EUROPEAN COMMISSION
HEALTH & FOOD SAFETY DIRECTORATE-GENERAL

Safety of the food chain
Pesticides and Biocides

SANCO/12483/2014– rev. 3
29 May 2015

Template to be used for the

List of Endpoints

This document has been conceived as a guidance document of the Commission Services. It does not represent the official position of the Commission. It does not intend to produce legally binding effects. Only the European Court of Justice has jurisdiction to give preliminary rulings concerning the validity and interpretation of acts of the institutions of the EU pursuant to Article 267 of the Treaty.

Revision history

When	What
Rev. 2 of 12.12.2014	The template for the List of Endpoints for the microorganisms has been added.
Rev. 3 of 29.05.2015	In the template for the List of Endpoints for the microorganisms the OECD-numbering has been added.

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Background

This template for the List of Endpoints reflects the new data requirements for active substances and plant protection products as set out in Commission Regulations (EU) No 283/2013 and 284/2013 of 1 March 2013, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market

This template should be used in conjunction with the

- TEMPLATE TO BE USED FOR ASSESSMENT REPORTS (SANCO/12592/2012)
- TEMPLATE TO BE USED FOR ASSESSMENT REPORTS REGARDING LEVEL 3 OF VOLUME 1 (SANCO/11114/2012).

It is envisaged that there will be a general review of the templates for the List of Endpoints within the next years.

Implementation schedule

This document as regards the list of endpoints for chemical active substances has been finalised in the Standing Committee on Plants, Animals, Food and Feed on 11 July 2014. The list of endpoints for microorganisms has been finalised in the Standing Committee on Plants, Animals, Food and Feed on 12 December 2014.

This template should be used for assessment reports prepared for active substances for which an application for the approval or renewal of approval has been submitted as from 1 March 2015.

Preferably these templates should also be used for assessment reports for all active substances (chemicals as well as microorganisms):

- For which an application for approval has been submitted after 1 January 2014 (i.c. an application according to the data requirements as laid down in Regulation (EU) No 283/2013 and No 284/2013),
- covered by Commission Regulation (EU) No 844/2012 *setting out the provisions necessary for the implementation of the renewal procedure for active substances, as provided for in Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market* for which an application for the renewal of approval has been submitted before 1 March 2015.

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

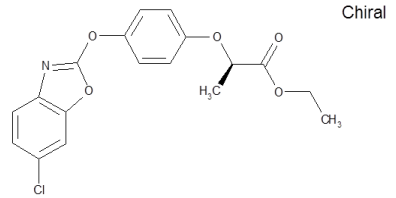
Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Identity, Physical and Chemical Properties, Details of Uses, Further Information (Regulation (EU) N° 283/2013, Annex Part A, points 1.3 and 3.2)

Active substance (ISO Common Name)	Fenoxaprop-P (accepted ISO common name) Variant: **Fenoxaprop-P-ethyl** (unless otherwise stated the data relate to the variant)
Function (*e.g.* fungicide)	Herbicide

Rapporteur Member State	Austria
Co-rapporteur Member State	Finland

Identity (Regulation (EU) N° 283/2013, Annex Part A, point 1)

Chemical name (IUPAC)	ethyl (2R)-2-{4-[(6-chloro-1,3-benzoxazol-2-yl)oxy] phenoxy}propanoate
Chemical name (CA)	propanoic acid, 2-[4-[(6-chloro-2-benzoxazolyl)oxy] phenoxy]-, ethyl ester, (2R)-
CIPAC No	484.202
CAS No	71283-80-2
EC No (EINECS or ELINCS)	not allocated
FAO Specification (including year of publication)	--
Minimum purity of the active substance as manufactured	Reference specification **BCS**: 920 g/kg renewal process **BCS**: 930 g/kg **Cheminova**: 985 g/kg
Identity of relevant impurities (of toxicological, ecotoxicological and/or environmental concern) in the active substance as manufactured	There are no impurities of toxicological or environmental concern
Molecular formula	$C_{18}H_{16}ClNO_5$
Molar mass	361.8 u
Structural formula	

Physical and chemical properties (Regulation (EU) N° 283/2013, Annex Part A, point 2)

Melting point (state purity)	89 – 111 °C (98.4% w/w) (onset temperature = 90 °C; apex temperature = 94.5 °C)
Boiling point (state purity)	The substance decomposes before boiling
Temperature of decomposition (state purity)	Evidence of decomposition above 330 °C (98.4% w/w)
Appearance (state purity)	Pure material: white powder (99.9% w/w) Technical material: white powder (94.1% w/w)
Vapour pressure (state temperature, state purity)	6.5×10^{-6} Pa (20 °C) (98.4% w/w) 1.2×10^{-5} Pa (25 °C) 2.3×10^{-4} Pa (50 °C)
Henry's law constant (state temperature)	5.5×10^{-3} Pa m^3 mol^{-1} at 20 °C Parameter for calculation all at 20 °C Vapour pressure: 6.5×10^{-6} Pa Water solubility in unbuffered water: 0.43 mg /L
Solubility in water (state temperature, state purity and pH)	at 20 °C (99.3% w/w)

pH	Solubility (mg/L)
water unbuffered	0.43
pH 4 buffer	0.43
pH 7 buffer	0.42
pH 10 buffer	0.34

Solubility in organic solvents (state temperature, state purity)

at 20 °C (95.6% w/w)

Solvent	Solubility (g/L)
n-heptane	7.70
acetone	>250
xylene	>250
1,2-dichloroethane	>250
methanol	38.6
n-octanol	19.4
ethyl acetate	>250

Surface tension (state concentration and temperature, state purity)	at 20 °C (90 % saturated solution) (95.6% w/w) 70.5 mN/m
Partition coefficient (state temperature, pH and purity)	at 30 °C (98.9 % w/w) (water/methanol 70:30 v/v) unbuffered solution 4.58 No dissociation at environmentally relevant pH
Dissociation constant (state purity)	pKa = -0.18 (calculation) No dissociation at environmentally relevant pH

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

UV/VIS absorption (max.) incl. ε (state purity, pH)	In neutral acetonitrile (99.5% w/w)

nm	Absorbance	Molar ext. L/mol * cm
239	0.6183	2.29×10^4 (22862)
278	0.2158	0.80×10^4 (7980)
291	0.0402	0.15×10^4 (1487)

No absorbance at wavelengths above 300 nm.

No UV/Vis spectra measured in acidic or in alkaline media since the active substance is unstable under these conditions.

Flammability (state purity)	Not highly flammable (95.6% w/w)
Explosive properties (state purity)	Not explosive (96.3% w/w)
Oxidising properties (state purity)	Not oxidizing (94.5% w/w)

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

(Regulation (EU) N° 284/2013, Annex Part A, points 3, 4)

PUMA S69 EW [Fenoxaprop-P-ethyl + Mefenpyr-diethyl EW 144 (69+75 g/L)]

Crop and/or situation (a)	Member State	Product Name	F G I (b)	Pests or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks (m)
					Type (d-f)	Conc of a.i. g/kg (i)	Method kind (f-h)	Growth stage and season (j)	Number min max (k)	Interval between applications (min)	kg as/hL min max	water L/ha min max	kg as/ha min max		
wheat (s+w) durum wheat rye, w.-rye triticale		**PUMA S69 EW** [Fenoxaprop-P-ethyl + Mefenpyr-diethyl EW 144 (69+75 g/L)]	F	grass weed species	EW	(1) 69 (2) 75	Ground-boom sprayer	BBCH 11-39 (autumn or spring)	1	-	(1) 0.007 - 0.083 (2) 0.0075 - 0.090	100 -400	(1) 0.028 0.083 (2) 0.030. 0.090	F*	Dose rate: **max. 1.2 1 L product/ha** F*: PHI is covered by the normal vegetation period between last application and harvest
barley (s+w)		**PUMA S69 EW** [Fenoxaprop-P-ethyl + Mefenpyr-diethyl EW 144 (69+75 g/L)]	F	grass weed species	EW	(1) 69 (2) 75	Ground-boom sprayer	BBCH 12-32 (autumn or spring)	1	-	(1) 0.007 - 0.083 (2) 0.0075 - 0.090	100 - 400	(1) 0.028 0.083 (2) 0.030. 0.090	F*	Dose rate: **max. 1.2 L product/ha** F*: PHI is covered by the normal vegetation period between last application and harvest

* For uses where the column „Remarks“ in marked in grey further consideration is necessary. Uses should be crossed out when the notifier no longer supports this use(s).
(a) For crops, the EU and Codex classification (both) should be taken into account ; where relevant, the use situation should be described (e.g. fumigation of a structure)
(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)
(c) *e.g.* biting and suckling insects, soil born insects, foliar fungi, weeds
(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypyr). In certain cases, where only one variant synthesised, it is more appropriate to give the rate for the variant (e.g. benthiavalicarb-isopropyl).
(j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of

(d) *e.g.* wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(e) GCPF Codes – GIFAP Technical Monograph N° 2, 1989
(f) All abbreviations used must be explained
(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant – type of equipment used must be indicated application
(k) Indicate the minimum and maximum number of application possible under practical conditions of use
(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha
(m) PHI - minimum pre-harvest interval

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Crop and/or situation (a)	Zone	Product code	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
					Type (d-f)	Conc. of as (i)	Method kind (f-h)	Growth stage & season (j)	Number min max (k)	Interval between applica-tions (min)	kg as/hL min max	water L/ha min max	kg as/ha min max		
wheat (s+w), durum wheat (S+W) rye, triticale	Europe	**CHA 4960** (Fenoxaprop-P-ethyl 69 g/L EW)	F	Monocotyledonous weeds		69g/L	Ground-boom sprayer	BBCH 11-39 (autumn or spring)	1	-	1) 0.010 - 0.083 (2) 0.0053 - 0.041	100 - 400	(1) 0.041 - 0.083 (2) 0.021 - 0.041	F*	Dose rate: **max. 1.2 L product/ha**
barley (s+w)	Europe	**CHA 4960** (Fenoxaprop-P-ethyl 69 g/L EW)	F	Monocotyledonous weeds		69g/L	Ground-boom sprayer	BBCH 11-32 (autumn or spring)	1	-	(1) 0.010 - 0.069 (2) 0.0053 - 0.035	100 - 400	(1) 0.041 - 0.069 (2) 0.021 - 0.035	F*	Dose rate: **max. 1.0 L product/ha**

(1) fenoxaprop-P-ethyl 69 g/L
(2) cloquintocet-mexyl 34,5 g/L
F*: PHI is covered by the normal vegetation period between last application and harvest

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Regulation (EC) N° 1107/2009 Article 8.1(g))

Important note: efficacy, environmental risk and risk to humans by exposure other than via their diet have not been assessed for these uses

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Preparation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s. (i)	method kind (f-h)	range of growth stages & season (j)	number min-max (k)	Interval between application (min)	kg a.s /hL min-max (l)	Water L/ha min-max	kg a.s./ha min-max (l)		
MRL Application (according to Article 8.1(g) of Regulation (EC) No 1107/2009)															

(a) For crops, the EU and Codex classifications (both) should be taken into account; where relevant, the use situation should be described (e.g. fumigation of a structure)
(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)
(c) *e.g.* biting and sucking insects, soil born insects, foliar fungi, weeds
(d) *e.g.* wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(e) CropLife International Technical Monograph no 2, 6th Edition. Revised May 2008. Catalogue of pesticide
(f) All abbreviations used must be explained
(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
(h) Kind, *e.g.* overall, broadcast, aerial spraying, row, individual plant, between the plant- type of equipment used must be indicated
(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypyr). **In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. benthiavalicarb-isopropyl).**
(j) Growth stage range from first to last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
(k) Indicate the minimum and maximum number of applications possible under practical conditions of use
(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha
(m) PHI - minimum pre-harvest interval

Further information, Efficacy

Effectiveness (Regulation (EU) N° 284/2013, Annex Part A, point 6.2)

The representative uses on cereals and further uses acc. to article 4.7, all against weeds, with the representative formulation FPP+MPR EW 144 (69+75 g/L) and CHA 4960 are considered fully justified by the applicant.

However, a summary of achieved control (%control, number of trials), as required according to SANCO/10054/2013-rev.3, 11 July 2013 (Appendix I) is not available.
It is concluded that due to missing data effectiveness cannot be assessed conclusively.

Adverse effects on field crops (Regulation (EU) N° 284/2013, Annex Part A, point 6.4)

No adverse effects on the crops have been observed when the representative formulation is applied according to good agricultural practice.

A summary of crop safety (x specific crop safety trials with N doses and 2N doses, maximum % phytotoxicity), as required according to SANCO/10054/2013-rev.3, 11 July 2013 (Appendix I) is not available.
It is concluded that crop safety cannot be assessed conclusively.

Observations on other undesirable or unintended side-effects (Regulation (EU) N° 284/2013, Annex Part A, point 6.5)

No other undesirable or unintended side-effects have been observed when the representative formulation is applied according to good agricultural practice.

According to SANCO/10054/2013-rev.3, 11 July 2013 (Appendix I), a brief summary of any testing on impacts on succeeding or adjacent crops should be available for Fenoxaprop-P-ethyl.

Groundwater metabolites: Screening for biological activity (SANCO/221/2000-rev.10-final Step 3 a Stage 1)

	Chlorobenzoxazolone (AE F054014)	*fenoxaprop-Pacid (AE F088406)*	*HOPP-acid (AE F096918)*
Activity against target organism	*Not triggered*	*Not triggered*	*Not triggered*

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Methods of Analysis

Analytical methods for the active substance (Regulation (EU) N° 283/2013, Annex Part A, point 4.1 and Regulation (EU) N° 284/2013, Annex Part A, point 5.2)

Technical a.s. (analytical technique)	HPLC-UV	[also CIPAC]
Impurities in technical a.s. (analytical technique)	HPLC-UV GC-FID	
Plant protection product (analytical technique)	HPLC-UV	[also CIPAC]

Analytical methods for residues (Regulation (EU) N° 283/2013, Annex Part A, point 4.2 & point 7.4.2)

Residue definitions for monitoring purposes

Food of plant origin		Sum of Fenoxaprop-ethyl and all metabolites converted to 6-chloro-2,3- dihydrobenzoxazol-2-one, expressed as fenoxaprop-ethyl
Food of animal origin		Sum of Fenoxaprop-ethyl and all metabolites converted to 6-chloro-2,3- dihydrobenzoxazol-2-one, expressed as fenoxaprop-ethyl
Soil		Fenoxaprop-ethyl and the sum of all components which give chlorobenzoxazolone (AE F054014) metabolites expressed as fenoxaprop-P-ethyl
Sediment		Fenoxaprop-ethyl and the sum of all components which give chlorobenzoxazolone (AE F054014) metabolites expressed as fenoxaprop-P-ethyl
Water	surface	Fenoxaprop-ethyl and the sum of all components which give chlorobenzoxazolone (AE F054014) metabolites expressed as fenoxaprop-P-ethyl
	drinking/ground	Fenoxaprop-ethyl and the sum of all components which give chlorobenzoxazolone (AE F054014) metabolites expressed as fenoxaprop-P-ethyl
Air		
Body fluids and tissues		

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Monitoring/Enforcement methods

Food/feed of plant origin (analytical technique and LOQ for methods for monitoring purposes)	**Kaune A.; 2003** **Rosati D.; 2003 (ILV)** GC-MS Analyte: LOQ: 0.01 mg/kg AE F46360 [1] AE F054014 AE F088406 [2] AE F054014 AE F054014 [3] AE F054014 Matrix: Grain **Freitag, T.; 2006** **Class, T.; 2004 (ILV)** LC-MS/MS Analyte: LOQ: 0.01 mg/kg AE F46360 [1]: AE F054014 (one transition) AE F088406 [2] AE F054014 (one transition) AE F054014 [3] AE F054014(two transitions Matrices: Grain, Straw, Olives, Citrus Grain, Tomato (ILV)
Food/feed of animal origin (analytical technique and LOQ for methods for monitoring purposes)	**Lakaschus, S.; Amann, S.; 2011** **Konrad, St.; Neuland, M.; 2011 (ILV)** LC-MS/MS two transitions Analyte: LOQ: 0.01 mg/kg AE F46360 [1] AE F054014 AE F088406 [2] AE F054014 AE F054014 [3] AE F054014 Matrices: Whole Milk, Muscle, Kidney, Liver, Fat, Whole Egg
Soil (analytical technique and LOQ)	**Freitag T., (2007)** LC-MS/MS two transitions Analyte: LOQ: 0.01 mg/kg AE F033171 [4] AE F053022 [5] AE F054014 [3] Matrix: Soil (silt loam, sandy loam)
Water (analytical technique and LOQ)	**Braune, M.; 2013** **Thies, S.; 2015 (ILV)** LC-MS/MS two transitions Analyte: LOQ: 0.05 µg/L AE F046360 [1] AE F088406 [2] Matrix: Surface water

Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Air (analytical technique and LOQ)	**Bacher R.; (2005)** LC-MS/MS two transitions Analyte: LOQ: 1.0 µg/m^3 AE F46360 [1] AE F088406 [2] Matrix: Air 22 °C and 30 % RH and 36 °C and 100 % RH
Body fluids and tissues (analytical technique and LOQ)	**Burton, D.; 2016** LC-MS/MS two transitions Analyte: LOQ: 0.01 mg/kg AE F46360 [1] AE F054014 AE F088406 [2] AE F054014 AE F054014 [3] AE F054014 Matrices: Chicken egg, muscle, liver, skin/fat and blood

[1] AE F046360 Fenoxaprop-P-ethyl not enantio-selective detected

[2] AE F088406 Fenoxaprop-P (free acid) not enantio-selective detected

[3] AE F054014 6-chloro-2,3-dihydro-benzoxazol-2-one

[4] AE F33171 Fenoxaprop-ethyl

[5] AE F053022 Fenoxaprop

Classification and labelling with regard to physical and chemical data (Regulation (EU) N° 283/2013, Annex Part A, point 10)

Substance	fenoxaprop-P-ethyl
Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended][1]:	No classification regarding physical and chemical data
Peer review proposal [2] for harmonised classification according to Regulation (EC) No 1272/2008:	No classification regarding physical and chemical data

[1] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

[2] It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)

Section 3 Residues

Impact on Human and Animal Health

Absorption, distribution, metabolism and excretion (toxicokinetics) (Regulation (EU) N° 283/2013, Annex Part A, point 5.1)

Rate and extent of oral absorption/systemic bioavailability	Rapid (Cmax <8hrs) and almost completely absorbed (>90%) after oral low dose application in rats, based on urinary and faecal (assumed biliary) excretion after oral and i.v. application
Toxicokinetics	Cmax, Tmax, Plasma $T_{½}$ not reported for fenoxaprop-P-ethyl
Distribution	Widely distributed, highest concentrations in kidneys, blood, fatty tissues and liver; total amount after 7 days: 0.7-2%
Potential for bioaccumulation	No potential for accumulation
Rate and extent of excretion	> 75% excreted within 48 hours; males generally excrete lower amounts of radioactivity via urine (35 - 65%) than via faeces (43 - 54%)
Metabolism in animals	Extensively metabolised via hydrolysis into free acid and conjugation
In vitro metabolism	Rapid degradation to mainly sulfate ester of M11 in mouse, rat, rabbit, dog and human liver (13-week oral toxicity study available) No unique human metabolite identified
Toxicologically relevant compounds (animals and plants)	Parent compound
Toxicologically relevant compounds (environment)	Parent compound

