Consultation on maximum levels for some contaminants in feed

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EU proposes to set and amend maximum levels for some contaminants in feed

Draft Commission delegated Regulation amending Annexes I and II to Directive 2002/32/EC of the European Parliament and of the Council as regards maximum levels and action thresholds for arsenic, cadmium, lead, nickel, rye ergot, delta-9-tetrahydrocannabinol, endosulfan, heptachlor, hexachlorbenzene, hexachlorohexane, dioxins and PCBs, *Datura* sp., certain coccidiostats and histomonostats and p-phenetidine in animal feed

Annexes

Update

The EU has informed the World Trade Organization Sanitary and Phytosanitary Measures (WTO SPS) Committee that it proposes to establish maximum levels for arsenic, cadmium, lead, nickel, rye ergot, delta-9-tetrahydrocannabinol, endosulfan, heptachlor, hexachlorbenzene, hexachlorohexane, dioxins and PCBs, *Datura* sp., certain coccidiostats and histomonostats, and p-phenetidine in animal feed (G/SPS/N/EU/703).

Impacted products

Feed

What is changing?

The main proposed changes to permitted levels of these contaminants in animal feed are:

- establishment of maximum levels for nickel, Δ9-tetrahydrocannabinol (Δ9-THC), and p-phenetidine
- increase of maximum levels for arsenic in fish feed, cadmium in copper (I) oxide, and lead in game meat for use in pet food
- lowering of maximum levels for rye ergot, endosulfan, heptachlor, hexachlorobenzene, gamma-hexachlorocyclohexane, dioxins and dioxin-like PCBs, and Datura seeds
- changes to certain action levels for dioxins and PCBs.

In addition, there are amendments to some wording of the feed materials, e.g. “cupric acid” is replaced by “copper (II) oxide”. See the proposed Annexes to the Regulation for details.

Maximum levels

“Maximum levels” here refer to the maximum levels of contaminants that can be accepted in a given product or products. The changes to maximum levels proposed in Annex I are highlighted in the Tables below.

- Table 1: inorganic contaminants and nitrogenous compounds (Section I)
- Table 2: mycotoxins and inherent plant toxins (Sections II and III)
- Table 3: organochlorine compounds (except dioxins and PCBs) (Section IV)
- Table 4: dioxins and PCBs (Section V)
- Table 5: residues of authorised feed additives in feed for nontarget animals (Section VII)
- Table 6: harmful botanical impurities and other undesirable substances (Sections VI and VIII).

In addition, Table 7 shows proposed changes to action thresholds triggering investigations by Member States (Annex II).

Why?

The proposed changes to maximum levels respond to a series of evaluations undertaken by the European Food Safety Authority aimed at ensuring the levels are achievable, while preserving animal and human health (EFSA 2005a, 2005b, 2006, 2007, 2008, 2011, 2018, 2022).

Timeline

The Regulation is expected to apply 20 days following that of its publication in the Official Journal of the European Union.

Recommended Actions

Suppliers of feed materials to the EU market should check their compliance with the new proposed maximum levels of contaminants, and where necessary take steps to ensure compliance by July 2024.

Background

Maximum levels and action thresholds for undesirable substances in feed were established by Directive 2002/32/EC.

Resources

Directive 2002/32 on undesirable substances in animal feed

EFSA (2005a) Opinion of the Scientific Panel on Contaminants in the Food Chain on a request from the Commission related to endosulfan as undesirable substance in animal feed. EFSA Journal, 3(7): 234.

EFSA (2005b) Opinion of the Scientific Panel on Contaminants in the Food Chain on a request from the Commission related to gamma-hexachlorocyclohexane (■-HCH) and other hexachlorocyclohexanes as undesirable substance in animal feed. EFSA Journal, 3(7): 250.

EFSA (2006) Opinion of the Scientific Panel on Contaminants in the Food Chain on a request from the Commission related to hexachlorobenzene as undesirable substance in animal feed. EFSA Journal, 4(10): 402.

EFSA (2007) Opinion of the Scientific Panel on Contaminants in the Food Chain on a request from the Commission related to heptachlor as undesirable substance in animal feed. EFSA Journal, 5(6): 478.

EFSA (2008) Tropane alkaloids (from Datura sp.) as undesirable substances in animal feed[1] – Scientific Opinion of the Panel on Contaminants in the Food Chain. EFSA Journal, 6(8): 691.

EFSA (2011) Scientific Opinion on the safety of hemp (Cannabis genus) for use as animal feed. EFSA Journal, 9(3): 2011.

EFSA (2018) Risk for animal and human health related to the presence of dioxins and dioxin-like PCBs in feed and food. EFSA Journal, 16(11): 5333.

EFSA (2022) Safety and efficacy of a feed additive consisting of ethoxyquin (6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline) for all animal species (FEFANA asbl). EFSA Journal, 20(3): 7166.

