

GOVERNMENT NOTICES

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

No. R. 70

12 February 2010

FERTILIZERS, FARM FEEDS, AGRICULTURAL REMEDIES AND STOCK REMEDIES ACT, 1947 (ACT NO. 36 OF 1947)

FARM FEEDS REGULATIONS: AMENDMENT

The Minister for Agriculture, Forestry and Fisheries, acting under Section 23 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), made amendments to the regulations in the schedule

SCHEDULE

1. In this schedule "the Regulations" means regulations published by government notice no. R.1087 of 3 November 2006.

Substitution of Table 2 of the Regulations

2. The Regulations are hereby amended by the substitution of Table 2 with the following table;

TABLE 2
UNDESIRABLE SUBSTANCES IN ANIMAL FEEDS
[REG. 11 (3)]

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
Substances (ions or elements)		
1. Arsenic	Feed ingredients with the exception of:	2
	meal made from grass, from dried Lucerne and from dried clover and dried sugar beet pulp and dried molasses sugar beet pulp	4
	palm kernel expeller	4(*)
	phosphates and calcareous marine algae	10
	calcium carbonate	15
	magnesium oxide	20
	feedstuffs (farm feed) obtained from the processing of fish or other marine animals	25(*)
	seaweed meal and feed ingredients derived from seaweed (kelp)	40(*)

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
<p>2. Lead</p> <p><i>Maximum levels refer to an analytical determination of lead, whereby extraction is performed in nitric acid (5% w/w) for 30 minutes at boiling temperature. Equivalent extraction procedures can be applied for which it can be demonstrated that the used extraction procedure has an equal efficiency.</i></p>	Additives belonging to the functional group of compounds of trace elements except:	30
	copper sulphate pentahydrate and copper carbonate,	50
	zinc oxide, manganese oxide and copper oxide	100
	Complete farm feeds with the exception of:	2
	complete farm feeds for fish and complete feeds for fur animals	10(*)
	Supplements/concentrates with the exception of:	4
	mineral products	12
	Ingredients with the exception of:	10
	green fodder (roughages)	40(**)
	phosphates and calcareous marine algae	15
	calcium carbonate	20
	yeast	5
Additives belonging to the functional group of compounds of trace elements (mineral products) except:	100	

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
3. Fluorine	zinc oxide	400(**)
	manganous oxide, iron, carbonate, copper carbonate	200(**)
	Additives belonging to the functional groups of binders and anti-caking agents except:	30(**)
	clinoptilolite of volcanic origin	60(**)
	premixtures	200(**)
	Complementary feedingstuffs (supplements/concentrates) with the exception of:	10
	mineral feedingstuffs (mineral products)	15
	Complete farm feeds	5
	Feed Ingredients with the exception of:	150
	feed ingredients of animal origin with the exception of marine crustaceans such as marine krill	500
	marine krill	3000
	phosphates	2000
	calcium carbonate	350
	magnesium oxide	600
	calcareous marine algae	1000
vermiculite (E561)	3000	
complementary feedingstuffs (supplements/concentrates) containing less than 4% phosphorus	500	

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
4. Mercury	containing more than 4% phosphorus	125 per 1% phosphorus
	Complete farm feeds with the exception of:	150
	complete feeds for lactating cattle, sheep and goats	30
	other	50
	complete feeds for pigs	100
	complete feeds for poultry	350
	complete feeds for chicks	250
	Feed ingredients except feed ingredients produced by the processing of fish or other marine animals	0.1
	Feed ingredients produced by the processing of fish or other marine animals	0.5
	Complete feeds except for dogs and cats	0.1
Complete feeds for dogs and cats	0.4	
Concentrates/supplements except complementary food for dogs and cats	0.2	
5. Nitrites	Fish meal	60 (expressed as sodium nitrite)
	Complete feeds excluding: ingredients intended for pets except birds and aquarium fish	15 (expressed as sodium nitrite)