Acute toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.2)

Rat LD_{50} oral	2,000 > LD50 > 300 mg/kg bw	**H302**
Rat LD_{50} dermal	> 2000 mg/kg bw (♂+♀)	
Rat LC_{50} inhalation	> 1.224 mg/La air (♂+♀)	
Skin irritation	Slightly irritating (classification not required)	
Eye irritation	Slightly irritating (classification not required)	
Skin sensitisation	Sensitizer to the skin (M&K)	**H317**
Phototoxicity	Not phototoxic on BALB/c 3T3 cells	

Short-term toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.3)

Target organ / critical effect	Liver, kidneys (rat, mouse, to a weaker extent also dog)	(*mention proposed*

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)

Section 3 Residues

		classif)
Relevant oral NOAEL	Rat: overall 2 mg/kg bw/d (13 wk + 6 mo interim) Mouse: overall 5.5 mg/kg bw/d (13 wk + 12 mo interim) Dog: 15.6 mg/kg bw/d (13 wk)	
Relevant dermal NOAEL	20 mg/kg bw/d (rats, 21 appl. within 30d)	**EUH066**
Relevant inhalation NOAEL	0.015 mg/L air (rats, 28 exposures 6h/day within 40 days, nose only)	

Genotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.4)

In vitro studies	Negative ± S9 in reverse mutation assays, forward mutation assay, gene mutation assay, L5178Y TK+/- MLA, CA tests in human lymphocytes, mitotic gene conversion in S. cerevisiae, in vitro UDS test in mammalian cells	
In vivo studies	Negative in oral MN test in NMRI mice (*state the available in vivo studies and the results*)	
Photomutagenicity	Not required as not phototoxic	
Potential for genotoxicity	Fenoxaprop-P-ethyl is unlikely to be genotoxic	

Long-term toxicity and carcinogenicity (Regulation (EU) N°283/2013, Annex Part A, point 5.5)

Long-term effects (target organ/critical effect)	<u>Studies performed with the racemic fenoxaprop-ethyl, data bridged for the a.s. fenoxaprop-P-ethyl</u> Liver, kidneys (rat, mouse) Decreased bodyweight gain (dog)	**H373 (kidney)**
Relevant long-term NOAEL	2-year, rat: 1.6 mg/kg bw per day 2-year, mouse: 5.7 mg/kg bw per day 2-year, dog: 1 mg/kg bw per day	
Carcinogenicity (target organ, tumour type)	Liver adenomas and carcinomas in NMRI mice: non-genotoxic mechanism in rodents (peroxisome proliferation) Unlikely to pose a carcinogenic risk to humans. No tumours found in rats and dogs	
Relevant NOAEL for carcinogenicity	24-month, mouse: ♂ 5.67 mg/kg bw/d, ♀ 6.84 mg/kg bw/d	

Reproductive toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.6)

Reproduction toxicity

Reproduction target / critical effect	Studies performed with the racemic fenoxaprop-ethyl, data bridged for the a.s. fenoxaprop-P-ethyl Parental: organ weight changes of liver, kidneys Reproduction: no effects on reproduction Offspring: reduced bodyweight during lactation; organ weight changes of liver, kidneys	
Relevant parental NOAEL	1.4 mg/kg bw per day	
Relevant reproductive NOAEL	8.8 mg/kg bw per day	
Relevant offspring NOAEL	1.4 mg/kg bw per day	

Developmental toxicity

Developmental target / critical effect	Maternal toxicity: decreased food consumption and bodyweight gain (rat and rabbit), reduced placental weight (rat only) Fetal toxicity: delayed ossification particularly in cranial bones (rat); increased incidence of a 13th rib (rabbit)	
Relevant maternal NOAEL	Rat and rabbit: 32 mg/kg bw per day	
Relevant developmental NOAEL	Rat: 10 mg/kg bw per day Rabbit: 32 mg/kg bw per day	

Neurotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.7)

Acute neurotoxicity	No data, no concern from other studies	
Repeated neurotoxicity	No data, no concern from other studies	
Additional studies (e.g. delayed neurotoxicity, developmental neurotoxicity)	No additional studies	

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Rapporteur Member State	Month and year	Active Substance (Name)

Section 3 Residues

Other toxicological studies (Regulation (EU) N° 283/2013, Annex Part A, point 5.8)

Supplementary studies on the active substance	Increased catalase activity (liver) in mice (80 ppm onwards) after short term repeated dose indicating peroxisome proliferation Immunotoxicity study: No evidence of immunotoxic potential Combined repeated dose toxicity study with the active substance and the safener mefenpyr-diethyl: no change of the toxicological profile of fenoxaprop-P-ethyl
Endocrine disrupting properties	No mechanistic studies were submitted.
Studies performed on metabolites or impurities	6-Chlorobenzoxazolone: 13-week oral, rat: decreased bodyweight gain in ♂ and only at h.d. in ♀ (compensated during treatment-free period)

Medical data (Regulation (EU) N° 283/2013, Annex Part A, point 5.9)

No detrimental effects noted in personnel handling fenoxaprop-P-ethyl (manufacture, processing, handling)

Summary[3] (Regulation (EU) N°1107/2009, Annex II, point 3.1 and 3.6)	Value (mg/kg bw (per day))	Study	Uncertainty factor
Acceptable Daily Intake (ADI)	0.01	2-year feeding study in dogs supported by the multi-generation study in rats	100
Acute Reference Dose (ARfD)	0.1	Developmental study in rats	100
Acceptable Operator Exposure Level (AOEL)	0.014	Multi-generation study in rats	100
Acute Acceptable Operator Exposure Level (AAOEL)	0.1	Developmental study in rats	100

[3] If available include also reference values for metabolites

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Dermal absorption (Regulation (EU) N° 284/2013, Annex Part A, point 7.3)

Representative formulation: PUMA S 69 EW (69 g/L fenoxaprop-P-ethyl)	Concentrate: 0.7 %; Spray dilution (0.22g/L fenoxaprop-P-ethyl): 27 % *in vitro* human skin with Puma S 69 EW
CHA 4960 (69 g/L fenoxaprop-P-ethyl, EW)	Concentrate: 3 %; Spray dilution (0.138g/L fenoxaprop-P-ethyl): 17 % rat *in vivo* with CHA 4960 + *in vitro* human/rat skin with CHA 4960

Exposure scenarios (Regulation (EU) N° 284/2013, Annex Part A, point 7.2)

Operators	Use: cereals, tractor field application, application rate 0.083 kg a.s./ha PUMA S 69 EW (EFSA AOEM): Without PPE: 34 % of AOEL CHA 4960 (EFSA AOEM): Without PPE: 66.9 % of AOEL
Workers	PUMA S 69 EW: 22.4% CHA 4960: 14.1% according to EFSA AOEM
Bystanders and residents	PUMA S 69 EW: Resident (EFSA AOEM), 2-3m: Adult: 19.3 % of AOEL Children: 55 % of AOEL Bystander (Martin *et al.*), 1m: Adult: 7.4 % of AOEL Children: 5.8 % of AOEL CHA 4960: Resident (EFSA AOEM) 2-3m: Adult: 12.8 % of AOEL Children: 37.6 % of AOEL Bystander (Martin *et al.*), 1m: Adult: 4.7 % of AOEL Children: 3.6 % of AOEL

List of end points

Rapporteur Member State	Month and year	Active Substance (Name)

Section 3 Residues

Classification with regard to toxicological data (Regulation (EU) N° 283/2013, Annex Part A, Section 10)

Substance :	Fenoxaprop-P-ethyl
Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended][4] :	Skin Sens. 1 H317 STOT RE 2 H373 (kidneys)
Peer review proposal [5] for harmonised classification according to Regulation (EC) No 1272/2008:	Acute Tox 4 H302 (oral) Skin Sens. 1 H317 STOT RE 2 H373 (kidneys)

Metabolism in plants
Regulation (EU) No 283/2013, Sections 6.2.1, 6.5.1, 6.6.1 and 6.7.1

Primary crops (Plant groups covered) **OECD test guideline 501**	**Crop groups**	**Crop(s)**	**Application(s)**	**PHI** (days)
	Fruit crops	-	-	-
	Root crops	-	-	-
	Leafy crops		-	-
	Cereals/grass crops	Wheat	1x 143 g as/ha, BBCH 23-24	29, 106
		Wheat	1x 110 g as/ha, early tillering	0, 15, 30, 60, 109
		Wheat	1x 90 g as/ha, 3-leaf stage	1,7
		Wheat	1x 183 g as/ha, early tillering	0, 10, 37, 59, 83, 91
		Wheat	1x 180 g as/ha, early tillering	2h, 4h, 21h, 27h, 96h, 10d
		Barley	1x 90 g as/ha, 2-3 leaf stage	2h, 4h, 6h, 24h, 48h, 72h, 144h
		Rice	1x 90 g as/ha, 5-6 leaf stage	2, 6, 7, 9, 13, 17, 22, 36, 63, 84, 112
	Pulses/Oilseeds	Soybean	1x 110 g as/ha, 2-3 leaf stage	5, 12
	Miscellaneous	-	-	-

[4] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

[5] It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

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	In plants the active is rapidly converted via ester hydrolysis to form the free acid fenoxaprop-P which still shows herbicidal activity. Further cleavage of the ether-linkage between the bezoxazolone- and phenoxy-part of the molecule leads to the terminal metabolites chlorobenzoxazolone (AE F054014) and Hopp acid (AE F096918). The metabolism is not influenced by the presence of safeners. No racemisation of the active could be observed.			
Rotational crops (metabolic pattern) **OECD test guideline 502**	**Crop groups**	**Crop(s)**	**PBI** (days)	**Comments**
	Root/tuber crops	Little radish	30, 365	1x 0.113 kg as/ha, bare soil
		carrots	30	1x 0.113 kg as/ha, bare soil
		Red beets	111	1x 0.110 kg as/ha, rice plants
	Leafy crops	spinach	30, 365	1x 0.113 kg as/ha, bare soil
			111	1x 0.110 kg as/ha, rice plants
		lettuce	30	1x 0.110 kg as/ha, rice plants
	Cereals (small grain)	wheat	30, 365	1x 0.113 kg as/ha, bare soil
			111	1x 0.110 kg as/ha, rice plants
		buckwheat	30	1x 0.113 kg as/ha, bare soil
	Other			
Rotational crop and primary crop metabolism similar ?	Yes Even with applications at exaggerated rates to bare soil radioactive residues were low for all rotations. The highest residue determined in edible plant parts intended for human consumption was 0.006 mg/kg TRR. Therefore no metabolite identification was performed. No tendency for accumulation in the plants or translocation into deeper soil layers could be observed.			
Processed commodities (standard hydrolysis study) **OECD Guideline 507**	**Conditions**			
	20 min, 90°C, pH 4	Not necessary, since no significant residues in the raw agricultural commodities (RAC) at harvest (all residues in grains are < 0.01 mg/kg)		
	60 min, 100°C, pH 5			
	20 min, 120°C, pH 6			
Residue pattern in processed commodities similar to residue pattern in raw commodities?	Not applicable			
Plant residue definition for monitoring (RD-Mo) **OECD Guidance** (Series on pesticides No 31)	Sum of Fenoxaprop-ethyl and all metabolites converted to 6-chloro-2,3- dihydrobenzoxazol-2-one, expressed as fenoxaprop-ethyl			
Plant residue definition for risk assessment (RD-RA)	Sum of Fenoxaprop-P-ethyl and all metabolites converted to 6-chloro-2,3- dihydrobenzoxazol-2-one, expressed as fenoxaprop-P-ethyl			
Conversion factor (monitoring to risk assessment)	Not relevant			

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Residues in succeeding crops (Regulation (EU) No 283/2013, Section 6.6.2)

Confined rotational crop study **OECD test guideline 502**	Total radioactive residues in plants sown 30 days and one year after application of ^{14}C-Fenoxaprop-P-ethyl to bare soil (0.113 kg as/ha) were low or even below the limits of detection for all crops at all time points investigated. Fenoxaprop-P-ethyl was rapidly degraded in soil since on day 0 (start of the experiment) only the hydrolysed free fenoxaprop-P acid and the metabolite chlorobenzoxazolone were detectable. Uptake of radioactivity into the soil matter or edible plant parts is considered negligible.
Field rotational crop study **OECD test guideline 504**	Not required

Stability of residues (Regulation (EU) No 283/2013, Section 6.1) **OECD test guideline 506**

Plant products (Category)	**Commodity**	**T** (°C)	**Stability** (Month/year)				
			AE F046360	AE F033171	AE F088406	AE F053022	AE F054014
High water content	-						
High oil content	-						
High protein content	-						
High starch content	Wheat grain	-20	24 month		24 month		24 month
	Barley grain	-30	14 month	14 month		14 month	14 month
	Barley straw	-30	14 month	14 month		14 month	14 month
High acid content	-						
Processed products	-						
Other	-						
Duration covers the length over which samples from the residue trials have been stored prior analyses.							

Animal	**Animal commodity**	**T** (°C)	**Stability** (Month/Year)			
			AE F033171	AE F053022	AE F054014	
Poultry	Muscle	-23	12 month	12 month	12 month	
	Liver	-23	12 month	12 month	12 month	
	Milk	-	-	-	-	
	Egg	-23	12 month	12 month	12 month	
	Other					
Tissues were analysed within 4 weeks after sacrifice of the animals.						

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Rapporteur Member State	Month and year	Active Substance (Name)

Section 3 Residues

Summary of residues data from the supervised residue trials (Regulation (EU) N° 283/2013, Annex Part A, point 6.3) OECD Guideline 509, OECD Guidance, series on pesticides No 66 and OECD MRL calculator

Crop	**Region/ Indoor** (a)	**Residue levels** (mg/kg) **observed in the supervised residue trials relevant to the supported GAPs** (b)	**Recommendations/comments** (OECD calculations)	**MRL** proposals (mg/kg)	**HR** (mg/kg) (c)	**STMR** (mg/kg) (d)
Representative uses						
Cereal grain - wheat, durum wheat, rye, triticale (BBCH 39)	NEU	**8x < 0.01***		**0.01***	< 0.01*	< 0.01*
	SEU	**7x < 0.01***				
Barley grain (BBCH 32)	NEU	3x < 0.02*	Residue trials evaluated in the DAR (2005) with an LOQ of 0.02 mg/kg were not considered for MRL calculation Extrapolation from wheat to barley according to SANCO 7525/VI/95, rev. 10.2 (23.09.2016) considered possible before forming of the edible part			
	SEU	2x < 0.02*				
Cereal straw	NEU	BBCH 39: 0.14, 0.2, 0.25, 0.27, 2x 0.34, 0.45, 0.7		-	0.70	0.31
Barley, rye straw		BBCH 32: 7x < 0.05*		-	-	-
Cereal straw	SEU	BBCH 39: 0.10, 0.11, 0.18, 0.20, 0.22, 2x 0.23, 2x 0.27, 0.28, 0.29, 0.30, 0.42, 0.57, 0.58, 0.73, 0.74, 0.89		-	0.89	0.28
Barley straw		BBCH 32: 2x < 0.05*		-	-	-
Summary of data on residues in pollen and bee products (Regulation (EU) No 283/2013, Annex Part A, point 6.10.1)						
Product(s)	**Region**	**Residue data** (mg/kg)	**Recommendations/comments**			
Not required. Application early in the growing season (latest at BBCH 39, stem elongation). Cereals are not attractive for bees with reference to pollen and not relevant for collection of nectar (these crops do not produce nectar).						

(a): **NEU** or **SEU** for northern or southern **outdoor** trials in EU member states (**N+SEU** if both zones), **Indoor** for glasshouse/protected crops, **Country** if non-EU location.

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(b): Residue levels in trials conducted according to GAP reported in ascending order (*e.g.* 3x <0.01, 0.01, 6x 0.02, 0.04, 0.08, 3x 0.10, 2x 0.15, 0.17). When residue definition for monitoring and risk assessment differs, use **Mo/RA** to differentiate data expressed according to the residue definition for **Mo**nitoring and **R**isk **A**ssessment.

(c): **HR**: Highest residue. When residue definition for monitoring and risk assessment differs, HR according to residue definition for monitoring reported in brackets (HR_{Mo}).

(d): **STMR:** Supervised Trials Median Residue. When residue definition for monitoring and risk assessment differs, STMR according to definition for monitoring reported in brackets ($STMR_{Mo}$).

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Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 3 Residues

Inputs for animal burden calculations

Feed commodity	Median dietary burden		Maximum dietary burden	
	(mg/kg)	**Comment**	(mg/kg)	**Comment**
Representative uses				
Wheat grain	0.01	STMR	0.01	Highest residue
Barley grain	0.02	STMR	0.02	Highest residue
Rye grain[#]	0.01	STMR	0.01	Highest residue
Wheat straw	0.28	STMR	0.89	Highest residue
Barley straw	0.05	STMR	0.05	Highest residue
Rye straw[#]	0.28	STMR	0.89	Highest residue

[#]..extrapolated from wheat

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Rapporteur Member State	Month and year	Active Substance (Name)
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Section 3 Residues

Residues from livestock feeding studies (Regulation (EU) N° 283/2013, Annex Part A, points 6.4.1, 6.4.2, 6.4.3 and 6.4.4)

OECD Guideline 505 and OECD Guidance, series on pesticides No 73

MRL calculations	**Ruminant**				**Pig/Swine**		**Poultry**		**Fish**	
Highest expected intake (mg/kg bw/d) (mg/kg DM for fish)	Beef cattle	0.005	Ram/Ewe	0.014	Breeding	0.001	Broiler	0.001	Carp	-
	Dairy cattle	0.008	Lamb	0.018	Finishing	0.001	Layer	0.008	Trout	-
							Turkey	0.001	Fish intake >0.1 mg/kg DM	
Intake >0.004 mg/kg bw	Yes		Yes		No		Yes (Layer) /No		Yes/No	
Feeding study submitted	Yes Hoe 033171: Hoe 054014= 1:1		No		No		Yes		No	
Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and **N rates**	Level 1 0.02 mg/kg bw	Beef: 3.8 N Dairy: 2.4 N	Level	Lamb: 1.1 N Ewe: 1.4 N	Level	N rate Breed/Finish	Level 1 0.11 mg/kg bw	B or T: 85 N Layer: 13 N	Level	N rate Carp/Trout
	Estimated HR[(a)] at 1N	**MRL** proposals	Estimated HR[(a)] at 1N	**MRL** proposals	Estimated HR[(a)] at 1N	**MRL** proposals	Estimated HR[(a)] at 1N	**MRL** proposals	Estimated HR[(a)] at 1N	**MRL** proposals
Muscle	0.008	< 0.01	0.021	0.03			0.01	0.01	-	-
Fat	0.010	0.01	0.010	0.01			0.001	< 0.01	-	-
Meat[(b)]	0.020		0.018				0.008			
Liver	0.008	<0.01	0.018	0.02			0.011	0.015		
Kidney	0.010	0.01	0.010	0.01			-	-		
Milk[(a)]	0.010	0.01	0.010	0.01						
Eggs							0.01	0.01		
Method of calculation[(c)]	Estimated intakes below 30% lowest feeding level. No values derived by linear regression.						Estimated intakes below 30% lowest feeding level. No values derived by linear regression.			