Sources

Draft Regulation as regards maximum levels and action thresholds for arsenic, cadmium, lead, nickel, rye ergot, delta-9-tetrahydrocannabinol, endosulfan, heptachlor, hexachlorbenzene, hexachlorohexane, dioxins and PCBs, *Datura* sp., certain coccidiostats and histomonostats and p-phenetidine in animal feed

Annexes

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Table & Figures

Table 1
Proposed changes to maximum levels of inorganic contaminants and nitrogenous compounds (Annex I, Section I)

Undesirable substance	Products intended for animal feed	New wording	Maximum content[1]	
			Current	Proposed
Arsenic	– fish, other aquatic animals and products derived thereof		25	40
	Complementary feed	*Added feed material:* – complementary feed for fish	–	10
Cadmium	Feed additives belonging to the functional group of compounds of trace elements with the exception of: – cupric oxide, manganous oxide, zinc oxide and manganous sulphate monohydrate	*Added to the exceptions:* – copper (I) oxide	–	15
Lead	Feed materials with the exception of:	*Added to the exceptions:* – animal byproducts derived from game animals for use in the production of pet food	–	25
Nickel		*Feed materials* Fatty acids esterified with glycerol, mono di and triglycerides of fatty acids, salts of fatty acids, crude fatty acids, salt of lactylates of fatty acids, pure distilled fatty acids, crude glycerine and glycerine	–	20

[1] In mg/kg (ppm) relative to a feed with 12% moisture content.

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Table 2
Proposed changes to maximum levels of mycotoxins and inherent plant toxins (Annex I, Sections II and III)

Undesirable substance	Products intended for animal feed	New wording	Maximum content[1]	
			Current	Proposed
Mycotoxins: Rye ergot (*Claviceps purpurea*)	Feed materials and compound feed containing unground cereals		1,000	500
	with the exception of:	*Added to the exceptions:* – feed materials and compound feed containing unground rye	–	750
Inherent plant toxins: Delta-9-tetrahydrocannabinol (Δ^9-THC)		Feed materials – hemp seed	–	3
		– hemp expeller	–	3
		– hemp seed oil	–	7.5
		– hemp flour	–	7.5
		– hemp fibre	–	7.5
		Complete feed	–	0.5

[1] In mg/kg (ppm) relative to a feed with 12% moisture content.

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Table 3
Proposed changes to maximum levels of organochlorine compounds (except dioxins and PCBs) (Annex I, Section IV)

Undesirable substance	Products intended for animal feed	New wording	Maximum content[1]	
			Current	Proposed
Endosulfan[2]	Feed materials and compound feed with the exception of:	–	0.1	0.05
	– complete feed for Salmonids	–	0.05	0.02
Heptachlor[3]	Feed materials and compound feed with the exception of:	–		
	– fats and oils	–	0.2	0.1
Hexachlorobenzene (HCB)	Feed materials and compound feed with the exception of:	–		
	– fats and oils	–	0.2	0.1
Hexachlorocyclo-hexane (HCH)–gamma isomers	Feed materials and compound feed with the exception of:	–	0.2	0.01
	– fats and oils	–	2.0	0.1

[1] In mg/kg (ppm) relative to a feed with 12% moisture content.
[2] Sum of alpha and beta isomers and of endosulfan sulphate expressed as endosulfan.
[3] Sum of heptachlor and of heptachlor epoxide expressed as heptachlor.

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Table 4
Proposed changes to maximum levels of dioxins and PCBs
(Annex I, Section V)

Undesirable substance	Products intended for animal feed	New wording	Maximum content[1]	
			Current	Proposed
Dioxins[2]	Feed materials of animal origin: – Animal fat, including milk fat and egg fat		1.50	1.0
	– Fish oil		5.0	3.5
	– Hydrolysed fish protein containing more than 20% fat; crustacea meal		1.75	1.5
	Feed additives belonging to the functional group of compounds of trace elements Compound feed with the exception of: – compound feed for pet animals and fish	Compound feed with the exception of: – compound feed for fish	1.75	1.0
		– compound feed for pet animals	1.75	1.75
Sum of dioxins and dioxin-like PCBs[3]	Compound feed with the exception of: – compound feed for pet animals and fish	Compound feed with the exception of: – compound feed for fish	5.5	2.0
		– compound feed for pet animals	5.5	5.5

[1] In ng WHO-PCDD/F-TEQ/kg (ppt) relative to a feed with a moisture content of 12%.
[WHO-PCDD/F-TEQ is the sum of the toxic equivalencies of the 17 most toxicologically significant dioxins and furans. WHO, World Health Organization; PCDD, polychlorinated dibenzo-para-dioxin; TEQ, toxic equivalent.]
[2] Sum of PCDDs and polychlorinated dibenzofurans (PCDFs) expressed in WHO toxic equivalents, using the WHO-toxic equivalency factors (TEFs) 2005.
[3] Sum of PCDDs, PCDFs, and polychlorinated biphenyls (PCBs) expressed in WHO toxic equivalents, using the WHO-TEFs 2005.

