Herten; Germany Fed. Rep. ID-324-003 Yes Unpublished	N	BASF
KCA 9.2/6	Singh M. et al.	2013	Aqueous photolysis of 14C-BAS 720 H 2013/7001838 BASF Crop Protection, Research Triangle Park NC, United States of America yes Unpublished	N	BASF
KCA 9.2/7	Gorman M.	1994	CO2 evolution test (modified Sturm test) for aerobic biodegradation of AC 299, 263 ABC - Analytical Bio-Chemistry Laboratories Inc.; Columbia MO; United States of America ID-690-001 <none> Unpublished	N	BASF
KCA 9.2/8	Schwarz H.	2012	BAS 720 H (Imazamox) - Determination of the ready biodegradability in the CO2-evolution test 2012/1254659 BASF SE, Ludwigshafen/Rhein, Germany Fed.Rep. yes Unpublished	N	BASF
KCA 9.2/9	Ebert D. et al.	2013	14C-BAS 720 H (Imazamox): Aerobic mineralization in surface water 2013/1125941 BASF SE, Limburgerhof, Germany Fed.Rep. yes Unpublished	N	BASF
KCA 9.2/10	McCullough J., Lewis C.J.	1997	AC 299, 263: Degradation and metabolism in water sediment systems Covance Laboratories; Harrogate North Yorkshire HG3 1PY; United Kingdom ID-630-003 <none> Unpublished	N	BASF

KCA 9.2/11	Wu S-S. et al.	2013	Aerobic aquatic metabolism of 14C-BAS 720 H 2013/7001809 Symbiotic Research LLC, Mount Olive NJ, United States of America yes Unpublished	N	BASF
KCA 9.2/12	Donaldson F.P.	2013	Kinetic evaluation of the aerobic aquatic metabolism of BAS 720 H (Imazamox) 2013/7002692 BASF Crop Protection, Research Triangle Park NC, United States of America no Unpublished	N	BASF
KCA 9.2/13	Mangels G.	1994	AC 299,263: Estimation of the photochemical oxidation rate in the atmosphere American Cyanamid Co.; Princeton NJ; United States of America ID-324-001 No Unpublished	N	BASF
KCA 9.2/14	Keenan D.J.	2013	Determination of plant uptake factors for Imazamox and metabolites CL 312622 and CL 354825 in oilseed rape and wheat 2013/7002013 Ricerca Biosciences LLC, Concord OH, United States of America yes Unpublished	N	BASF

## **Appendix 2 Detailed evaluation of the new Annex II studies**

Not performed, not required

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

Not required