[(a)]: Estimated HR calculated at 1N level (**estimated mean level for milk**).
[(b)]: HR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry
[(c)]: The OECD guidance document on residues in livestock (series on pesticides 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by intrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.

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Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 3 Residues

STMR calculations	**Ruminant**				**Pig/Swine**		**Poultry**		**Fish**	
Median expected intake (mg/kg bw/d) (mg/kg DM for fish)	Beef cattle	0.002	Ram/Ewe	0.005	Breeding	< 0.001	Broiler	0.001	Carp	
	Dairy cattle	0.003	Lamb	0.006	Finishing	< 0.001	Layer	0.004	Trout	
							Turkey	0.001		
Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and **N rates**	Level 1 0.2 mg/kg bw	Beef: 3.8N Dairy: 2.4N	Level	Lamb : N Ewe: N	Level	N rate Breed/Finish	Level 1 0.11 mg/kg bw	B or T: 85 N Layer: 13N	Level	N rate Carp/Trout
	Mean level in feeding level	Estimated **STMR**[(b)] at 1N	Mean level in feeding level	Estimated **STMR**[(b)] at 1N	Mean level in feeding level	Estimated **STMR**[(b)] at 1N	Mean level in feeding level	Estimated **STMR**[(b)] at 1N	Mean level in feeding level	Estimated **STMR**[(b)] at 1N
Muscle	0.01	0.005					0.01	0.010		
Fat	0.01	0.01					0.011	< 0.01		
Meat[(a)]	0.01	0.01					0.010	0.010		
Liver	0.01	0.01					0.083	< 0.01		
Kidney	0.01	0.01					-	-		
Milk	0.01	0.01								
Eggs							0.01	0.01		
Method of calculation[(c)]										

[(a)]: STMR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry
[(b)]: When the mean level is set at the LOQ, the STMR is set at the LOQ.
[(c)]: The OECD guidance document on residues in livestock (series on pesticide 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by intrapolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.

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Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 3 Residues

Conversion Factors (CF) for monitoring to risk assessment

Not relevant

Processing factors (Regulation (EU) N° 283/2013, Annex Part A, points 6.5.2 and 6.5.3)

OECD Guideline 508 and OECD Guidance, series on testing and assessment No 96

Crop (RAC)/Edible part or Crop (RAC)/Processed product	**Number of studies**[(a)]	**Processing Factor** (PF)		**Conversion Factor** (CF_P) **for RA**[(b)]
		~~Individual values~~	~~Median PF~~	
Representative uses				
The supported uses of fenoxaprop-P-ethyl on cereals do not result in significant residues in the raw agricultural commodities (RAC) at harvest (all residues in grains are < 0.01 mg/kg).				

[(a)]: Studies with residues in the RAC at or close to the LOQ should be disregarded (unless concentration)
[(b)]: When the residue definition for risk assessment differs from the residue definition for monitoring

Consumer risk assessment (Regulation (EU) N° 283/2013, Annex Part A, point 6.9)

Including all uses (representative uses and uses related to an MRL application).

ADI	**0.01 mg/kg bw per day**		
TMDI according to EFSA PRIMo	Highest TMDI:	21.9 % ADI	(FR toddler)
NTMDI, according to (to be specified)	Highest NTMDI:	- % ADI	(MS, diet)
IEDI (% ADI), according to EFSA PRIMo	Highest IEDI:	- % ADI	(MS, diet)
NEDI (% ADI), according to (to be specified)	Highest NEDI:	- % ADI	(MS, diet)
Factors included in the calculations	-		
ARfD	**0.1 mg/kg bw**		
IESTI (% ARfD), according to EFSA PRIMo	Highest IESTI:	1.9 % ARfD	(milk)
NESTI (% ARfD), according to (to be specified)	Highest NESTI:	- % ARfD	(commodity)
Factors included in IESTI and NESTI	-		

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Rapporteur Member State	Month and year	Active Substance (Name)
Austria	**February 2018**	**Fenoxaprop-P-ethyl**

Section 3 Residues

Proposed MRLs (Regulation (EU) No 283/2013, Annex Part A, points 6.7.2 and 6.7.3)

Code[a]	Commodity/Group	MRL/Import tolerance[b] (mg/kg) and Comments	
Plant commodities			
Representative uses			
0500090	Wheat (Triticale)	0.01*	15 new residue trials (8x NEU, 7x SEU)
0500070	Rye	0.01*	Extrapolated from wheat[c]
0500010	Barley	0.01*	Extrapolated from wheat[c]
Animal commodities			
1012000	**Bovine**		
	Muscle	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Fat	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Liver	0.01	Covered by the existing temporary MRL (0.1 mg/kg)
	Kidney	0.01	Covered by the existing temporary MRL (0.1 mg/kg)
	Milk	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
1016000	**Poultry**		
	Muscle	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Fat	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Liver	0.015	Covered by the existing temporary MRL (0.05 mg/kg)
	Eggs	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
1013000	**Sheep**		
	Muscle	0.03	Covered by the existing temporary MRL (0.05 mg/kg)
	Fat	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Liver	0.02	Covered by the existing temporary MRL (0.05 mg/kg)
	kidney	0.01	Covered by the existing temporary MRL (0.05 mg/kg)
	Milk	0.01	Covered by the existing temporary MRL (0.05 mg/kg)

* … LOQ (Limit of quantification)

(a): Commodity code number, as listed in Annex I of Regulation (EC) No 396/2005

(b): MRLs proposed at the LOQ, should be annotated by an asterisk (*) after the figure.

(c): SANCO 7525/VI/95, Rev. 10.2 (23.09.2016)

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Environmental fate and behaviour

Route of degradation (aerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.1)

Mineralisation after 100 days	9.7 - 32.5 % after 100 d, [^{14}C-ClPh]-label (n[6] = 4) 8.4 - 16.6 % after 37 d, [^{14}C-ClPh]-label (n = 4) 33.5 - 49.6 % after 37 d, [^{14}C-Ph]-label (n = 4)
Non-extractable residues after 100 days	49.4 - 70.1 % after 100 d, [^{14}C-ClPh]-label (n = 4) 63.5 - 68.7 % after 37 d, [^{14}C-ClPh]-label (n = 4) 37.6 - 51.3 % after 37 d, [^{14}C-Ph]-label (n = 4)
Metabolites requiring further consideration - name and/or code, % of applied (range and maximum)	Fenoxaprop-P-acid (AE F088406): 41.9 - **85.8 %** at 0.25 - 3 d (n = 8) [^{14}C-ClPh] & [^{14}C-Ph] Chlorobenzoxazolone (AE F054014): 1.5 - **19.1 %** at 3 - 37 d (n = 8) [^{14}C-ClPh]

Route of degradation (anaerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.2)

Mineralisation after 100 days	Fenoxaprop-P-ethyl (AE F046360) applied: 0.6 % after 120 d, [^{14}C-ClPh]-label (n = 1) 3.9 % after 126 d, [^{14}C-ClPh]-label (n = 1) 22.7 % after 126 d, [^{14}C-Ph]-label (n = 1) Racemic fenoxaprop-ethyl (AE F033171) applied: 7.8 % after 120 d, [^{14}C-Ph]-label (n = 1)
Non-extractable residues after 100 days	Fenoxaprop-P-ethyl (AE F046360) applied: 76.4 % after 120 d, [^{14}C-ClPh]-label (n = 1) 63.9 % after 126 d, [^{14}C-ClPh]-label (n = 1) 26.5 % after 126 d, [^{14}C-Ph]-label (n = 1) Racemic fenoxaprop-ethyl (AE F033171) applied: 11.0 % after 120 d, [^{14}C-Ph]-label (n = 1)
Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)	Fenoxaprop-P-ethyl (AE F046360) applied: Fenoxaprop-P-acid (AE F088406): 93.8 - **94.8 %** at 2 - 3 d (n = 2) [^{14}C-ClPh] & [^{14}C-Ph]

[6] n corresponds to the number of soils.

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

	Chlorobenzoxazolone (AE F054014): **7.5 %** at 59 d (n = 1) [^{14}C-ClPh] HOPP-acid (AE F054014): **49.2 %** at 59 d (n = 1) [^{14}C-Ph] Racemic fenoxaprop-ethyl (AE F033171) applied: Fenoxaprop-acid (AE F053022): **96.0 %** at 1 d (n = 1) [^{14}C-Ph] HOPP-acid, racemic mixture (AE F020686): **74.1 %** at 120 d (n = 1) [^{14}C-Ph]

Route of degradation (photolysis) on soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)

Mineralisation at study end	No study with fenoxaprop-P-ethyl (AE F046360) Racemic fenoxaprop-ethyl (AE F033171) applied, sterile conditions: 12.1 % after 5 d, [^{14}C-ClPh]-label (n = 1)
Non-extractable residues at study end	No study with fenoxaprop-P-ethyl (AE F046360) Racemic fenoxaprop-ethyl (AE F033171) applied, sterile conditions: 7.4 % after 5 d, [^{14}C- ClPh]-label (n = 1)
Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)	No study with fenoxaprop-P-ethyl (AE F046360) Racemic fenoxaprop-ethyl (AE F033171) applied, sterile conditions: Chlorobenzoxazolone (AE F054014): **6.8 %** at 2 d [^{14}C-Ph]-label (n = 1)

Rate of degradation in soil (aerobic) laboratory studies active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Fenoxaprop-P-ethyl (AE F046360)	Dark aerobic conditions						
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	DT_{50} (d) 20 °C pF2 / 10 kPa[b)]	St. (χ^2)	Method of calculation
Loamy sand	ClPh	5.8	22 °C / 40 % MWHC	0.35 / 1.2	0.33	12.7	SFO
Sandy loam	ClPh	5.6	22 °C / 40 % MWHC	0.33 / 1.1	0.28	11.0	SFO
Silt loam	ClPh	5.2	22 °C / 40 % MWHC	0.25 / 3.0	0.70[c)]	6.5	FOMC
Sandy loam	ClPh	5.2	22 °C / 40 % MWHC	0.42 / 5.9	1.4[c)]	7.7	FOMC
Sandy loam	ClPh	5.2	20 °C / pF2 - 2.5	0.32 / 7.0	1.2[c)]	5.5	FOMC
	Ph	5.2	20 °C / pF2 - 2.5	0.35 / 5.2	0.86[c)]	12.8	FOMC
Loamy sand	ClPh	6.9	20 °C / pF2 - 2.5	0.22 / 0.71	0.20	10.6	SFO
	Ph	6.9	20 °C / pF2 - 2.5	0.14 / 1.0	0.27[c)]	6.0	FOMC
Sandy loam	ClPh	6.2	20 °C / pF2 - 2.5	0.13 / 1.2	0.26[c)]	2.4	FOMC
	Ph	6.2	20 °C / pF2 - 2.5	0.24 / 0.78	0.17	10.8	SFO
Silt loam	ClPh	6.6	20 °C / pF2 - 2.5	0.07 / 0.24	0.07	7.3	SFO
	Ph	6.6	20 °C / pF2 - 2.5	0.08 / 0.25	0.07	8.6	SFO
Maximum[e)]				**0.42 / 5.9**			**FOMC[d)]**
Geometric mean[e)]					**0.36**		
pH dependence					Yes[f)]		

[a)] Measured in calcium chloride solution
[b)] Normalised using a Q_{10} of 2.58 and Walker equation coefficient of 0.7
[c)] Based on non-normalized FOMC-DT_{90} divided by 3.32
[d)] FOMC α = 0.771, β = 0.305
[e)] Different labels averaged (geometric mean) before averaging soils or calculating the maximum of all soils
[f)] As degradation is fast at all apparent pH-dependency is not considered further

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Rate of degradation in soil (aerobic) laboratory studies transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Fenoxaprop-P-acid (AE F088406)	Dark aerobic conditions, the precursor from which the f.f. was derived was fenoxaprop-P-ethyl (AE F046360)							
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	f. f. k_f / k_{dp}	DT_{50} (d) 20 °C pF2 / 10 kPa[b)]	St. (χ^2)	Method of calculation
Loamy sand	ClPh	5.8	22 °C / 40 % MWHC	12.6 / 41.7	0.95	12.1	13.4	$P_{SFO} \rightarrow M_{SFO}$
Sandy loam	ClPh	5.6	22 °C / 40 % MWHC	4.3 / 14.1	0.90	3.5	5.0	$P_{SFO} \rightarrow M_{SFO}$
Silt loam	ClPh	5.2	22 °C / 40 % MWHC	3.0 / 9.8	0.66	2.3	6.0	$P_{FOMC} \rightarrow M_{SFO}$
Sandy loam	ClPh	5.2	22 °C / 40 % MWHC	4.0 / 13.2	0.79	3.0	12.8	$P_{FOMC} \rightarrow M_{SFO}$
Sandy loam	ClPh	5.2	20 °C / pF2 - 2.5	4.5 / 14.9	0.76	2.5	10.0	$P_{FOMC} \rightarrow M_{SFO}$
	Ph	5.2	20 °C / pF2 - 2.5	4.4 / 14.7	0.84	2.4	10.5	$P_{FOMC} \rightarrow M_{SFO}$
Loamy sand	ClPh	6.9	20 °C / pF2 - 2.5	16.7 / 55.4	0.93	15.5	2.7	$P_{SFO} \rightarrow M_{SFO}$
	Ph	6.9	20 °C / pF2 - 2.5	16.2 / 54.0	0.95	15.0	1.5	$P_{FOMC} \rightarrow M_{SFO}$
Sandy loam	ClPh	6.2	20 °C / pF2 - 2.5	10.0 / 33.2	0.93	7.3	5.9	$P_{FOMC} \rightarrow M_{SFO}$
	Ph	6.2	20 °C / pF2 - 2.5	7.7 / 25.5	0.90	5.6	6.7	$P_{SFO} \rightarrow M_{SFO}$
Silt loam	ClPh	6.6	20 °C / pF2 - 2.5	8.1 / 26.9	0.88	7.5	6.4	$P_{SFO} \rightarrow M_{SFO}$
	Ph	6.6	20 °C / pF2 - 2.5	4.5 / 14.9	0.86	4.2	10.9	$P_{SFO} \rightarrow M_{SFO}$
Maximum[c)]				**16.4 / 54.7**		**15.2**		
Geometric mean[c)]						**5.0**		
Arithmetic mean[d)]					**0.85**			
pH dependence						Yes		

[a)] Measured in calcium chloride solution
[b)] Normalised using a Q_{10} of 2.58 and Walker equation coefficient of 0.7
[c)] Different labels averaged (geometric mean) before averaging soils or calculating the maximum of all soils
[d)] Different labels averaged (arithmetic mean) before averaging soils

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Chlorobenz-oxazolone (AE F054014)	Dark aerobic conditions , the precursor from which the f.f. was derived was fenoxaprop-P-acid (AE F088406)							
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	f. f. k_f / k_{dp}	DT_{50} (d) 20 °C pF2 / 10 kPa[b)]	St. (χ^2)	Method of calculation
Loamy sand	ClPh	5.8	22 °C / 40 % MWHC	7.7 / 25.4	na	7.3	17.0	SFO[(c)]
Sandy loam	ClPh	5.6	22 °C / 40 % MWHC	23.8 / 79.2	na	23.8	24.3	SFO[(c)]
Silt loam	ClPh	5.2	22 °C / 40 % MWHC	17.9 / 59.6	na	14.0	6.0	SFO[(c)]
Sandy loam	ClPh	5.2	22 °C / 40 % MWHC	8.5 / 28.1	na	6.5	20.0	SFO[(c)]
Sandy loam	ClPh	5.2	20 °C / pF2 - 2.5	56.6 / 188	na	31.0	4.4	SFO[(c)]
Maximum				**56.6 / 188**				
Geometric mean						**13.7**		
Arithmetic mean					**na**			
pH dependence						No[d)]		

[a)] Measured in calcium chloride solution
[b)] Normalised using a Q_{10} of 2.58 and Walker equation coefficient of 0.7
[c)] Decline fit
[d)] No pH dependent degradation can be deduced from the available degradation rate data set. However, OECD 106 batch studies indicate that chlorobenzoxazolone is less stable under more alkaline conditions

HOPP-acid (AE F096918)	Dark aerobic conditions, metabolite dosed							
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	f. f. k_f / k_{dp}	DT_{50} (d) 20 °C pF2 / 10 kPa[b)]	St. (χ^2)	Method of calculation
Loam	Ph	5.8	20 °C / 45 % of MWHC	0.01 / 0.03	na	0.01	8.5	SFO
Sandy loam	Ph	7.4	20 °C / 24 % of MWHC	0.01 / 0.03	na	0.01	4.1	SFO
Sandy clay loam	Ph	5.7	20 °C / 41 % of MWHC	0.01 / 0.03	na	0.01	3.9	SFO
Loam	Ph	5.2	20 °C / 34 % of MWHC	0.01 / 0.03	na	0.01	0.3	SFO
Sandy loam	Ph	6.9	20 °C / 29 % of MWHC	0.01 / 0.04	na	0.01	0.9	SFO
Silt loam	Ph	6.3	20 °C / 32 % of MWHC	0.01 / 0.04	na	0.01	0.3	SFO
Clay loam	Ph	7.3	20 °C / 45 % of MWHC	0.01 / 0.04	na	0.01	0.5	SFO
Maximum				**0.01 / 0.04**				
Geometric mean						**0.01**		

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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HOPP-acid (AE F096918)	Dark aerobic conditions, metabolite dosed							
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	f. f. k_f / k_{dp}	DT_{50} (d) 20 °C pF2 / 10 kPa[b)]	St. (χ^2)	Method of calculation
Arithmetic mean					**na**			
pH dependence						No		

[a)] Measured in calcium chloride solution
[b)] Normalised using a Q_{10} of 2.58 and Walker equation coefficient of 0.7

Rate of degradation field soil dissipation studies (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.1)

Fenoxaprop-P-acid (AE F088406)	Aerobic conditions								
Soil type (indicate if bare or cropped soil was used).	Location (country or USA state).		pH[a)]	Depth (cm)	$DissT_{50}$ (d) actual	$DissT_{90}$ (d) actual	St. (χ^2)	$DissT_{50}$ (d) Norm[b)].	Method of calculation
Sandy loam, cropped (peanuts)	Wilson County, NC, USA		6.1	30.5	8.8	29.2	9.2	nc	SFO
Silt loam, cropped (soybeans)	Iowa, USA		5.8	30.5	7.2	23.8	6.5	nc	SFO
Geometric mean (if not pH dependent)								nc	
pH dependence					No applicable				

[a)] Matrix unknown
[b)] Normalised using a Q_{10} of 2.58 and Walker equation coefficient of 0.7, values are DegT50matrix

Combined laboratory and field kinetic endpoints for modelling (when not from different populations)*

Rate of degradation in soil active substance, normalised geometric mean (if not pH dependent)	Not applicable (no field degradation data available)	
Rate of degradation in soil transformation products, normalised geometric mean (if not pH dependent)	Not applicable	Not applicable
Kinetic formation fraction (f. f. k_f / k_{dp}) of transformation products, arithmetic mean	Not applicable	Not applicable

* Only relevant after implementation of the published EFSA guidance describing how to amalgamate laboratory and field endpoints.