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
6. Cadmium	Ingredients of vegetable origin	1
	Feed material (ingredients) of animals origin	2
	Feed material of mineral origin (mineral products) except:	2
	phosphates	10
	Additives belonging to the functional group of compounds of trace elements (mineral products) except:	10
	copper oxide, manganous oxide, zinc oxide and manganous sulphate monohydrate.	30
	additives belonging to the functional groups of binders and anti-caking agents	2
	premixtures	15
	mineral feedingstuffs (Mineral products) containing less than 7% phosphorus	5
	containing more than 7% phosphorus	0.75 per 15 phosphorus with a maximum of 7.5
complementary feedingstuffs (supplements/concentrates) for pet animals	2	
other complementary feedingstuffs (supplements/concentrates)	0.5	
complete feedingstuffs (farm feeds) for cattle, sheep and goats and feedingstuffs for fish except	1	

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
7.Copper	complete feedingstuffs (farm feeds) for pets	2
	complete feedingstuffs (Farm feeds) for calves, lambs and kids of other completefeedingstuffs (farm feeds)	0.5
	Feed for free-range meat pigs	150
	Piglets up to 70 days	250
	Bovine before the start of rumination	15
	Milk replacers	25
	Bovines	35
	Other complete feedingstuffs	
	Ovine	22
	Fish	25
	Crustaceans	50
Other species	30	
8.Nickel	Fodder fats	50(based on fat)
9.Zinc	Feed for free-range meat pigs	250
	Piglets up to 70 days	3100
	Pet animals	250
	Fish	200
	Milk replacers	200
	Other species	150

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
10 Aflatoxins B1	Feed ingredients with the exception of: groundnut, copra, palm-kernel, cotton seed, maize and products derived from the processing thereof Complete farm feeds for cattle, sheep and goats with the exception of: dairy cattle calves and lambs complete feeds for pigs and poultry (except young animals) other complete farm feeds (including pets) maize products intended for feedlot supplement/concentrates for cattle, sheep and goats (except for dairy animals, calves and lambs)	0.05 0.02 0.05 0.005 0.01 0.02 0.01 300000 0.05
11. Deoxynivalenol (DON)	Feeding stuffs on full ration basis for: Pigs cattle calves up to 4 months dairy cattle poultry pets	1 5 2 3 4 1

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
12. Fumonisin B1	Horses and pets	5
	Pigs	10
	Beef and poultry	50
	Fish	10
13. Ochratoxin A	Feeding stuffs on full ration basis for:	
	Pigs	0.05
	poultry	0.2
14. Zearalenone	Feeding stuffs on full ration basis for:	
	sows and pigs	5
	piglets	3
	calves and dairy cattle	0.5
15. Nitrosamines		
15.1 Nitrosodiethylamine		1
15.2 Nitrosodimethylamine		1
16. Ruminant protein and by-product	Cattle, sheep, goat and game	0
17. Dioxins (sum of polychlorinated dibenzo-para-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs)***	Feed materials of plant origin with the exception of vegetable oils and their by-products	0.75(****)
	Vegetable oils and their by- products	0.75(****)
	Feed material of mineral origin	1(****)
	Frying fats and oils	250µg/kg(based on fat)
	Feed materials of animal origin (where fat content >2%fat)except fish oil	50µg/kg(based on fat)

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
18. Polychlorbiphenols (Pcb's)	Feed materials of animal origin (where fat content <2% fat)	200µg/kg(based on fat)
	Feed materials of plant origin with the exception of vegetable oils	1.25µg/kg
	Compound feeding stuffs with the exception for pet food	1.5µg/kg
	Feeding stuff for pet	7µg/kg
	Premixtures	1.5µg/kg
	Feed additives	1.5µg/kg
19. Hydrocyanic acid	Feed ingredients with the exception of:	50
	linseed	250
	linseed cakes	350
	manioc products and almond cakes	100
	complete feeds	50
20. Hydrocarbons (C10 – C40)	Animal fats, with the exception of:	400
	raw fish oil	3000
	vegetable oil(except sunflower oil)	400
	sunflower oil and sunflower fatty acids	1000
	vegetable fatty acids incl. mixes of fatty acids(except sunflower fatty acids)	3000
	complete feeds for chickens	10