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Table 5
Proposed changes to maximum levels of harmful botanical impurities (Annex I, Section VI)

Undesirable substance	Products intended for animal feed	New wording	Maximum content, mg/kg (ppm)	
			Current	Proposed
Harmful botanical impurities (Section VI)				
Weed seeds and unground and uncrushed fruits containing alkaloids, glucosides or other toxic substances separately or in combination, including	Feed materials and compound feed	–		
– *Datura* sp.			1,000	500

Table 6
Proposed changes to maximum residue levels of authorised feed additives in feed for nontarget animals, and other undesirable substances (Annex I, Sections VII and VIII)

[New title wording:] Section VII: Residues of authorised feed additives in feed for nontarget animal species (2) (3) following unavoidable carry-over

(2) Coccidiostats (substances) which are authorised as feed additive according to Regulation (EC) 1831/2003 either alone or in combination with other coccidiostats

(3) Without prejudice to the authorised levels in the frame of Regulation (EC) No 1831/2003

[Old title wording:] Section VII: Authorised feed additives in non-target feed following unavoidable carryover

Undesirable substance	Products intended for animal feed	New wording	Maximum content[1]	
			Current	Proposed
Lasalocid sodium	Feed materials		1.25	0.9
	Compound feed for – dogs, calves, rabbits, equine species, dairy animals, laying birds, turkeys (>16 weeks) and chickens reared for laying (>16 weeks)	Compound feed for – dogs, calves, rabbits, equine species, dairy animals, laying birds, turkeys (>16 weeks) and chickens reared for laying	1.25	0.9
	– chickens for fattening, chickens reared for laying (<16 weeks) and turkeys (<16 weeks) for the period before slaughter in which the use of lasalocid A sodium is prohibited (withdrawal feed)	– chickens for fattening and turkeys (>16 weeks) for the period before slaughter in which the use of lasalocid sodium is prohibited (withdrawal feed)	1.25	0.9
	– pheasants, guinea fowl, quails and partridges (except laying birds) for the period before slaughter in which the use of lasalocid A sodium is prohibited (withdrawal feed)	– pheasants, guinea fowl, quails and partridges (except laying birds) for the period before slaughter in which the use of lasalocid sodium A is prohibited (withdrawal feed)	1.25	0.9
	– other animal species	– other animal species for which the use of lasalocid sodium is not authorised	3.75	2.7
Nicarbazin	Feed materials Compound feed for	Feed materials Compound feed for (is added) - chickens for fattening for the period before slaughter in which the use is prohibited (withdrawal feed)	–	1.25
Other undesirable substances (new Section VIII)				
p-phenetidine		Feed materials, feed additives, premixtures and compound feed	–	125

[1] In mg/kg (ppm) relative to a feed with 12% moisture content.

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Table 7
Proposed changes to action thresholds triggering investigations by Member States (Annex II)

Undesirable substance	Products intended for animal feed	New wording	Action threshold[1,2]	
			Current	Proposed
Dioxins	Feed materials of animal origin: – Animal fat, including milk fat and egg fat	Feed materials of animal origin: – Animal fat, including milk fat and egg fat	0.75	0.5
		– Fish oil	4.0	2.5
		– Hydrolysed fish protein containing more than 20% fat; crustacea meal	1.25	1.0
Dioxins (sum of PCDDs and PCDFs)[3]	Compound feed with the exception of: – compound feed for pet animals and fish	Compound feed with the exception of: – compound feed for fish	1.25	0.75
		– compound feed for pet animals	1.25	1.25
Dioxin-like PCBs[4]	Feed materials of animal origin: – Fish oil	Feed materials of animal origin: – Fish oil	11.0	8.0
	– Fish, other aquatic animals and products derived thereof with the exception of fish oil and fish protein, hydrolysed, containing more than 20% fat	– Fish, other aquatic animals, and products derived thereof with the exception of fish oil, hydrolysed fish protein containing more than 20% fat and crustacea meal	2.0	1.5
	– Fish protein, hydrolysed, containing more than 20% fat	– Hydrolysed fish protein containing more than 20% fat; crustacea meal	5.0	4.0
	Compound feed with the exception of: – compound feed for pet animals and fish	Compound feed with the exception of: – compound feed for fish	2.5	1.25
		– compound feed for pet animals	2.5	2.5

[1] Action thresholds are levels of detection that trigger an investigation by the EU competent authorities, in coordination with the operator, to identify the sources of the contaminant. This includes cases where the maximum levels are exceeded, also where an upward trend in the levels is detected. The thresholds are set to ensure a uniform approach among competent authorities.
[2] In ng WHO-PCDDFTEQ/kg (ppt) relative to a feed with a moisture content of 12%.
[WHO-PCDD/F-TEQ is the sum of the toxic equivalencies of the 17 most toxicologically significant dioxins and furans. WHO, World Health Organization; PCDD, polychlorinated dibenzo-para-dioxin; TEQ, toxic equivalent.]
[3] Sum of PCDDs and polychlorinated dibenzofurans (PCDFs) expressed in WHO toxic equivalents, using the WHO-toxic equivalency factors (TEFs) 2005.
[4] Sum of polychlorinated biphenyls (PCBs) expressed in WHO toxic equivalents, using the WHO-TEFs 2005.

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Source: Annexes to the draft Regulation

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