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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Soil accumulation (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.2)

Soil accumulation and plateau concentration	No accumulation

Rate of degradation in soil (anaerobic) laboratory studies active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Fenoxaprop-P-ethyl (AE F046360)	Dark anaerobic conditions						
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	DT_{50} (d) 20 °C[b)]	St. (χ^2)	Method of calculation
Loamy sand	ClPh	5.4	20 °C / 100 % MWHC	0.35 / 1.2	0.35	3.8	SFO
Loamy sand	ClPh & Ph	5.4	20 °C / 100 % MWHC	0.37 / 1.2	0.37	4.7	SFO
Geometric mean (if not pH dependent)					**0.36**		

a) Measured in calcium chloride solution
b) Normalised using a Q_{10} of 2.58

Rate of degradation in soil (anaerobic) laboratory studies transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.4 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Fenoxaprop-P-acid (AE F088406)	Dark anaerobic conditions, the precursor from which the f.f. was derived was fenoxaprop-P-ethyl (AE F046360)							
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d)	f. f. k_f / k_{dp}	DT_{50} (d) 20 °C[b)]	St. (χ^2)	Method of calculation
Loamy sand	ClPh	5.4	20 °C / 100 % MWHC	35.7 / 119	1.0	35.7	7.1	$P_{SFO} \rightarrow M_{SFO}$
Loamy sand	ClPh & Ph	5.4	20 °C / 100 % MWHC	43.7 / 145	1.0	43.7	2.2	$P_{SFO} \rightarrow M_{SFO}$
Geometric mean (if not pH dependent)						**39.5**		
Arithmetic mean					1.0			

a) Measured in [medium to be stated, usually calcium chloride solution or water]
b) Normalised using a Q_{10} of 2.58

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Rate of degradation on soil (photolysis) laboratory active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3

Racemic fenoxaprop-ethyl (AE F033171)	Soil photolysis, racemic fenoxaprop-ethyl (AE F033171) applied					
Soil type	Label	pH[a)]	t. °C / % MWHC	DT_{50} / DT_{90} (d) calculated at 52 °N	St. (χ^2)	Method of calculation
Sandy clay loam	ClPh	7.3	25 °C / air dried / sterile	62.5 / 208	≤ 5.3	SFO

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

Soil adsorption active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Fenoxaprop-P-ethyl (AE F046360)							
Soil Type	OC %	Soil pH[a)]	K_d (mL/g)	K_{doc} (mL/g)	K_F (mL/g)	K_{Foc} (mL/g)	1/n
Clay	0.23	7.6	12.8	5419	na	na	1.0[b)]
Silty clay loam	0.81	6.5	212	26207	na	na	1.0[b)]
Sandy loam	2.55	6.4	443	17352	na	na	1.0[b)]
Clay loam	2.65	6.8	176	6667	na	na	1.0[b)]
Geometric mean (if not pH dependent)			**121**	**11322**	**na**	**na**	
Arithmetic mean (if not pH dependent)							**1.0**
pH dependence			No				

[a)] Matrix unknown
[b)] Default assuming linear sorption

Soil adsorption transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Fenoxaprop-P-acid (AE F088406)							
Soil Type	OC %	Soil pH[a)]	K_d (mL/g)	K_{doc} (mL/g)	K_F (mL/g)	K_{Foc} (mL/g)	1/n
Sandy loam	2.64	7.3	6.91	262	na	na	1.0[b)]
Sand	0.53	4.7	2.32	438	na	na	1.0[b)]
Silty clay loam	1.67	7.1	2.58	154	na	na	1.0[b)]
Sand	0.81	6.4	1.20	148	na	na	1.0[b)]
Loam	1.43	7.5	3.95	276	na	na	1.0[b)]

Clay loam	1.99	7.4	3.14	158	na	na	1.0[b)]
Sandy loam[c)]	2.07	4.5	21.9	1058	na	na	1.0[b)]
Geometric mean			**3.89**	**276**	**na**	**na**	
Geometric mean (neutral and alkaline soils)			**3.05**	**192**	**na**	**na**	
Arithmetic mean							**1.0**
pH dependence			Yes				

[a)] Measured in calcium chloride solution
[b)] Default assuming linear sorption
[c)] Sediment

Chlorobenzoxazolone (AE F054014)							
Soil Type	OC %	Soil pH[a)]	K_d (mL/g)	K_{doc} (mL/g)	K_F (mL/g)	K_{Foc} (mL/g)	1/n
Loamy sand	0.53	4.7	2.43	458	na	na	1.0[b)]
Sandy loam	1.84	5.4	6.12	333	na	na	1.0[b)]
Silty loam	1.52	5.4	6.66	438	na	na	1.0[b)]
Sandy loam[c)]	2.07	4.5	6.84	330	na	na	1.0[b)]
Loamy sand	1.95	6.0	6.55	336	na	na	1.0[b)]
Silt loam	1.10	7.4	3.26	285	na	na	1.0[b)]
Clay	1.90	6.9	6.59	284	na	na	1.0[b)]
Loamy sand	2.36	5.6	10.8	448	na	na	1.0[b)]
Geometric mean			**5.64**	**358**	**na**	**na**	
Arithmetic mean							**1.0**
pH dependence			No				

a) Measured in calcium chloride solution or water
b) Default assuming linear sorption
c) Sediment

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Mobility in soil column leaching active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.4.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Column leaching	Elution (mm): 200 mm Time period (d): 2 d
	Without aging: Leachate : < 0.01 % total radioactivity in leachate (n = 1) With aging: Aging period: 16 days Leachate : 3.6 % total radioactivity in leachate (n = 1) Aging period 30 days Leachate : 2.3 % total radioactivity in leachate (n = 1) (radioactivity could not be assigend to parent or metabolites)
	Elution (mm): 200 mm Time period (d): 2 d
	Without aging: Leachate : 0.08 - 0.29 % total radioactivity in leachate (n = 3) With aging: Aging period: 2 days Leachate : 1.9 % total radioactivity in leachate (n = 1) (no further characterization of leachate)

Mobility in soil column leaching transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.4.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Column leaching	See above
	See above

Lysimeter / field leaching studies (Regulation (EU) N° 283/2013, Annex Part A, points 7.1.4.2 / 7.1.4.3 and Regulation (EU) N° 284/2013, Annex Part A, points 9.1.2.2 / 9.1.2.3)

Lysimeter/ field leaching studies	No study available

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Hydrolytic degradation (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.1.1

Hydrolytic degradation of the active substance and metabolites > 10 %	pH 4: 2.1 - 4.3 d at 25 °C (SFO, χ^2 = 2.3 - 5.0, n = 3) Fenoxaprop-P-acid (AE F088406): 22.2 % (1 d) Chlorobenzoxazolone (AE F054014): **102.4 % AR** (15 d) AE F029062: **101.2 % AR** (30 d)
	pH 5: 19.1 - 34.0 d at 25 °C (SFO, χ^2 = 0.8 - 2.1, n = 2) Chlorobenzoxazolone (AE F054014): 63.9 % AR (30 d)
	pH 7: 8.6 - 111 d at 25 °C (SFO, χ^2 = 1.3 - 1.7, n = 3) Fenoxaprop-P-acid (AE F088406): 84.4 % AR (24 d) Chlorobenzoxazolone (AE F054014): 27.9 % AR (30 d)
	pH 9: 0.6 - 0.9 d at 25 °C (SFO, χ^2 = 3.5 - 6.1, n = 3) Fenoxaprop-P-acid (AE F088406): **95.9 %** AR (6 d) Chlorobenzoxazolone (AE F054014): 24.5 % AR (30 d) HOPP-acid (AE F096918): **14.2 % AR** (29 d)
Hydrolytic degradation of fenoxaprop-P-acid (AE F088406)	pH 4: 2.5 d at 25 °C (SFO, χ^2 = not stated, n = 1)
	pH 5: 27.4 d at 25 °C (interpolated, n = 1)
	pH 7: 189 d at 25 °C (interpolated, n = 1)
	pH 9: 35 - 143 d at 25 °C (SFO, χ^2 = not stated, n = 2)
Hydrolytic degradation of chlorobenzoxazolone (AE F054014)	pH 5: stable (n = 2)
	pH 7: stable (n = 2)
	pH 9: stable (n = 2)

Aqueous photochemical degradation (Regulation (EU) N° 283/2013, Annex Part A, points 7.2.1.2 / 7.2.1.3)

Photolytic degradation of active substance and metabolites above 10 %	Direct photolysis: DT_{50} : 14.6 d (pH 5, n = 1) DT_{50} : 0.3 - 17.8 d (pH 7, n = 2) Natural light, 52 °N, pH 5: DT_{50} 85.7 days (n = 1) Natural light, 33.3 °N, pH 7: DT_{50} 0.7 days (n = 1) Natural light, European summer light, pH 7: DT_{50} 17.8 days (n = 1) Fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271): **17.7 % AR** (0.25 d)

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

	Indirect photolysis (surface water): DT_{50} : 0.7 d (pH 9, n = 1) Fenoxaprop-P-acid (AE F088406): **56.6 % AR** (2 d) Polar metabolite fractions 'M1': **18.6 % AR** (6 d) Polar metabolite fraction 'M2': **22.9 % AR** (6 d)
Photolytic degradation of chlorobenzoxazolone (AE F054014)	DT_{50} : 0.1 - 1.3 d (pH 7, n = 2) Natural light, 30-40 °N, pH 7: DT_{50} 0.3 - 7 days (n = 2)
Quantum yield of direct phototransformation in water at Σ > 290 nm	Fenoxaprop-P-ethyl (AE F046360): pH 5: 5.11×10^{-6} mol · $Einstein^{-1}$ (n = 1) pH 7: 0.04 mol · $Einstein^{-1}$ (n = 1) Chlorobenzoxazolone (AE F054014): pH 7: 0.0056 - 0.151 mol · $Einstein^{-1}$ (n = 2)

'Ready biodegradability' (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.1)

Readily biodegradable (yes/no)	No

Aerobic mineralisation in surface water (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.1)

Fenoxaprop-P-ethyl (AE F088406)										
System identifier (indicate fresh, estuarine or marine)	pH water phase	pH sed[a)]	t. °C[b)]	DT_{50} / DT_{90} (d) whole system (suspended sediment test)		St. (χ^2)	DT_{50} /DT_{90} (d) water (pelagic test)		St. (χ^2)	Method of calculation
				At study temp	Normalised to *x* °C[c)]		At study temp	Normalised to x °C[c)]		
Fresh, low dose	8.0	na	20	na	na	na	0.4 / 1.4	na	5.1	SFO
Fresh, high dose	8.0	na	20	na	na	na	0.4 / 1.2	na	2.6	SFO
Fresh, low dose	9.2	na	20	na	na	na	0.2 / 0.6	na	4.6	SFO
Fresh, high dose	9.2	na	20	na	na	na	0.2 / 0.8	na	3.3	SFO

[a)] Measured in [medium to be stated, usually calcium chloride solution or water]
[b)] Temperature of incubation = temperature that the environmental media was collected or std temperature of 20 °C
[c)] Normalised using a Q_{10} of 2.58 to the temperature of the environmental media at the point of sampling. (note temp of x should be stated).

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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Fenoxaprop-P-acid (AE F088406)	Max in total system **101.4 % AR** after 3 days									
System identifier (indicate fresh, estuarine or marine)	pH water phase	pH sed[a)]	t. °C[b)]	DT_{50} / DT_{90} (d) whole system (suspended sediment test)		St. (χ^2)	DT_{50} /DT_{90} water (pelagic test)		St. (χ^2)	Method of calculation
				At study temp	Normalised to x °C[c)]		At study temp	Normalised to x °C[c)]		
Fresh, low dose	8.0	na	20	na	na	na	107 / 354	na	2.5	SFO[d)]
Fresh, high dose	8.0	na	20	na	na	na	432 / > 1000	na	1.2	SFO[d)]
Fresh, low dose	9.2	na	20	na	na	na	39.4 / 131	na	5.5	SFO[d)]
Fresh, high dose	9.2	na	20	na	na	na	134 / 444	na	2.4	SFO[d)]

[a)] Measured in [medium to be stated, usually calcium chloride solution or water]
[b)] Temperature of incubation=temperature that the environmental media was collected or std temperature of 20°C
[c)] Normalised using a Q_{10} of 2.58 to the temperature of the environmental media at the point of sampling. (note temp of x should be stated).
[d)] Decline fit

Mineralisation and non extractable residues (for parent dosed experiments)					
System identifier (indicate fresh, estuarine or marine)	pH water phase	pH sed	Mineralisation *x* % after *n* d. (end of the study).	Non-extractable residues. max *x* % after *n* d (suspended sediment test)	Non-extractable residues. max *x* % after *n* d (end of the study) (suspended sediment test)
Fresh, low dose[(a)]	8.0	na	1.2 % after 62 days	na	na
Fresh, high dose[(a)]	8.0	na	2.0 % after 62 days	na	na
Fresh, low dose[(b)]	9.2	na	14.1 % after 62 days	na	na
Fresh, high dose[(b)]	9.2	na	9.5 % after 62 days	na	na

a) ClPh label
b) Ph label

Water / sediment study (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.2)

Fenoxaprop-P-ethyl (AE F046360)	Max. in sediment 34.4 % after 0 d									
Water / sediment system	pH	pH	t.	$DegT_{50}$ /	St.	$DissT_{50}$ /	St.	$DissT_{50}$ /	St.	Method

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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	wat	sed[a)]	°C	$DegT_{90}$ whole sys.	(χ^2)	$DissT_{90}$ water	(χ^2)	$DissT_{90}$ sed.	(χ^2)	of calcu-lation
Rhine River, ClPh	7.3	7.9	20	0.12 / 0.40	8.1	0.11 / 0.38	14.0	nr	nr	SFO
Nidda River, ClPh	6.8	5.1	20	0.11 / 0.36	3.4	0.09 / 0.29	18.0	0.27 / 0.89	8.9	SFO
Clayton Pond, Ph	6.6	4.4	20	0.17 / 0.58	18.3	0.17 / 0.57	8.1	na	na	SFO
Roding River, Ph	8.0	7.2	20	0.38 / 1.2	17.5	0.38 / 1.3	3.4	na	na	SFO
Goose River, ClPh	8.3	7.9	20	0.11 / 0.38	3.2	0.06 / 0.20	5.4	0.13 / 0.42	13.3	SFO
Goose River, Ph	8.3	7.9	20	0.11 / 0.35	3.0	0.06 / 0.19	11.1	0.20 / 0.65	9.6	SFO
Lawrence River, ClPh	7.8	7.4	20	0.05 / 0.18	18.6	0.04 / 0.14	18.3	nr	nr	SFO
Lawrence River, Ph	7.8	7.4	20	0.07 / 0.23	5.0	0.06 / 0.20	7.6	0.05 / 0.17	12.3	SFO
Rhine River, ClPh	8.0	7.4[b)]	20	< 1 / < 1	na	< 1 / < 1	na	na	na	na
Rhine River, Ph	8.0	7.4[b)]	20	< 1 / < 1	na	< 1 / < 1	na	na	na	na
Fröschweiher Pond, ClPh	7.8	7.2[b)]	20	< 1 / < 1	na	< 1 / < 1	na	na	na	na
Fröschweiher Pond, Ph	7.8	7.2[b)]	20	< 1 / < 1	na	< 1 / < 1	na	na	na	na
Geometric mean at 20 °C[c)]				**0.13 / 0.44**		**0.11 / 0.37**		**0.14 / 0.45**		

[a)] Measured in calcium chloride solution
[b)] Matrix not specified
[c)] Different labels averaged (geometric mean) before averaging different water/sediments
nr denotes no reliable fit
na denotes not applicable (not observed)

<u>Fenoxaprop-P-acid (AE F088406)</u>	Distribution (max in water 97.2 % after 2 d, max. sediment 47.9 % after 7 d). Max in total system **97.2 %** after 2 days, kinetic formation fraction (k_f/k_{dp}): **0.98** (whole system, arithmetic mean, n = 6, range from 0.93 - 1.0)									
Water / sediment system	pH wat	pH sed[a)]	t. °C	$DegT_{50}$ / $DegT_{90}$ whole sys.	St. (χ^2)	$DissT_{50}$ / $DissT_{90}$ water	St. (χ^2)	$DissT_{50}$ / $DissT_{90}$ sed.	St. (χ^2)	Method of calculation
Rhine River, ClPh	7.3	7.9	20	13.9 / 46.2	12.6	10.7 / 35.5	7.1	16.8 / 55.8	16.1	$P_{SFO} \rightarrow M_{SFO}$[c)]
Nidda River, ClPh	6.8	5.1	20	8.0 / 26.5	15.0	4.3 / 14.3	9.1	8.7 / 28.9	10.5	$P_{SFO} \rightarrow M_{SFO}$[c)]
Clayton Pond, Ph	6.6	4.4	20	39.6 / 132	12.4	33.9 / 113	9.3	nr	nr	$P_{SFO} \rightarrow M_{SFO}$[c)]
Roding River, Ph	8.0	7.2	20	41.9 / 139	14.8	40.5 / 135	9.1	nr	nr	$P_{SFO} \rightarrow M_{SFO}$[c)]
Goose River, ClPh	8.3	7.9	20	17.2 / 57.0	4.1	7.2[e)] / 23.8	0.4	19.7 / 65.4	6.2	$P_{SFO} \rightarrow M_{SFO}$[c)]
Goose River, Ph	8.3	7.9	20	17.4 / 57.8	2.8	6.7 / 22.1	7.0	19.9 / 66.1	3.4	$P_{SFO} \rightarrow M_{SFO}$[c)]
Lawrence River, ClPh	7.8	7.4	20	18.6 / 62.0	8.4	8.4 / 27.9	7.0	9.9 / 32.8	1.0	$P_{SFO} \rightarrow M_{SFO}$[c)]
Lawrence River, Ph	7.8	7.4	20	15.3 / 50.9	8.3	8.3 / 27.6	7.1	7.7 / 25.4	4.0	$P_{SFO} \rightarrow M_{SFO}$[c)]
Rhine River, ClPh & Ph	8.0	7.4[b)]	20	13.5 / 44.7	11.2	9.0 / 29.2	6.6	17.7 / 58.8[g)]	na	SFO[d)]

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Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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Fröschweiher Pond, ClPh & Ph	7.8	7.2[b)]	20	15.6 / 51.9	11.4	10.2 / 33.9	7.5	16.6 / 55.1[g)]	na	SFO[d)]
Geometric mean at 20 °C[f)]				**18.1 / 60.0**		**11.6 / 38.6**		**14.0 / 46.3**		

[a)] Measured in calcium chloride solution
[b)] Matrix not specified
[c)] Pathway fit in case of total system, decline fit (SFO) in case of water and sediment (with the exception of DFOP fit in the water phase of Goose River, ClPh label)
[d)] Decline fit
[e)] DFOP DT_{90} divided by 3.32
[f)] Different labels averaged (geometric mean) before averaging different water/sediments
[g)] Geometric mean of individual fits for both labels
nr denotes no reliable fit