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
21. Free gossypol	Feed ingredients with the exception of: cotton seed cakes cotton seed Complete farm feeds with the exception of: complete feeds for cattle, sheep and goats complete feeds for poultry (except laying hens) and calves complete feeds for rabbits and pigs (except piglets)	20 1 200 5 000 20 500 100 60
22. Theobromine	Complete farm feeds with the exception of: complete feedingstuffs for cattle complete feedingstuffs for pigs, complete feedingstuffs for dogs, rabbits, horses and fur animals	300 700 200 50
23. Volatile mustard oil	Feed ingredients with the exception of: rape seed cakes Complete farm feeds with the exception of: complete feeds for cattle, sheep and goats (except young animals) complete feeds for pigs (except	100 4 000 (expressed as allyl isothiocyanate) 150 (expressed as allyl isothiocyanate) 1 000 (expressed as allyl isothiocyanate) 500

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
	piglets) and poultry	(expressed as allyl isothiocyanate)
24. Vinal thioxazolidone (vinyloxazolidine thione)	Complete feeds for poultry with the exception of:	1 000
25. Rye ergot (<i>Claviceps purpurea</i>)	complete feeds for laying hens	500
25. Rye ergot (<i>Claviceps purpurea</i>)	All farm feeds containing unground cereals	1 000
26. Weed seeds and unground and uncrushed fruit containing alkaloids, glucosides or other toxic substances separately or in combination including	All farm feeds	3 000
(a) <i>Lolium temulentum</i> L,		1 000
(b) <i>Lolium remotum</i> Schrank,		1 000
(c) <i>Datura stramonium</i> L.		1 000
27. Seeds and husks from <i>Ricinus communis</i> L., <i>Croton tiglium</i> L. and <i>Arbus precatorius</i> L. as well as their processed derivatives (*****), separately or in combination	All farm feeds	10
28. <i>Crotalaria</i> spp.	All farm feeds	100
29. Aldrin singly or combined expressed as dieldrin	All farm feeds with the exception of:	0,01
	fats	0,02
	cattle	0.05
	laying hen	0.025
	broiler	0.025

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
30. Camphechlor (Toxaphene)	All farm feeds	0,1
31. Chlordane (sum of cis-and trans-isomers and of oxychlordane, expressed as chlordane)	All farm feeds with the exception of:	0,02
	fats	0,05
	feeding stuff for fish	0,05
32. 2,4-Dichlorophenoxyacetic acid	Feeding stuff for poultry,	18
	goats	480
33. Endosulfan (sum of alpha- and beta-somers and of endosulfansulphate expressed as endosulfan)	All farm feeds with the exception of:	0,1
	maize	0,2
	oilseeds	0,5
	complete feeds for fish	0,005
34. Endrin (sum of endrin and delta ketoi-endrin, expressed as endrin)	All farm feeds with the exception of:	0,01
	fats	0,05
35. Heptachlor (sum of heptachlor and of heptachlor-epoxide, expressed as oxidized)	All farm feeds with the exception of:	0,01
	fats	0,2
36. Hexachlorobenzene (HCB)	All farm feeds with the exception of:	0,01
	fats	0,2
37. Hexachlorocyclo-hexane (HCH)	All farm feeds with the exception of fat	0,02
37.1 alpha-isomer	All farm feeds with the exception of:	0,02
	fats	0,2