HOPP-acid (AE F096918)	Distribution (max in water 22.9 % after 62 d, max. sediment 3.4 % after 62 d). Max in total system **26.3 %** after 62 days, kinetic formation fraction (k_f/k_{dp}): na (decline fit)									
Water / sediment system	pH water phase	pH sed[a)]	t. °C	$DegT_{50}$ / $DegT_{90}$ whole sys.	St. (χ^2)	$DissT_{50}$ / $DissT_{90}$ water	St. (χ^2)	$DissT_{50}$ / $DissT_{90}$ sed.	St. (χ^2)	Method of calculation
Clayton Pond	6.6	4.4	20	9.8 / 32.6	2.8	9.9 / 32.9	3.5	nr	nr	SFO[b)]
Geometric mean at 20 °C				**9.8 / 32.6**		**9.9 / 32.9**		**nr**		

[a)] Measured in [medium to be stated, usually calcium chloride solution or water]
[b)] Decline fit
nr denotes no reliable fit

Mineralisation and non extractable residues (from parent dosed experiments)					
Water / sediment system	pH water	pH sed[a)]	Mineralisation x % after n d (end of the study)	Non-extractable residues in sed. max x % after n d	Non-extractable residues in sed. max x % after n d (end of the study)
Rhine River, ClPh	7.3	7.9	27.6 % after 199 d	75.0 % after 59 d	54.9 % after 199 d
Nidda River, ClPh	6.8	5.1	16.9 % after 199 d	75.3 % after 155 d	69.1 % after 199 d
Clayton Pond, Ph	6.6	4.4	45.9 % after 118 d	33.5 % after 118 d	33.5 % after 118 d
Roding River, Ph	8.0	7.2	27.4 % after 118 d	28.7 % after 47 d	27.3 % after 118 d
Goose River, ClPh	8.3	7.9	0.9 % after 28 d	40.5 % after 28 d	40.5 % after 28 d
Goose River, Ph	8.3	7.9	6.0 % after 28 d	37.6 % after 28 d	37.6 % after 28 d
Lawrence River, ClPh	7.8	7.4	9.7 % after 28 d	66.1 % after 28 d	66.1 % after 28 d
Lawrence River, Ph	7.8	7.4	36.6 % after 28 d	35.5 % after 28 d	35.5 % after 28 d
Rhine River, ClPh	8.0	7.4[b)]	19.6 % after 103 d	70.1 % after 57 d	65.6 5 after 103 d
Rhine River, Ph	8.0	7.4[b)]	56.1 % after 103 d	43.3 % after 27 d	37.8 % after 103 d

Fröschweiher Pond, ClPh	7.8	7.2[b)]	21.5 % after 100 d	72.2 & after 57 d	65.9 % after 100 d
Fröschweiher Pond, Ph	7.8	7.2[b)]	67.9 % after 100 d	34.6 5 after 57 d	30.4 % after 100 d

[h)] Measured in calcium chloride solution
[i)] Matrix not specified

Fate and behaviour in air (Regulation (EU) N° 283/2013, Annex Part A, point 7.3.1)

Direct photolysis in air	No data
Photochemical oxidative degradation in air	DT_{50} of 3.83 hours derived by the Atkinson model (version 1.92). OH (12 h) concentration assumed = 1.5 × 10^6 radicals/cm^3
Volatilisation	from plant surfaces (BBA guideline): no data
	from soil surfaces (BBA guideline): no data
Metabolites	Fenoxaprop-P-acid (AE F088406): DT_{50} of 3.42 hours derived by the Atkinson model (version 1.92). OH (12 h) concentration assumed = 1.5 × 10^6 radicals/cm^3

Residues requiring further assessment (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.1)

Environmental occurring residues requiring further assessment by other disciplines (toxicology and ecotoxicology) and or requiring consideration for groundwater exposure	Soil: Fenoxaprop-P-ethyl (AE F046360), fenoxaprop-P-acid (AE F088406), chlorobenzoxazolone (AE F054014), HOPP-acid (AE F096918) Surface water: Fenoxaprop-P-ethyl (AE F046360), fenoxaprop-P-acid (AE F088406), chlorobenzoxazolone (AE F054014), HOPP-acid (AE F096918), phenol metabolite (AE F040356), fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271) Sediment: Fenoxaprop-P-ethyl (AE F046360), fenoxaprop-P-acid (AE F088406), chlorobenzoxazolone (AE F054014), HOPP-acid (AE F096918), phenol metabolite (AE F040356), fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271) Ground water: Fenoxaprop-P-ethyl (AE F046360), fenoxaprop-P-acid (AE F088406), chlorobenzoxazolone (AE F054014), HOPP-acid (AE F096918) Air: Fenoxaprop-P-ethyl (AE F046360), fenoxaprop-P-acid (AE F088406)[a)]

a) Active metabolite

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2)

Refer to section 5, Ecotoxicology

Monitoring data, if available (Regulation (EU) N° 283/2013, Annex Part A, point 7.5

Soil (indicate location and type of study)	No data
Surface water (indicate location and type of study)	No data
Ground water (indicate location and type of study)	No data
Air (indicate location and type of study)	No data

PEC soil (Regulation (EU) N° 284/2013, Annex Part A, points 9.1.3 / 9.3.1)

Parent Method of calculation	DT_{50} / DT_{90} (d): 0.42 / 5.9 days Kinetics: FOMC (alpha = 0.771, beta = 0.305) Field or Lab: representative worst case from lab studies
Application data	Product: 'Puma S 69 EW' & 'CHA 4960' Crop: Spring & winter cereals Depth of soil layer: 5 cm Soil bulk density: 1.5 g/cm^3 % plant interception: 0 % Number of applications: 1 Interval (d): na Application rate(s): 83 g a.s./ha

PEC$_{(s)}$ (mg/kg)		Single application Actual	Single application Time weighted average	Multiple application Actual	Multiple application Time weighted average
Initial		**0.111**	**-**	**-**	
Short term	24h	0.036	0.060	-	-
	2d	0.023	0.044	-	-
	4d	0.014	0.031	-	-
Long term	7d	0.010	0.023	-	-
	28d	0.003	0.010	-	-

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Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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PEC$_{(s)}$ (mg/kg)		Single application Actual	Single application Time weighted average	Multiple application Actual	Multiple application Time weighted average
	50d	0.002	0.007	-	-
	100d	0.001	0.004	-	-
Plateau concentration		No accumulation			

Fenoxaprop-P-acid (AE F088406) Method of calculation	Molecular weight relative to the parent: 0.922 DT_{50} (d): 16.4 days Kinetics: SFO Field or Lab: representative worst case from lab studies
Application data	Application rate assumed: 66.8 g/ha (assumed fenoxaprop-P-acid (AE F08849) is formed at a maximum of 94.3 % of the applied dose)

PEC$_{(s)}$ (mg/kg)		Single application Actual	Single application Time weighted average	Multiple application Actual	Multiple application Time weighted average
Initial		**0.097**	-	**-**	
Short term	24h	0.093	0.095	-	-
	2d	0.089	0.093	-	-
	4d	0.082	0.089	-	-
Long term	7d	0.072	0.084	-	-
	28d	0.030	0.057	-	-
	50d	0.012	0.040	-	-
	100d	0.001	0.023	-	-
Plateau concentration		No accumulation			

Chlorobenzoxazolone (AE F054014) Method of calculation	Molecular weight relative to the parent: 0.469 DT_{50} (d): 56.6 days Kinetics: SFO Field or Lab: representative worst case from lab studies
Application data	Application rate assumed: 7.4 g/ha (assumed

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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			chlorobenzoxazolone (AE F054014) is formed at a maximum of 19.1 % of the applied dose)		
PEC$_{(s)}$ (mg/kg)		Single application Actual	Single application Time weighted average	Multiple application Actual	Multiple application Time weighted average
Initial		**0.010**	-	-	
Short term	24h	0.010	0.010	-	-
	2d	0.010	0.010	-	-
	4d	0.009	0.010	-	-
Long term	7d	0.009	0.009	-	-
	28d	0.007	0.008	-	-
	50d	0.006	0.008	-	-
	100d	0.005	0.007	-	-
Plateau concentration		No accumulation			

HOPP-acid (AE F096918) Method of calculation	Molecular weight relative to the parent: 0.504 DT_{50} (d): 0.012 days Kinetics: SFO Field or Lab: representative worst case from lab studies
Application data	Application rate assumed: 31 g/ha (assumed HOPP-acid (AE F096918) is formed at a maximum of 74.1 % of the applied dose)

PEC$_{(s)}$ (mg/kg)		Single application Actual	Single application Time weighted average	Multiple application Actual	Multiple application Time weighted average
Initial		**0.041**	-	-	
Short term	24h	< 0.001	< 0.001	-	-
	2d	< 0.001	< 0.001	-	-
	4d	< 0.001	< 0.001	-	-
Long term	7d	< 0.001	< 0.001	-	-
	28d	< 0.001	< 0.001	-	-
	50d	< 0.001	< 0.001	-	-
	100d	< 0.001	< 0.001	-	-

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Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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Plateau concentration	No accumulation

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Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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PEC ground water (Regulation (EU) N° 284/2013, Annex Part A, point 9.2.4.1)

Method of calculation and type of study (*e.g.* modelling, field leaching, lysimeter)	For FOCUS gw modelling, values used – Modelling using FOCUS model(s), with appropriate FOCUSgw scenarios, according to FOCUS guidance. Model(s) used: PEARL 4.4.4, PELMO 5.5.3, MACRO 5.5.4 Crop: Winter & spring cereals <u>Parent</u> Molecular weight (g/mol): 361.8 Water solubility (mg/L): 0.42 at pH 7 and 20 °C Vapour pressure (Pa): 6.5×10^{-6} at 20 °C Geometric mean parent $DT_{50,lab}$ (d): 0.36 (normalisation to 10kPa or pF2, 20 °C with Q_{10} of 2.58 and Walker equation coefficient 0.7) K_{OC}: parent, geometric* mean 11322 mL/g, arithmetic mean $^1/_n$= 1.0 Crop uptake factor: 0 <u>Fenoxaprop-P-acid (AE F088406)</u> Molecular weight (g/mol): 333.7 Water solubility (mg/L): 55400 at pH 7 and 20 °C Vapour pressure (Pa): 0 at 20 °C Geometric mean parent $DT_{50,lab}$ (d): 15.3 (normalisation to 10kPa or pF2, 20 °C with Q_{10} of 2.58 and Walker equation coefficient 0.7) K_{OC}: parent, geometric* mean (acidic and neutral soils) 192 mL/g, arithmetic mean $^1/_n$= 1.0 Crop uptake factor: 0 Formation fraction: 0.85 (from parent) <u>Chlorobenzoxazolone (AE F054014)</u> Molecular weight (g/mol): 169.6 Water solubility (mg/L): 248 at pH 7 and 20 °C Vapour pressure (Pa): 0 at 20 °C Geometric mean parent $DT_{50,lab}$ (d): 13.7 (normalisation to 10kPa or pF2, 20 °C with Q_{10} of 2.58 and Walker equation coefficient 0.7) K_{OC}: parent, geometric* mean (acidic and neutral soils) 291 mL/g, arithmetic mean $^1/_n$= 1.0 Crop uptake factor: 0

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Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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	Formation fraction: 0.85 (from fenoxaprop-P-acid (AE F088406)) <u>HOPP-acid (AE F096918)</u> Molecular weight (g/mol): 182.2 Water solubility (mg/L): 135000 at pH 7 and 20 °C Vapour pressure (Pa): 0 at 20 °C Geometric mean parent $DT_{50,lab}$ (d): 0.01 (normalisation to 10kPa or pF2, 20 °C with Q_{10} of 2.58 and Walker equation coefficient 0.7) K_{OC}: parent, geometric* mean 0.0 mL/g, arithmetic mean $^{1}/_{n}$= 1.0 Crop uptake factor: 0 Formation fraction: na (pseudo application)[a)]
Application rate	Products: 'Puma S69 EW' & 'CHA 4960' Crop: Winter & spring cereals Gross application rate: 83 g/ha. Crop growth stage: BBCH 11-39 Canopy interception %: 0 Application rate net of interception: Parent: 83 g/ha HOPP-acid (AE F020686): 4.033 g/ha[a)] No. of applications: 1 Time of application (absolute or relative application dates): Winter cereals (autumn): 1 day post emergence Winter cereals (spring): 14th of February to 4th of May depending on the scenario Spring cereals: 1 day post emergence

* Only relevant after implementation of the published EFSA guidance

a) Pseudo application of 4.033 g/ha assuming degradation of the parent under aerobic conditions for one day and subsequently a maximum occurrence of 74.1 % following anaerobic conditions

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Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

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PEC(gw) - FOCUS modelling results (80th percentile annual average concentration at 1m)

	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
PEARL 4.4.4 (winter cereals, autumn)	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	0.002	0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001
	Okehampton	< 0.001	0.003	0.001	< 0.001
	Piacenza	< 0.001	0.001	0.001	< 0.001
	Porto	< 0.001	0.001	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001

	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
PEARL 4.4.4 (winter cereals, spring)	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001
	Okehampton	< 0.001	0.001	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

PEARL 4.4.4 (spring cereals)	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001
	Okehampton	< 0.001	< 0.001	< 0.001	< 0.001
	Piacenza	na	na	na	na
	Porto	< 0.001	< 0.001	< 0.001	< 0.001
	Sevilla	na	na	na	na
	Thiva	na	na	na	na

PELMO 5.5.3 (winter cereals, autumn)	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	0.003	0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	0.001	< 0.001	< 0.001
	Okehampton	< 0.001	0.004	0.002	< 0.001
	Piacenza	< 0.001	0.002	0.001	< 0.001
	Porto	< 0.001	0.004	0.001	< 0.001
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
PELMO 5.5.3 (winter cereals, spring)	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001
	Okehampton	< 0.001	0.001	< 0.001	< 0.001
	Piacenza	< 0.001	< 0.001	< 0.001	< 0.001
	Porto	< 0.001	< 0.001	< 0.001	< 0.001
	Sevilla	< 0.001	< 0.001	< 0.001	< 0.001
	Thiva	< 0.001	< 0.001	< 0.001	< 0.001

	Scenario	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
PELMO 5.5.3 (spring cereals)	Chateaudun	< 0.001	< 0.001	< 0.001	< 0.001
	Hamburg	< 0.001	< 0.001	< 0.001	< 0.001
	Jokioinen	< 0.001	< 0.001	< 0.001	< 0.001
	Kremsmünster	< 0.001	< 0.001	< 0.001	< 0.001
	Okehampton	< 0.001	< 0.001	< 0.001	< 0.001
	Piacenza	na	na	na	na
	Porto	< 0.001	< 0.001	< 0.001	< 0.001
	Sevilla	na	na	na	na
	Thiva	na	na	na	na

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

	Scenario / Crop	Parent (µg/L)	Metabolite (µg/L)		
			Fenoxaprop-P-acid (AE F088406)	Chlorobenzoxazolone (AE F054014)	HOPP-acid (AE F096918)
MACRO 5.5.4	Chateaudun / winter cereals (autumn)	< 0.001	< 0.001	< 0.001	< 0.001
	Chateaudun / winter cereals (spring)	< 0.001	< 0.001	< 0.001	< 0.001
	Chateaudun / spring cereals	< 0.001	< 0.001	< 0.001	< 0.001

PEC$_{(gw)}$ From lysimeter / field studies

Parent	1st year	2nd year	3rd year
Annual average (µg/L)	No data	No data	No data

Metabolite X	1st year	2nd year	3rd year
Annual average (µg/L)	No data	No data	No data

PEC surface water and PEC sediment (Regulation (EU) N° 284/2013, Annex Part A, points 9.2.5 / 9.3.1)

Parent <u>fenoxaprop-P-ethyl (AE F046360)</u> Parameters used in FOCUSsw step 1 and 2	Version control no. of FOCUS calculator: 3.2 Molecular weight (g/mol): 361.8 K_{OC}/K_{OM} (mL/g): 11322 / 6567 DT_{50} soil (d): 0.36 days (lab, geomean, in accordance with FOCUS SFO) DT_{50} water/sediment system (d): 0.13 d (geomean from sediment water/sediment studies) DT_{50} water (d): 0.13 d DT_{50} sediment (d): 1000 d (default)
Parameters used in FOCUSsw step 3 (if performed)	Not performed
Application rate	Products: 'Puma S69 EW' & 'CHA 4960' Crop and growth stage: Winter & spring cereals, BBCH 11-39 Number of applications: 1 Interval (d): not applicable Application rate(s): 83 g a.s./ha Crop interception (%): 0 % (minimal crop cover)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Application window:
NE & SE, October - February & March - May

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
Fenoxaprop-P-ethyl (AE F046360)	0 h	2.482		194.609	
	24 h	0.009	1.245	0.967	97.788
	2 d	< 0.001	0.624	0.005	48.984
	4 d	< 0.001	0.312	< 0.001	24.492
	7 d	< 0.001	0.178	< 0.001	13.996
	14 d	< 0.001	0.089	< 0.001	6.998
	21 d	< 0.001	0.059	< 0.001	4.665
	28 d	< 0.001	0.045	< 0.001	3.499
	42 d	< 0.001	0.030	< 0.001	2.333

FOCUS STEP 2 Fenoxaprop-P-ethyl (AE F046360)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	0.76		3.58	
	Southern EU	0 h	0.76		3.58	
Winter cereals, March - May	Northern EU	0 h	0.76		3.58	
	Southern EU	0 h	0.76		3.58	
Spring cereals, March - May	Northern EU	0 h	0.76		3.58	
	Southern EU	0 h	0.76		3.58	

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Metabolite fenoxaprop-P-acid (AE F088406) Parameters used in FOCUSsw step 1 and 2	Molecular weight (g/mol): 333.7 Soil or water metabolite: Soil & water K_{OC}/K_{OM} (mL/g): 192 / 111 DT_{50} soil (d): 15.2 days (lab, worst case, in accordance with FOCUS SFO) DT_{50} water/sediment system (d): 18.1 d (geometric mean from water/sediment studies) DT_{50} water (d): 18.1 d DT_{50} sediment (d): 1000 d (default) Maximum occurrence observed (% molar basis with respect to the parent) Total Water and Sediment: 97.2 % Soil: 94.8 %
Parameters used in FOCUSsw step 3 (if performed)	Not performed
Application rate	See parent
Main routes of entry	Drift & runoff/drainage

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
Fenoxaprop-P-acid (AE F088406)	0 h	39.693		74.896	
	24 h	38.075	38.884	73.104	74
	2 d	36.652	38.121	70.372	72.865
	4 d	33.964	36.706	65.211	70.312
	7 d	30.297	34.73	58.17	66.588
	14 d	23.207	30.663	44.557	58.825
	21 d	17.776	27.232	34.13	52.254
	28 d	13.616	24.325	26.143	46.681
	42 d	7.989	19.735	15.339	37.875

FOCUS STEP 2 Fenoxaprop-P-acid (AE F088406)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	8.54		16.32	
	Southern EU	0 h	6.93		13.24	

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

FOCUS STEP 2 Fenoxaprop-P-acid (AE F088406)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, March - May	Northern EU	0 h	3.72		7.08	
	Southern EU	0 h	6.93		13.24	
Spring cereals, March - May	Northern EU	0 h	3.72		7.08	
	Southern EU	0 h	6.93		13.24	

Metabolite chlorobenzoxazolone (AE F054014) Parameters used in FOCUSsw step 1 and 2	Molecular weight (g/mol): 169.6 Soil or water metabolite: Soil & water K_{OC}/K_{OM} (mL/g): 358 / 208 DT_{50} soil (d): 13.7 days (lab, geomean, in accordance with FOCUS SFO) DT_{50} water/sediment system (d): 1000 d (default) DT_{50} water (d): 1000 d (default) DT_{50} sediment (d): 1000 d (default) Maximum occurrence observed (% molar basis with respect to the parent) Total Water and Sediment: 8.5 % Soil: 19.1 %
Parameters used in FOCUSsw step 3 (if performed)	Not performed
Application rate	See parent
Main routes of entry	Drift & runoff/drainage

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
Chlorobenz-oxazolone (AE F054014)	0 h	2.453		8.674	
	24 h	2.442	2.448	8.742	8.708
	2 d	2.440	2.444	8.736	8.723
	4 d	2.437	2.441	8.724	8.727
	7 d	2.432	2.438	8.706	8.721
	14 d	2.420	2.432	8.663	8.703
	21 d	2.408	2.426	8.622	8.683
	28 d	2.397	2.420	8.580	8.662

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
	42 d	2.373	2.408	8.497	8.621

FOCUS STEP 2 Chlorobenzoxazolone (AE F054014)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	0.71		2.52	
	Southern EU	0 h	0.57		2.03	
Winter cereals, March - May	Northern EU	0 h	0.30		1.05	
	Southern EU	0 h	0.57		2.03	
Spring cereals, March - May	Northern EU	0 h	0.30		1.05	
	Southern EU	0 h	0.57		2.03	

Metabolite HOPP-acid (AE F096918) Parameters used in FOCUSsw step 1 and 2	Molecular weight (g/mol): 182.2 Soil or water metabolite: Soil & water K_{OC}/K_{OM} (mL/g): 0 / 0 (PEC_{SW}), 1000 / 580 (PEC_{Sed}) DT_{50} soil (d): 0.01 days (lab, geomean, in accordance with FOCUS SFO) DT_{50} water/sediment system (d): 9.8 d (one value only from water/sediment studies) DT_{50} water (d): 9.8 d (default) DT_{50} sediment (d): 1000 d (default) Maximum occurrence observed (% molar basis with respect to the parent) Total Water and Sediment: 26.3 % Soil: 74.1 %
Parameters used in FOCUSsw step 3 (if performed)	Not performed
Application rate	See parent
Main routes of entry	Drift

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
HOPP-acid (AE F096918)	0 h	14.090		59.951	
	24 h	13.128	13.609	56.261	58.106
	2 d	12.231	13.141	52.419	56.211
	4 d	10.618	12.273	45.504	52.546
	7 d	8.588	11.113	36.804	47.598
	14 d	5.234	8.943	22.433	38.313
	21 d	3.190	7.338	13.673	31.440
	28 d	1.945	6.133	8.334	26.276
	42 d	0.722	4.500	3.096	19.280

FOCUS STEP 2 HOPP-acid (AE F096918)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	0.10		0.37	
	Southern EU	0 h	0.10		0.37	
Winter cereals, March - May	Northern EU	0 h	0.10		0.37	
	Southern EU	0 h	0.10		0.37	
Spring cereals, March - May	Northern EU	0 h	0.10		0.37	
	Southern EU	0 h	0.10		0.37	

Metabolite phenol metabolite (AE F040356) Parameters used in FOCUSsw step 1 and 2	Molecular weight (g/mol): 261.7 Soil or water metabolite: Soil & water K_{OC}/K_{OM} (mL/g): 0 / 0 (PEC_{SW}), 1000 / 580 (PEC_{Sed}) DT_{50} soil (d): 1000 d (default) DT_{50} water/sediment system (d): 1000 d (default) DT_{50} water (d): 1000 d (default) DT_{50} sediment (d): 1000 d (default) Maximum occurrence observed (% molar basis with respect to the parent) Total Water and Sediment: 13.1 % Soil: 2.2 %
Parameters used in FOCUSsw step 3 (if performed)	Not performed

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Application rate	See parent
Main routes of entry	Drift

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
Phenol metabolite (AE F040356)	0 h	3.134		13.122	
	24 h	3.132	3.133	13.423	13.273
	2 d	3.130	3.132	13.414	13.345
	4 d	3.126	3.130	13.395	13.375
	7 d	3.119	3.127	13.367	13.378
	14 d	3.104	3.119	13.303	13.356
	21 d	3.089	3.112	13.238	13.328
	28 d	3.074	3.104	13.174	13.297
	42 d	3.044	3.089	13.047	13.235

FOCUS STEP 2 Phenol metabolite (AE F040356)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	0.29		1.25	
	Southern EU	0 h	0.25		1.06	
Winter cereals, March - May	Northern EU	0 h	0.16		0.69	
	Southern EU	0 h	0.25		1.06	
Spring cereals, March - May	Northern EU	0 h	0.16		0.69	
	Southern EU	0 h	0.25		1.06	

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

Metabolite fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271) Parameters used in FOCUSsw step 1 and 2	Molecular weight (g/mol): 343.3 Soil or water metabolite: Soil & water K_{OC}/K_{OM} (mL/g): 0 / 0 (PEC_{SW}), 1000 / 580 (PEC_{Sed}) DT_{50} soil (d): 1000 d (default) DT_{50} water/sediment system (d): 1000 d (default) DT_{50} water (d): 1000 d (default) DT_{50} sediment (d): 1000 d (default) Maximum occurrence observed (% molar basis with respect to the parent) Total Water and Sediment: 17.7 % (aquatic photolysis) Soil: 0 %
Parameters used in FOCUSsw step 3 (if performed)	Not performed
Application rate	See parent
Main routes of entry	Drift

FOCUS STEP 1 Winter & spring cereals	Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
		Actual	TWA	Actual	TWA
Fenoxaprop-P-ethyl-dechloro-hydroxy (AE F040356)	0 h	4.775		19.914	
	24 h	4.772	4.773	20.449	20.182
	2 d	4.768	4.772	20.435	20.312
	4 d	4.762	4.768	20.407	20.366
	7 d	4.752	4.763	20.364	20.375
	14 d	4.729	4.752	20.266	20.345
	21 d	4.706	4.740	20.168	20.302
	28 d	4.683	4.729	20.070	20.256
	42 d	4.638	4.706	19.876	20.162

FOCUS STEP 2 Fenoxaprop-P-ethyl-dechloro-hydroxy (AE F040356)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, Oct. - Feb.	Northern EU	0 h	0.13		0.55	
	Southern EU	0 h	0.13		0.55	

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 4 Environmental fate and behaviour

FOCUS STEP 2 Fenoxaprop-P-ethyl-dechloro-hydroxy (AE F040356)		Day after overall maximum	PEC_{SW} (µg/L)		PEC_{SED} (µg/kg)	
			Actual	TWA	Actual	TWA
Winter cereals, March - May	Northern EU	0 h	0.13		0.55	
	Southern EU	0 h	0.13		0.55	
Spring cereals, March - May	Northern EU	0 h	0.13		0.55	
	Southern EU	0 h	0.13		0.55	

Estimation of concentrations from other routes of exposure (Regulation (EU) N° 284/2013, Annex Part A, point 9.4)

Method of calculation	No data

PEC

Maximum concentration	No data

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Ecotoxicology

Effects on birds and other terrestrial vertebrates (Regulation (EU) N° 283/2013, Annex Part A, point 8.1 and Regulation (EU) N° 284/2013, Annex Part A, point 10.1)

Species	Test substance	Time scale	End point	Toxicity (mg/kg bw per day)
Birds				
Japanese quail	a.s.	Acute	LD_{50}	> 2000 mg a.s./kg bw
Bobwhite quail				> 2000 mg a.s./kg bw
Mallard duck				> 2000 mg a.s./kg bw
Patridge				= 2000 mg a.s./kg bw
Japanese quail	FPP + MPR EW 144 (69+75 g/L)	Acute	LD_{50}	> 2000 mg prod./kg bw
Bobwhite quail	CHA 4960			> 2000 mg prod./kg bw
Bobwhite quail	a.s.	Long-term	NOAEC NOAEL	= 400 ppm = 30.8 mg a.s./kg bw/d
Mammals				
Rat	a.s.	Acute	LD_{50}	= 1098 mg a.s./kg bw
Rat				4000 > LD50 > 3150 mg/kg bw
Rat				2000 > LD50 > 300 mg/kg bw
Mouse				> 5000 mg a.s./kg bw
Rat	FPP + MPR EW 144 (69+75 g/L)	Acute	LD_{50}	> 4000 mg prod./kg bw
Rat	CHA 4960	Acute	LD_{50}	> 2000 mg prod./kg bw

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Rat	a.s.	Long-term [*for first tier risk assessment*]	NOAEL	= 10 mg/kg bw/d
Endocrine disrupting properties (Annex Part A, points 8.1.5) No indication of relevant effect in repro-toxicity studies with birds and therefore no evidence of any endocrine disrupting potential of fenoxaprop-P-ethyl. Based on the available toxicological data set, there was no evidence of endocrine disrupting potential of fenoxaprop-P-ethyl in mammals within the in vivo studies. However no mechanistic data is available.				
Additional higher tier studies (Annex Part A, points 10.1.1.2): Risk assessment passed at Tier 1. No further studies were necessary.				
Terrestrial vertebrate wildlife (birds, mammals, reptile and amphibians) (Annex Part A, points 8.1.4, 10.1.3): Currently there are no test methods for amphibians or reptiles available.				

Toxicity/exposure ratios for terrestrial vertebrates (Regulation (EU) N° 284/2013, Part A, Annex point 10.1)

Cereals at 83 g a.s./ha, 1 application

Growth stage	Indicator or focal species	Time scale	DDD (mg/kg bw per day)	TER	Trigger
Screening Step (Birds)					
-	Small omnivorous birds	Acute	13.2	151	10
-	Small omnivorous birds	Long-term	2.85	10	5
Tier 1 (Birds)					
-	-	-	-	--	-
-	-	-	-	-	-
Screening Step (Mammals)					
-	Small herbivorous mammal	Acute	9.8	112	10
-	Small herbivorous mammal	Long-term	2.12	**4.7**	5
Tier 1 (Mammals)					
BBCH 10-19	Small insectivorous mammal “shrew”	Long-term	0.18	55	5
BBCH ≥ 20	Small insectivorous mammal “shrew”	Long-term	0.08	125	5
Early (shoots)	Large herbivorous mammal “lagomorph”	Long-term	0.98	10.2	5
BBCH 10-29	Small omnivorous mammal “mouse”	Long-term	0.34	29	5
BBCH 30-39	Small omnivorous mammal “mouse”	Long-term	0.17	59	5
Risk from bioaccumulation and food chain behaviour					

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Indicator or focal species	Time scale	DDD (mg/kg bw per day)	TER	Trigger
Earthworm-eating birds	Long-term	0.28	110	5
Earthworm-eating mammals	Long-term	0.35	29	5
Fish-eating birds	Long-term	0.133	231	5
Fish-eating mammals	Long-term	0.12	83	5

Risk from consumption of contaminated water

Scenarios	**Indicator or focal species**	**Time scale**	**PECdwxDWR**	**TER**	**Trigger**
Leaf scenario	Birds	acute	Not relevant		5
Puddle scenario, Screening step 1)Application rate (g a.s./ha)/relevant endpoint <50 (koc<500 L/kg), TER calculation not needed 2)Application rate (g a.s./ha)/relevant endpoint <3000 (koc≥500 L/kg), TER calculation not needed					
Puddle scenario	Birds	acute	Not needed		10
Puddle scenario	Mammals	acute	Not needed		10
Puddle scenario	Birds	Long-term	Not needed		5
Puddle scenario	Mammals	Long-term	Not needed		5

Toxicity data for all aquatic tested species (Regulation (EU) N° 283/2013, Annex Part A, points 8.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.2)*

* This section does not yet reflect the new EFSA Guidance Document on aquatic organisms which has been noted in the meeting of the Standing Committee on Plants, Animals, Food and Feed on 11 July 2014.

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Laboratory tests				
Fish				
Oncorhynchus mykiss	a.s.	Acute 96 hr (flow-through)	Mortality, LC_{50}	0.39 mg a.s./L (mm)
Oncorhynchus mykiss	a.s.	Acute 96 hr (static)	Mortality, LC_{50}	0.46 mg a.s./L (nom)
Lepomis macrochirus	a.s.	Acute 96 hr (flow-through)	Mortality, LC_{50}	0.19 mg a.s./L (mm)
Pimephales promelas	a.s.	Acute 96 hr (flow-through)	Mortality, LC_{50}	0.466 mg a.s./L (nom)
Oncorhynchus mykiss	PUMA S 69 EW	Acute 96 hr (static)	Mortality, LC_{50}	4.2 mg prep./L (0.3 mg a.s./$L_{(nom)}$)

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Cyprinus carpio	PUMA S 69 EW	Acute 96 hr (static)	Mortality, LC_{50}	3.8 mg prep./L (0.27 mg a.s./$L_{(nom)}$)
Oncorhynchus mykiss	CHA 4960	Acute 96 hr (semi-static)	Mortality, LC_{50}	0.27 mg a.s./L (mm)
Oncorhynchus mykiss	a.s.	Chronic (flow-through)	Growth, Reproduction NOEC	0.02832 mg a.s./L (mm)
Pimephales promelas	a.s.	Chronic (flow-through)	Mortality Growth NOEC	0.043 mg a.s./L (mm) 0.0719 mg a.s./L (mm)
Oncorhynchus mykiss	Fenoxaprop-P acid (AE F088406)	Acute 96 hr (static)	Mortality, LC_{50}	> 68.82 mg a.s./L (mm)
Oncorhynchus mykiss	Chlorobenzoxazolone (AE F054014)	Acute 96 hr (semi-static)	Mortality, LC_{50}	> 10 mg a.s./L (nom)
Oncorhynchus mykiss	HOPP-acid (AE F0962918)	Acute 96 hr (semi-static)	Mortality, LC_{50}	353 mg a.s./L (nom)
Oncorhynchus mykiss	Phenol (AE F040356)	Acute 96 hr (semi-static)	Mortality, LC_{50}	0.590 mg a.s./L (mm)
Oncorhynchus mykiss	Fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271)	Acute 96 hr (semi-static	Mortality, LC_{50}	0.734 mg a.s./L (mm)
Oncorhynchus mykiss	Chlorobenzoxazolone (AE F054014)	Chronic	Growth Reproduction, NOEC	0.02832 mg a.s./L (mm)*
Oncorhynchus mykiss	Phenol (AE F040356)	Chronic	Growth Reproduction NOEC	0.02832 mg a.s./L (mm)*
Aquatic invertebrates				
Daphnia magna	a.s.	48 h (flow-through)	Mortality, EC_{50}	> 0.8411 mg a.s./L (mm)
Mysidopsis bahia	a.s.	48 h (semi-static)	Mortality, EC_{50}	0.109 mg a.s./L (mm)
Daphnia magna	PUMA S 69 EW	48 h (static)	Mortality, EC_{50}	0.282 mg a.s./L (mm)

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Daphnia magna	CHA 4960	48 h (semi-static)	Mortality, EC_{50}	3.1 mg prep./L (0.22 mg a.s./$L_{(nom)}$)
Mysidopsis bahia	a.s.	28 d (flow-through)	Reproduction, NOEC	0.011 mg a.s./L (mm)
Daphnia magna	PUMA S 69 EW	21 d (semi-static)	Reproduction, NOEC	1.0 mg prep./L (0.0.0728 mg a.s./$L_{(nom)}$)
Daphnia magna	CHA 4960	21 d (semi-static)	Reproduction, NOEC	0.019 mg a.s./L (mm)
Daphnia magna	Fenoxaprop-P acid (AE F088406)	48 h (static)	Mortality, EC_{50}	126 mg a.s./L (nom)
Daphnia magna	Chlorobenzoxazolone (AE F054014)	48 h (semi static)	Mortality, EC50	6.6 mg a.s./L (nom)
Daphnia magna	HOPP-acid (AE F0962918)	48 h (static)	Mortality, EC50	> 100 mg a.s./L (nom)
Daphnia magna	HOPP-acid (AE F0962918)	48 h (static)	Mortality, EC50	86.8 mg a.s./L (nom)
Daphnia magna	Phenol (AE F040356)	48 h (static)	Mortality, EC50	1.75 mg a.s./L (mm)
Daphnia magna	Fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271	48 h (static)	Mortality, EC_{50}	9.98 mg a.s./L (mm)
Daphnia magna	Fenoxaprop-P acid (AE F088406)	21 d (semi-static)	Growth, Reproduction, EC_{10}	0.49 mg a.s./L (nom)
Mysidopsis bahia	Chlorobenzoxazolone (AE F054014)	28 d (flow-through)	Reproduction, NOEC	0.011 mg a.s./L (mm)*
Daphnia magna	HOPP-acid (AE F0962918)	21 d (semi-static)	Growth, Reproduction, EC_{10}	3.0 mg a.s./L (nom)
Mysidopsis bahia	Phenol (AE F040356)	28 d (flow-through)	Reproduction, NOEC	0.011 mg a.s./L (mm)*

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Sediment-dwelling organisms				
Chironomus riparius	a.s.	28 d (static)	NOEC	0.2 mg a.s./L (nom)
Algae				
Navicula pelliculosa	a.s.	72 h (static)	Growth rate: E_rC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	> 0.811 mg a.s./L (mm) (0.049 mg a.s./L(mm)) > 0.811 mg a.s./L (mm) (0.049 mg a.s./L(mm))
Anabaena flos-aquae	a.s.	72 h (static) Limit Test	Growth rate: E_rC_{50} (NOEC) Biomass: E_bC_{50} (NOEC)	> 0.94 mg a.s./L (mm) (0.94 mg a.s./L(mm)) > 0.94 mg a.s./L (mm) (0.94 mg a.s./L(mm))
Anabaena flos-aquae	a.s.	72 h (static)	Growth rate: E_rC_{50} (NOEC)	> 0.518 mg a.s./L (mm) (0.518 mg a.s./L(mm))