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
37.2 beta-isomer	Compound farm feed with the exception of: feeding stuffs for dairy cattle	0,01 0,005
37.3 gamma-isomer	Feed ingredients with the exception of: fats	0,2 2,0
38. Parathion	Protein concentrates for pigs and poultry	3
39. Melamine, melame, meleme, ammeline, ammelide and cyanuric acid	Feed ingredients and complete feed for livestock with the exception of: feeding stuffs for dairy cattle feed ingredients and complete pet foods for pets	2.5 2.0 2.5
40. Total mould count	Feed ingredients and complete feed for all species	5000 cfu/kg
41. Escherjca Coli 0157:H7	Feed ingredients and complete feed for all species	10 cfu/kg
42. Enterobacteriaceae TEC	Feed ingredients and complete feed for all species	1000 cfu/kg
43. Salmonella in 25g	Feed ingredients and complete feed for all species	0 cfu/kg
44. Clostridium	Feed ingredients and complete feed for all species	10 cfu/kg

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
<p>A. Botanical impurities</p> <p>Apricots – <i>Prunus armeniaca</i> L.</p> <p>Bitter almond – <i>Prunus dulcis</i> (Mill.) D.A. Webb var. <i>amara</i> (DC.) Focke (= <i>Prunus amygdalus</i> Batsch var. <i>amara</i> (DC.) Focke)</p> <p>Wild camelina – <i>Camelina sativa</i> (L.) Crantz</p> <p>Mowrah, Bassia, Madhuca – <i>Madhuca longifolia</i> (L.) Macbr. (= <i>Bassia longifolia</i> L. = <i>Illipe malabroum</i> Engl.) <i>Madhuca indica</i> Gmelin (= <i>Bassia latifolia</i> (Roxb.) = <i>Illipe latifolia</i> (Rosc.) F. Mueller)</p> <p>Purghera – <i>Jatropha curcas</i> L.</p> <p>Indian mustard – <i>Brassica juncea</i> (L.) Czern. And Coss.ssp. <i>integrifolia</i> (West.) Thell.</p> <p>Sareptian mustard – <i>Brassica juncea</i> (L.) Czern. And Coss.ssp. <i>juncea</i></p>	<p>All farm feeds</p>	<p>Seeds and fruit of the plant species listed opposite as well their processed derivatives may only be present in feed ingredients in trace quantities not quantitatively determinable.</p>

SUBSTANCE, PRODUCTS	FARM FEEDS	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120g/kg
(1)	(2)	(3)
Chinese mustard – <i>Brassica Juncea</i> (L.) Czern and Coss. Ssp. <i>Junica var lutea Batelin</i> Black mustard – <i>Brassica</i> <i>nigra</i> (L.) Koch Ethiopian mustard – <i>Brassica carinata</i> A. Braun	All farm feeds	Seeds and fruits of the plant species listed opposite as well their processed derivatives may only be present in feed ingredients in trace quantities not quantitatively determinable

- * Upon request of the competent authorities, the responsible operator must perform an analysis to demonstrate that the content of inorganic arsenic is lower than 2ppm. This analysis is of particular importance for the seaweed species *Hizikia fusiforme*.
- ** Maximum levels refer to an analytical determination of cadmium, whereby extraction is performed in nitric acid (5% w/w) for 30 minutes at boiling temperature. Equivalent extraction procedures can be applied for which it can be demonstrated that the used extraction procedure has equal extraction efficiency.
- *** Expressed in World Health Organisation (WHO) toxic equivalences, using the WHO-TEFs (toxic equivalency factors, 1997(#))
- **** Upper-bound concentrations; upper-bound concentrations are calculated on the assumption that all values of the different congeners below the limit of quantification are equal to the limit of quantification.
- ***** In so far determinable by analytical microscopy.
- # WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisations meeting, Sweden, 15-18 June 1997 (van den Berg et al.,(1998) Toxic Equivalency Factors (TEFs) for PCDDs, and PCDFs, and PCDFs for humans and for wildlife. Environmental Health Perspectives, 106(12),755).