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Raphidocelis subcapitata	PUMA S 69 EW	72 h (static)	Growth rate: E_rC_{50} (NOEC) Biomass: E_bC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	0.418 mg a.s./L (mm) (0.087 mg a.s./$L_{(mm)}$) 0.231 mg a.s./L (mm) (0.041 mg a.s./$L_{(mm)}$) 0.243 mg a.s./L (mm) (0.041 mg a.s./$L_{(mm)}$)
Desmodesmus subspicatus	CHA 4960	72 h (static)	Growth rate: E_rC_{50} (NOEC) Biomass: E_bC_{50} (NOEC)	0.12 mg a.s./L (mm) (0.025 mg a.s./$L_{(mm)}$) 0.04 mg a.s./L (mm) (0.012 mg a.s./$L_{(mm)}$)
Raphidocelis subcapitata	Fenoxaprop-P acid (AE F088406)	72 h (static)	Growth rate: E_rC_{50} (NOEC) Biomass: E_bC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	69.9 mg a.s./L (mm) (13.72 mg a.s./$L_{(mm)}$) 35.8 mg a.s./L (mm) (13.72 mg a.s./$L_{(mm)}$) 33.9 mg a.s./L (mm) (13.72 mg a.s./$L_{(mm)}$)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Raphidocelis subcapitata	Chlorobenzoxazolone (AE F054014)	72 h (static)	Growth rate: E_rC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	8.78 mg a.s./L (nom) (5.1 mg a.s./$L_{(nom)}$) 8.12 mg a.s./L (nom) (5.1 mg a.s./$L_{(nom)}$)
Raphidocelis subcapitata	HOPP-acid (AE F0962918)	72 h (static)	Growth rate: E_rC_{50} (NOEC) Biomass: E_bC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	53.4 mg a.s./L (nom) (10.0 mg a.s./$L_{(nom)}$) 9.56 mg a.s./L (nom) (1.0 mg a.s./$L_{(nom)}$) 14.3 mg a.s./L (nom) (3.2 mg a.s./$L_{(nom)}$)
Raphidocelis subcapitata	Phenol (AE F040356)	72 h (static)	Growth rate: E_rC_{50} (NOEC) Yield: E_yC_{50} (NOEC)	> 3.33 mg a.s./L (mm) (0.828 mg a.s./$L_{(mm)}$) 3.04 mg a.s./L (mm) (0.828 mg a.s./$L_{(mm)}$)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Raphidocelis subcapitata	Fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271)	72 h (static)	Growth rate: E_rC_{50} (NOEC)	> 8.73 mg a.s./L (mm) (2.74 mg a.s./L(mm))
			Yield: E_yC_{50} (NOEC)	> 8.73 mg a.s./L (mm) (2.74 mg a.s./L(mm))
Higher plant				
Myriophyllum spicatum	a.s.	14 d (semi-static, Limit test)	Shoot length, dry and wet weight, E_rC_{50} (NOEC)	> 0.0336 mg a.s./L (mm) (0.0336 mg a.s./L(mm))
			Shoot length, dry and wet weight, E_yC_{50} (NOEC)	> 0.0336 mg a.s./L (mm) (0.0336 mg a.s./L(mm))
Lemna gibba	CHA 4960	7 d (semi-static)	Fronds number, E_rC_{50} (NOEC)	0.359 mg a.s./L (mm) (0.026 mg a.s./L(mm))
			Fronds number, E_yC_{50} (NOEC)	0.166 mg a.s./L (mm) (0.026 mg a.s./L(mm))
			Dry weight, E_rC_{50} (NOEC)	0.366 mg a.s./L (mm) (0.026 mg a.s./L(mm))
			Dry weight, E_yC_{50} (NOEC)	0.201 mg a.s./L (mm) (0.026 mg a.s./L(mm))

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)**

Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Lemna gibba	Fenoxaprop-P acid (AE F088406)	7 d (static)	Fronds number, E_rC_{50} (NOEC)	> 100 mg a.s./L $_{(nom)}$ (10 mg a.s./$L_{(nom)}$)
			Fronds number, E_yC_{50} (NOEC)	64.1 mg a.s./L $_{(nom)}$ (3.2 mg a.s./$L_{(nom)}$)
			Dry weight, E_rC_{50} (NOEC)	> 100 mg a.s./L $_{(nom)}$ (32 mg a.s./$L_{(nom)}$)
			Dry weight, E_yC_{50} (NOEC)	> 100 mg a.s./L $_{(nom)}$ (32mg a.s./$L_{(nom)}$)
Lemna gibba	Phenol (AE F040356)	7 d (semi-static)	Fronds number, E_rC_{50} (NOEC)	> 2.70 mg a.s./L $_{(mm)}$ (0.137 mg a.s./$L_{(mm)}$)
			Fronds number, E_yC_{50} (NOEC)	> 2.70 mg a.s./L $_{(mm)}$ (0.137 mg a.s./$L_{(mm)}$)
			Dry weight, E_rC_{50} (NOEC)	> 2.70 mg a.s./L $_{(mm)}$ (1.21 mg a.s./$L_{(mm)}$)
			Dry weight, E_yC_{50} (NOEC)	> 2.70 mg a.s./L $_{(mm)}$ (1.21 mg a.s./$L_{(mm)}$)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
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Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity[1]
Lemna gibba	Fenoxaprop-P-ethyl-dechloro-hydroxy (BCS-CY11271)	7 d (semi-static)	Fronds number, E_rC_{50} (NOEC)	> 29.4 mg a.s./L $_{(mm)}$ (2.09 mg a.s./L$_{(mm)}$)
			Fronds number, E_yC_{50} (NOEC)	12.9 mg a.s./L $_{(mm)}$ (2.09 mg a.s./L$_{(mm)}$)
			Dry weight, E_rC_{50} (NOEC)	> 29.4 mg a.s./L $_{(mm)}$ (2.09 mg a.s./L$_{(mm)}$)
			Dry weight, E_yC_{50} (NOEC)	16 mg a.s./L $_{(mm)}$ (2.09 mg a.s./L$_{(mm)}$)
Further testing on aquatic organisms *No further tests conducted.*				
Potential endocrine disrupting properties (Annex Part A, point 8.2.3) Population relevant effects of Fenoxaprop-P-ethyl on fish were studied in early life-stage tests (ELS) in Fathead minnow (Pimephales promelas) and in Rainbow trout, (Oncorhynchus mykiss). Survival of the fish larvae was the most sensitive endpoint in both species. All other endpoints were affected only at higher concentrations or not at all. Based on the absence of relevant effects that could hint to an endocrine activity of the compound, it can be concluded that Fenoxaprop-P-ethyl is not a (potential) endocrine disrupter.				

[1] ($_{nom}$) nominal concentration; ($_{mm}$) mean measured concentration; prep.: preparation; a.s.: active substance

* Endpoint of the active substance supported by QSAR is used for the risk assessment

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
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Section 5 Ecotoxicology

Bioconcentration in fish (Annex Part A, point 8.2.2.3)

	Active substance	Metabolite1	Metabolite2	Metabolite3
$logP_{O/W}$				
Steady-state bioconcentration factor (BCF) (total wet weight/normalised to 5% lipid content)	338*			
Uptake/depuration kinetics BCF (total wet weight/normalised to 5% lipid content)	343			
Annex VI Trigger for the bioconcentration factor	100			
Clearance time (days) (CT_{50})	< 1day			
(CT_{90})	< 2 days			
Level and nature of residues (%) in organisms after the 14 day depuration phase				
Higher tier study				

* based on total ^{14}C or on specific compounds

Toxicity/exposure ratios for the most sensitive aquatic organisms (Regulation (EU) N° 284/2013, Annex Part A, point 10.2)

PUMA S 69 EW:

FOCUS$_{sw}$ step 1-3 - PEC/RAC ratios for Fenoxaprop-P-ethyl –winter and spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**	**Sed. dweller prolonged**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Mysidopsis bahia*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*	*Chironomus riparius*
Toxicity [µg/L]		LC_{50} = 190	NOEC = 28.32	EC_{50}= 109	NOEC = 11	EC_{50} = 418[a]	EC_{50} = 33.6	NOEC = 200
Trigger **		100	10	100	10	10	10	10
RAC [µg/L]		1.9	2.832	1.09	1.1	41.8	3.36	20
FOCUS Step 1								
	2.48	**1.31**	0.88	**2.27**	**2.25**	0.059	0.74	0.12
FOCUS Step 2								
North Europe	0.76	0.40	-	0.69	0.69	-	-	-
South Europe	0.76	0.40	-	0.69	0.69	-	-	-
FOCUS Step 3*								
D3 / ditch								
D4 / pond								
D4 / stream								
D5 / pond								
D5 / stream								
R1 / pond								
R1 / stream								
R2 / stream								
R3 / stream								
R4 / stream								

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]

**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

[a] The most sensitive endpoint is based on a study with the representative formulation.

CHA 4960:

FOCUS$_{sw}$ step 1-3 - PEC/RAC ratios for Fenoxaprop-P-ethyl –winter and spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**	**Sed. dweller prolonged**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Mysidopsis bahia*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*	*Chironomus riparius*
Toxicity [µg/L]		LC_{50} = 170[a]	NOEC = 28.32	EC_{50} = 109	NOEC = 11	EC_{50} = 120[a]	EC_{50} = 33.6	NOEC = 200
Trigger **		100	10	100	10	10	10	10
RAC [µg/L]		1.7	2.832	1.09	1.1	1.2	3.36	20
FOCUS Step 1								
	2.48	**1.46**	0.88	**2.27**	**2.25**	0.21	0.74	
FOCUS Step 2								0.12
North Europe	0.76	0.45	-	0.69	0.69	-	-	-
South Europe	0.76	0.45	-	0.69	0.69	-	-	-
FOCUS Step 3*								
D3 / ditch								
D4 / pond								
D4 / stream								
D5 / pond								
D5 / stream								
R1 / pond								
R1 / stream								
R2 / stream								
R3 / stream								
R4 / stream								

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]
[a] The most sensitive endpoint is based on a study with the representative formulation.

$FOCUS_{sw}$ step 1-3 - PEC/RAC ratios for Fenoxaprop-P-acid –winter and spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Daphnia magna*	*Daphnia magna*	*Raphidocelis subcapitata*	*Lemna gibba*
Toxicity [µg/L]		LC_{50} = 68820	EC_{50} = 126000	EC_{10} = 490	EC_{50} = 69900	EC_{50} = 100000
Trigger **		100	100	10	10	10
RAC [µg/L]		688.2	1260	49		
FOCUS Step 1						
	39.7	0.06	0.03	0.81	0.0057	0.004

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

$FOCUS_{sw}$ step 1-3 - PEC/RAC ratios for Chlorobenzoxazolone –winter cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Daphnia magna*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*
Toxicity [µg/L]		LC_{50} = 10000	NOEC = 28.32	EC_{50} = 6600	NOEC = 11	EC_{50} = 8780	EC_{50} = 3.36
Trigger **		100	10	100	10	10	10
RAC [µg/L]		100	2.832	66	1.1	878	0.336
FOCUS Step 1							
	2.45	0.025	0.87	0.037	**2.23**	0.0028	**7.29**

FOCUS Step 2							
North Europe	0.71	-	-	-	0.65	-	**2.11**
South Europe	0.57	-	-	-	0.52	-	**1.70**

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

FOCUS$_{sw}$ step 1-3 - PEC/RAC ratios for Chlorobenzoxazolone –spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Daphnia magna*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*
Toxicity [µg/L]		LC_{50} = 10000	NOEC = 28.32	EC_{50} = 6600	NOEC = 11	EC_{50} = 8780	EC_{50} = 3.36
Trigger **		100	10	100	10	10	10
RAC [µg/L]		100	2.832	66	1.1	878	0.336
FOCUS Step 1							
	2.45	0.025	0.87	0.037	**2.23**	0.0028	**7.29**
FOCUS Step 2							
North Europe	0.30	-	-	-	0.27	-	0.89
South Europe	0.57	-	-	-	0.52	-	**1.70**

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

FOCUS$_{sw}$ step 1-3 - PEC/RAC ratios for HOPP-acid –winter and spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Daphnia magna*	*Daphnia magna*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*

Toxicity [µg/L]		LC_{50} = 353000	EC_{50} = 86800	EC_{10} = 3000	EC_{50} = 53400	EC_{50} = 3.36
Trigger **		100	100	10	10	10
RAC [µg/L]		3530	868	300	5340	0.336
FOCUS Step 1						
	14.1	0.004	0.016	0.047	0.0026	**41.96**
FOCUS Step 2						
North Europe	0.10	-	-	-	-	0.30
South Europe	0.10	-	-	-	-	0.30

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

$FOCUS_{sw}$ step 1-3 - PEC/RAC ratios for Phenol –winter cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Daphnia magna*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Lemna gibba*
Toxicity [µg/L]		LC_{50} = 590	NOEC = 28.32	EC_{50} = 1750	NOEC = 11	EC_{50} = 3330	EC_{50} = 2700
Trigger **		100	10	100	10	10	10
RAC [µg/L]		5.9	2.832	17.5	1.1	333	270
FOCUS Step 1							
	3.13	0.53	**1.11**	0.18	**2.85**	0.0094	0.012
FOCUS Step 2							
North Europe	0.29	-	0.10	-	0.26	-	-
South Europe	0.25	-	0.088	-	0.23	-	-

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]
**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

$FOCUS_{sw}$ step 1-3 - PEC/RAC ratios for Phenol –spring cereals at 83 g a.s./ha

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	**February 2018**	**Fenoxaprop-P-ethyl** **FPP + MPR EW 144 (69+75 g/L)** **CHA 4960 (Fenoxaprop-P-ethyl** **69 g/L EW)**

Section 5 Ecotoxicology

Scenario	**PEC global max (µg L)**	**fish acute**	**fish chronic**	**Aquatic invertebrates**	**Aquatic invertebrates prolonged**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Oncorhynchus mykiss*	*Daphnia magna*	*Mysidopsis bahia*	*Raphidocelis subcapitata*	*Lemna gibba*
Toxicity [µg/L]		LC_{50} = 590	NOEC = 28.32	EC_{50} = 1750	NOEC = 11	EC_{50} = 3330	EC_{50} = 2700
Trigger **		100	10	100	10	10	10
RAC [µg/L]		5.9	2.832	17.5	1.1	333	270
FOCUS Step 1							
	3.13	0.53	**1.11**	0.18	**2.85**	0.0094	0.012
FOCUS Step 2							
North Europe	0.16	-	0.056	-	0.15	-	-
South Europe	0.25	-	0.088	-	0.23	-	-

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]

**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

FOCUS$_{sw}$ step 1-3 - PEC/RAC ratios for Fenoxaprop-P-ethyl-dechloro-hydroxy –winter and spring cereals at 83 g a.s./ha

Scenario	**PEC global max (µg L)**	**fish acute**	**Aquatic invertebrates**	**Algae**	**Higher plant**
		Oncorhynchus mykiss	*Daphnia magna*	*Raphidocelis subcapitata*	*Myriophyllum spicatum*
Toxicity [µg/L]		LC_{50} = 734	EC_{50} = 9980	EC_{50} = 8730	EC_{50} = 29400
Trigger **		100	100	10	10
RAC [µg/L]		7.34	99.8	873	2940
FOCUS Step 1					
	4.77	0.65	0.048	0.0055	0.0016

*[Only scenarios where the trigger is not met at FOCUSsw step 1-2 should be included in step 3.]

**[If the Trigger value has been adjusted during the risk assessment, it should always be clear on what basis the risk assessment has been performed, i.e. what the AF value is and for which organism and endpoint it refers.]

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Effects on bees (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.1 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.1)*

* This section does reflect the new EFSA Guidance Document on bees which has not yet been noted by the Standing Committee on Plants, Animals, Food and Feed.

Species	Test substance	Time scale/type of endpoint	End point	toxicity
Apis mellifera	a.s., fenoxaprop-P-ethyl	Acute	Oral toxicity (LD_{50})	> 109.5 µg a.s./bee
Bombus terrestris	a.s., fenoxaprop-P-ethyl	Acute	Oral toxicity (LD_{50})	> 124.5 µg a.s./bee
Apis mellifera	FPP + MPR EW 144 (69+75 g/L)	Acute	Oral toxicity (LD_{50})	>211.8 µg product/bee
Apis mellifera	CHA 4960	Acute	Oral toxicity (LD_{50})	356.1 µg product/bee
Bombus terrestris	a.s., fenoxaprop-P-ethyl	Acute	Contact toxicity (LD_{50})	> 100 µg a.s./bee
Apis mellifera	FPP + MPR EW 144 (69+75 g/L)	Acute	Contact toxicity (LD_{50})	> 200 µg product/bee
Apis mellifera	CHA 4960	Acute	Contact toxicity (LD_{50})	598.6 µg product/bee
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Chronic	10 d-LDD50	10.06 µg/bee/day
Apis mellifera	FPP + MPR EW 144 (69+75 g/L)	Bee brood development	NOEClarvae	Slightly increased termination rate of eggs and old larvae and decreased termination rate of young larvae. No effects on honey bee pupae and larvae were observed. In both, in the test item treatment group and in the control group, post-application adult mortality was on the same level as the corresponding pre-application adult mortality, with the post-application adult mortality in the test item treatment group being only slightly higher. Overall, it can be concluded according to the results of this study that the administration of FPP + MPR EW 144 (69+75 g/L) fortified sugar syrup 0.21 g/L fenoxaprop-P-ethyl to honey bee colonies does

				neither adversely affect honey bee colonies nor bee brood development.
Apis mellifera	CHA 4960	Bee brood development		Slightly increased termination rate of eggs and young larvae, not significant compared to the control and decreased termination rate of old larvae. No effects on honey bee pupae and larvae were observed. Adult bee mortality in the test item treatment group was slightly lower compared to control. In both, in the test item treatment group and in the control group, post-application adult mortality was on the same level as the corresponding pre-application adult mortality in the test item treatment and control group being only slightly higher. Overall it can be concluded according to the results of this study that the administration of fenoxaprop 69 g/L EW fortified sugar syrup 0.21 g/L fenoxaprop-P-ethyl to honey bee colonies did not adversely affect honey bee colonies or bee brood development.
	a.s.,	Sub-lethal effects (behavioural and reproductive)	NOEC hypopharyngeal glands	No data available.
	preparation			No data available.

Potential for accumulative toxicity: *no*
Semi-field test (Cage and tunnel test) <u>FPP + MPR EW 144 (69+75 g/L): Semi-field honey bee brood study (according to OECD 75; forced exposure conditions) in *Phacelia*.</u> Overall, Fenoxaprop-P-ethyl 69 g/L EW was applied at a rate of 84.5 g a.s./ha to a flowering crop under semi-field (tunnel) conditions during bee flight. No biologically relevant adverse effects on mortality of worker bees or pupae were observed. Foraging activity, behaviour as well as queen survival was not affected. No effects on colony development or colony strength. <u>FPP + MPR EW 144 (69+75 g/L): Semi-field honey bee brood study (according to OECD 75; forced exposure conditions) in *Phacelia*.</u>

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Overall, Fenoxaprop-P-ethyl 69 g/L EW applied at a rate of 84.5 g a.s./ha to a flowering crop under semi-field (tunnel) conditions during bee flight. No biologically relevant adverse effects on mortality of worker bees or pupae were observed. Foraging activity, behaviour as well as queen survival was not affected. No effects on colony development or colony strength.
Field tests Not necessary when considering the outcome of the risk assessment and the results of the lower-tiered studies.

<u>Fenoxaprop-P-ethyl EW 69 (69 g/L)</u>

Risk assessment for use of Fenoxaprop-P-ethyl EW 69 (69 g/L) at 1.2 L product/ha [1 application in cereals]

Species	Test substance	Risk quotient	HQ/ETR	Trigger
Apis mellifera	a.s.	HQ_{oral}	< 0.06	0.2
Apis mellifera	CHA 4960	HQ_{oral}	< 0.03	0.2
Bombus terrestris	a.s.	HQ_{oral}	< 0.01	7
Apis mellifera	a.s.	$HQ_{contact}$	< 0.8	42
Apis mellifera	CHA 4960	$HQ_{contact}$	< 2.1	42
Bombus terrestris	a.s.	$HQ_{contact}$	< 0.8	7
Apis mellifera	CHA 4960	$ETR_{acute\ adult\ oral}$	< 0.03	> 0.2
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	$ETR_{chronic\ adult\ oral}$	**0.062**	>0.03
Apis mellifera	a.s., preparation	ETR_{larvae}	-	-
Apis mellifera	a.s., preparation	ETR_{hpg}	-	-

Tier 1 level assessment for use of Fenoxaprop-P-ethyl EW 69 (69 g/L) at 1.2 L product/ha [1 application in cereals]

Species	Test substance	Scenario	Risk quotient	HQ/ETR	Trigger
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Treated crop BBCH 10-29	$ETR_{chronic\ adult\ oral}$	0.005	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Treated crop BBCH 30-39	$ETR_{chronic\ adult\ oral}$	0.005	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Weeds BBCH 10-29	$ETR_{chronic\ adult\ oral}$	0.017	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Weeds BBCH 30-39	$ETR_{chronic\ adult\ oral}$	0.009	> 0.03

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Species	Test substance	Scenario	Risk quotient	HQ/ETR	Trigger
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Field margin BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Field margin BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 40-69	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	next crop BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0.003	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	next crop BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0.003	> 0.03

FPP + MPR EW 144

Risk assessment for use of FPP + MPR EW 144 at 1.2 L product/ha [1 application in cereals]

Species	Test substance	Risk quotient	HQ/ETR	Trigger
Apis mellifera	a.s.	ETR$_{\text{acute adult oral}}$	< 0.06	0.2
Apis mellifera	CHA 4960	ETR$_{\text{acute adult oral}}$	< 0.05	0.2
Bombus terrestris	a.s.	ETR$_{\text{acute adult oral}}$	< 0.01	7
Apis mellifera	a.s.	ETR$_{\text{acute adult contact}}$	< 0.8	42
Apis mellifera	CHA 4960	ETR$_{\text{acute adult contact}}$	< 6.3	42
Bombus terrestris	a.s.	ETR$_{\text{acute adult contact}}$	< 0.8	7
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	ETR $_{\text{chronic adult oral}}$	**0.062**	>0.03
Apis mellifera	a.s., preparation	ETR$_{\text{larvae}}$	-	-
Apis mellifera	a.s., preparation	ETR$_{\text{hpg}}$	-	-

Tier 1 level assessment for use of FPP + MPR EW 144 at 1.2 L product/ha [1 application in cereals]

Species	Test substance	Scenario	Risk quotient	HQ/ETR	Trigger

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Species	Test substance	Scenario	Risk quotient	HQ/ETR	Trigger
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Treated crop BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0.005	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Treated crop BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0.005	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Weeds BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0.017	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Weeds BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0.009	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Field margin BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Field margin BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	Adjacent crop BBCH 40-69	ETR $_{\text{chronic adult oral}}$	0	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	next crop BBCH 10-29	ETR $_{\text{chronic adult oral}}$	0.003	> 0.03
Apis mellifera	Fenoxaprop-P-ethyl EW 69 (69 g/L)	next crop BBCH 30-39	ETR $_{\text{chronic adult oral}}$	0.003	> 0.03

Effects on other arthropod species (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.2)

FPP + MPR EW 144 (69+75 g/L)

Laboratory tests with standard sensitive species

Species	Test Substance	End point	Toxicity
Typhlodromus pyri	AE F046360 24 EW14 A715	Mortality, LR_{50} Reproduction, ER_{50}	> 1200 mL/ha (> 82.2 g a.s./ha) > 48 mL prod./ha (3.3 g a.s./ha)
Aphidius rhopalosiphi	AE F046360 24 EW14 A715	Mortality, LR_{50} Reproduction, ER_{50}	678 mL/ha (46.6 g a.s./ha) > 600 mL/ha (41.2 g a.s./ha)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Species	Test Substance	End point	Toxicity
Additional species			
Crysoperla carnea	AE F046360 24 EW14 A715	Mortality, LR_{50} Reproduction, ER_{50}	> 1200 mL/ha (> 82.2 g a.s./ha) > 1200 mL/ha (> 82.2 g a.s./ha)

First tier risk assessment for – FPP + MPR EW 144 (69+75 g/L) at 1.2 L/ha, × 1 in cereals

Test substance	Species	Effect (LR_{50} g/ha)	HQ in-field	HQ off-field[1]	Trigger
FPP + MPR EW 144 (69+75 g/L)	*Typhlodromus pyri*	> 1200	< 1	< 0.03	2
FPP + MPR EW 144 (69+75 g/L)	*Aphidius rhopalosiphi*	678	1.8	0.05	2

[1]at 1m distance

CHA 4960

Laboratory tests with standard sensitive species

Species	Test Substance	End point	Toxicity
Typhlodromus pyri	CHA 4960	Mortality, LR_{50} Reproduction, ER_{50}	478 g/ha (34 g a.s./ha) > 257.5 g prod./ha (> 18.8 g a.s./ha)
Aphidius rhopalosiphi	CHA 4960	Mortality, LR_{50} Reproduction, ER_{50}	578 g prod./ha (41.1 g a.s./ha) > 515 g prod./ha (> 36.6 g a.s./ha)
Additional species			
- No additional species			

First tier risk assessment for – CHA 4960 at 1.2 L/ha, × 1 in cereals

Test substance	Species	Effect (LR_{50} g/ha)	HQ in-field	HQ off-field[1]	Trigger
CHA 4960	*Typhlodromus pyri*	578	**2.1**	0.06	2
CHA 4960	*Aphidius rhopalosiphi*	478	**2.6**	0.07	2

[1]at 1m distance

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Extended laboratory tests, aged residue tests

Species	Life stage	Test substance, substrate	Time scale	Dose (mL/ha)	End point	% effect[3]	ER_{50}
Aphidius rhopalosiphi	Adults	CHA 4960, leaves	~ 2 weeks	14.8 – 1200	Reduction in parasitisation, ER_{50}	< 50 %	> 1200 mL/ha
Typhlodromus pyri	Protonymphs	CHA 4960, bean plants, freshly dried residues	14 days	1200	Mortality, LR_{50} Effect on reproduction, ER_{50}	> 50 %	> 1200 mL/ha
Chrysoperla carnea	Larvae	CHA 4960, bean leaves	14 days	14.8 – 1200	Effects on reproduction, ER_{50}	< 50 %	> 1200 mL/ha

Risk assessment for – CHA 4960 at 1.2 L/ha, × 1 in cereals

Species	ER_{50} (mL/ha)	In-field rate	Off-field rate[1]
Aphidius rhopalosiphi[2]	1200	1200	16.62
Typhlodromus pyri[3]	1200	1200	166.2
Chrysoperla carnea[2]	1200	1200	16.62

[1]at 1m distance
[2] 2D
[3] 3D

Semi-field tests
-
Field studies
-
Additional specific test
-

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Effects on non-target soil meso- and macro fauna; effects on soil nitrogen transformation (Regulation (EU) N° 283/2013, Annex Part A, points 8.4, 8.5, and Regulation (EU) N° 284/2013 Annex Part A, points 10.4, 10.5)

Test organism	Test substance	Application method of test a.s./ OM[1]	Time scale	End point	Toxicity
Earthworms					
Eisenia fetida	FPP + MPR EW 144 (69+75 g/L)	mixed into soil / 10 %	Chronic, 56 days	$EC_{10\ reproduction}$	85 mg product/ha*
Eisenia fetida	CHA 4960	Mixed into soil / 10%	Chronic, 56 days	NOEC	26.9 mg product/ha*
Eisenia fetida	Fenoxaprop-P-ethyl	mixed into soil / 10 %	Chronic, 56 days	NOEC	≥ 28 mg a.s./kg dws*
Eisenia fetida	Fenoxaprop-P-acid (AE F088406)	mixed into soil / 10 %	Chronic, 56 days	NOEC	100 mg / kg dws
Eisenia fetida	Chlorobenzoxazolone (AE F054014)	mixed into soil / 10 %	Chronic, 56 days	NOEC	89 mg/kg dws
Eisenia fetida	HOPP-acid (AE F096918)	mixed into soil / 10 %	Chronic, 56 days	NOEC	158 mg/kg dws
Other soil macroorganisms					
Folsomia candida	FPP + MPR EW 144 (69+75 g/L)	mixed into soil / 5 %	Chronic, 28 days	NOEC	28 mg prod./kg dws*
Folsomia candida	CHA 4960	Mixed into soil / 5 %	Chronic, 28 days	NOEC	95.5 mg prod./kg dws*
Folsomia candida	Fenoxaprop-P-ethyl	mixed into soil / 5 %	Chronic, 28 days	NOEC	≥ 500 mg/kg dws*
Folsomia candida	Fenoxaprop-P-acid (AE F088406)	mixed into soil / 5 %	Chronic, 28 days	NOEC	≥ 111.6 mg./kg dws
Folsomia candida	Chlorobenzoxazolone (AE F054014)	mixed into soil / 5%	Chronic, 28 days	NOEC	≥ 50 mg/kg dws*
Folsomia candida	HOPP-P-acid	mixed into soil / 5 %	Chronic, 28 days	NOEC	≥ 100 mg/kg dws

* Endpoint corrected due to lipophilic substance (log POW > 2)

[1]To indicate whether the test substance was oversprayed/to indicate the organic content of the test soil (e.g. 5 % or 10 %).

Higher tier testing (e.g. modelling or field studies): No data available.

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Nitrogen transformation	FPP + MPR EW 144 (69+75 g/L)	28 days	< 25 % effect at day 28 at 0.56 mg a.s./kg soil (8.44 mg prod./kg.soil, 6 L prod./ha)
	CHA 4690	28 days	< 25% effect at day 28 at 0.98 mg a.s./kg soil (13.73 mg prod./kg soil, 5 L prod./ha)
	Fenoxaprop-P-ethyl	56 days	< 25 % effect at day 56 at 0.67 mg a.s./kg soil (500 g a.s./ha)
		42 days	< 25 % effect at day 42 at 0.55 mg a.s./kg soil (415 g a.s./ha)
	Fenoxaprop-P-acid (AE F088406)	28 days	< 25 % effect at day 28 at 0.524 mg a.s./kg soil (393 g p.m./ha)
	Chlorobenzoxazolone (AE F054014)	28 days	< 25 % effect at day 28 at 0.263 mg/kg soil (197 g p.m./ha)
	HOPP-acid (AE F096918)	28 days	< 25 % effect at day 28 at 0.300 mg/kg soil (225 g p.m./ha)

Toxicity/exposure ratios for soil organisms

[Representative use] at [application rate] g a.s./ha [x number of applications]

Test organism	Test substance	Time scale	Soil PEC[1]	TER	Trigger
Earthworms					
Eisenia fetida	FPP + MPR EW 144 (69+75 g/L)	Chronic, 56 days	1.688	50	5
	CHA 4690	Chronic, 56 days	1.648	16	5
	Fenoxaprop-P-ethyl	Chronic, 56 days	0.111	≥ 252	5
	Fenoxaprop-P-acid (AE F088406)	Chronic, 56 days	0.097	1030	5
	Chlorobenzoxazolone (AE F054014)	Chronic, 56 days	0.010	8900	5
	HOPP-acid (AE F096918)	Chronic, 56 days	0.041	3853	5
Other soil macroorganisms					
Folsomia candida	FPP + MPR EW 144 (69+75 g/L)	Chronic, 28 days	1.688	16	5
	CHA 4690	Chronic, 28 days	1.648	16	5
	Fenoxaprop-P-ethyl	Chronic, 28 days	0.111	≥ 4505	5
	Fenoxaprop-P-acid	Chronic, 28 days	0.097	≥ 1150	5

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Test organism	Test substance	Time scale	Soil PEC[1]	TER	Trigger
	(AE F088406)				
	Chlorobenzoxazolone (AE F054014)	Chronic, 28 days	0.010	≥ 5000	5
	HOPP-acid (AE F096918)	Chronic, 28 days	0.041	≥ 1219	5
Hypoaspis aculeifer	FPP + MPR EW 144 (69+75 g/L)	Chronic, 14 days	1.688	16	5
	CHA 4690	Chronic, 14 days	1.648	58	5
	Fenoxaprop-P-ethyl	Chronic, 14 days	0.111	≥ 4505	5
	Fenoxaprop-P-acid (AE F088406)	Chronic, 14 days	0.089	≥ 515	5
	Chlorobenzoxazolone (AE F054014)	Chronic, 14 days	0.010	≥ 5000	5

[1]PEC soil max

Effects on terrestrial non target higher plants (Regulation (EU) N° 283/2013, Annex Part A, point 8.6 and Regulation (EU) N° 284/2013 Annex Part A, point 10.6)

Screening data

Not required for herbicides or plant growth regulators as ER_{50} tests should be provided

FPP + MPR EW 144 (69+75 g/L)

Species	Test substance	ER_{50} (mL/ha) vegetative vigour	ER_{50} (mL/ha) emergence	Distance[1] (m)	Nozzle reduction (%)	Exposure (mL/ha)	TER	Trigger
Terrestrial non-target plants, 10 species	FPP + MPR EW 144 (69+75 g/L)	108.7 mL form./ha	> 1200 mL form./ha	1	-	33.24 mL form./ha	**3.3**	5
				5	-	6.84 mL form./ha	16	5
				1	50	16.62 mL form./ha	6.5	5
Extended laboratory studies, Semi-field and field test: In view of the results presented above, no further studies are deemed necessary								

[1] based on Ganzelmeier drift data for one application in cereals (1 m = 2.77 %, 5 m = 0.57%) and considering MAF = 1

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

CHA 4690

Species	Test substance	ER_{50} (mL/ha) vegetative vigour	ER_{50} (mL/ha) emergence	Distance[1] (m)	Nozzle reduction (%)	Exposure (mL/ha)	TER	Trigger
Terrestrial non-target plants, 6 species	CHA 4960 (Fenoxaprop 69 g/L EW)	84.85 mL form./ha	> 1000 mL form./ha	1	-	33.24 mL form./ha	2.6	5
				5	-	6.84 mL form./ha	12	5
				1	50	16.62 mL form./ha	5.1	5
Extended laboratory studies, Semi-field and field test: In view of the results presented above, no further studies are deemed necessary								

[1] based on Ganzelmeier drift data for one application in cereals (1 m = 2.77 %, 5 m = 0.57%) and considering MAF = 1

Effects on biological methods for sewage treatment (Regulation (EU) N° 283/2013, Annex Part A, point 8.8)

Test type/organism	end point
Activated sludge	3 hour EC_{20}, EC_{50}, EC_{80} > 1000 mg/L
Pseudomonas sp	

Monitoring data (Regulation (EU) N° 283/2013, Annex Part A, point 8.9 and Regulation (EU) N° 284/2013, Annex Part A, point 10.8)

Available monitoring data concerning adverse effect of the a.s.

No monitoring data are available and are not triggered by current data requirements.

Available monitoring data concerning effect of the PPP.

No monitoring data are available and are not triggered by current data requirements.

Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2) Ecotoxicologically relevant compounds[1]

Compartment	
soil	Fenoxaprop-P-ethyl, fenoxaprop-P-acid (AE F088406)
water	Fenoxaprop-P-ethyl, fenoxaprop-P-acid (AE F088406)
sediment	Fenoxaprop-P-ethyl, fenoxaprop-P-acid (AE F088406)
groundwater	Fenoxaprop-P-ethyl, fenoxaprop-P-acid (AE F088406)

List of end points

Rapporteur Member State	**Month and year**	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

[1] metabolites are considered relevant when, based on the risk assessment, they pose a risk comparable or higher than the parent

List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product **(Name)**
Austria	February 2018	Fenoxaprop-P-ethyl FPP + MPR EW 144 (69+75 g/L) CHA 4960 (Fenoxaprop-P-ethyl 69 g/L EW)

Section 5 Ecotoxicology

Classification and labelling with regard to ecotoxicological data (Regulation (EU) N° 283/2013, Annex Part A, Section 10)

Substance	Fenoxaprop-P-ethyl
Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended][7]:	The following classification is in compliance with the harmonized classification made in the 7th ATP 2015/12211 EC of CLP Regulation EC 1272/2008, officially published page 7/14.: Acute aquatic toxicity: Cat. 1 H400 Very toxic to aquatic life. Chronic aquatic toxicity: Cat 1 H410 Very toxic to aquatic life with long lasting effects
Peer review proposal[8] for harmonised classification according to Regulation (EC) No 1272/2008:	-

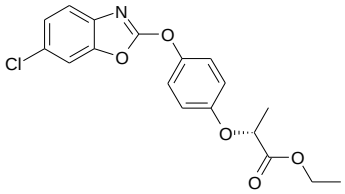
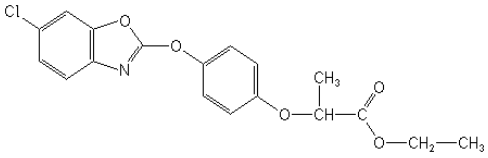
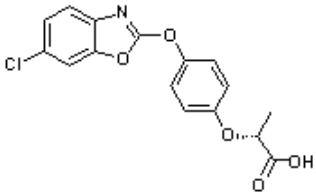
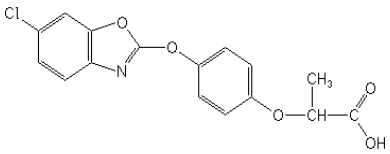
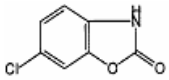
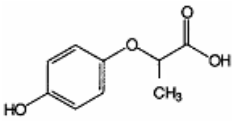
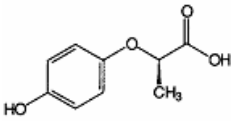
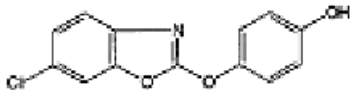
[7] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

[8] It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

List of end points

Rapporteur Member State	Month and year	Microbial or Viral Agent (Name)

Used compounds code(s)

Code/Trivial name*	IUPAC name/SMILES notation	Structural formula
AE F046360 or Hoe 046360 **Fenoxaprop-P-ethyl**	ethyl (*R*)-2[4-[(6-chloro-2-benzoxazolyl)oxy]-phenoxy]-propanoate	
AE F033171 or Hoe 033171 Fenoxaprop-ethyl	ethyl (*RS*)-2-[4-(6-chloro-1,3-benzoxazol-2-yloxy)phenoxy]propionate	
AE F088406 or Hoe 088406 Fenoxaprop-P (free acid)	(*R*)-2[4-[(6-chloro-2-benzoxazolyl)oxy]-phenoxy]-propanoic acid	
AE F053022 or Hoe 053022 Fenoxaprop	(*RS*)-2-[4-(6-chloro-1,3-benzoxazol-2-yloxy)phenoxy]propionic acid	
AE F054014 or Hoe 054014 Chlorobenzoxazolone	6-chloro-2,3-dihydro-benzoxazol-2-one	
AE F020686 or Hoe 020686 HOPP-acid (racemic mixture)	(*RS*)-2-(4-hydroxyphenoxy)-propionic acid	
AE F096918 or Hoe 096918 HOPP-acid (enantiomeric structure)	(*R*)-2-(4-hydroxyphenoxy)-propionic acid	
AE F040356 or Hoe 040356 Phenolic metabolite	4-(6-chloro-2-benzoxazolyloxy)-phenol	

* The compound code / trivial name in bold is the name used in the list of endpoints.