

No. R. 227**6 March 2009****FERTILIZERS, FARM FEEDS, AGRICULTURAL REMEDIES AND STOCK****REMEDIES ACT, 1947 (ACT NO. 36 OF 1947)****REGULATIONS RELATING TO FARM FEEDS, APPEALS AND IMPORTS: PROPOSED
AMENDMENT**

I, Lulama Xingwana, Minister of Agriculture, acting under Section 23 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), hereby-

- i. make known that I intend to make regulation in the schedule;
and
- ii. invite interested persons to submit any objections to or representations concerning the proposed regulation in writing to the Registrar: Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies, Private bag X 343, Pretoria, 0001, within four weeks from date of publication hereof.

L. Xingwana
Minister of Agriculture

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

FARM FEEDS REGULATIONS: PROPOSED AMENDMENT

The Minister of Agriculture, acting under Section 23 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), made the proposed amendment 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 of 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 lucern 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	15(*)
	- Seaweed meal and feed ingredients derived from seaweed (kelp)	40(*)
	Complete farm feeds with the exception of:	2
	complete farm feeds for fish and complete feeds for fur animals	6(*)

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>	Supplements/concentrates with the exception of:	4
	- Mineral products	12
	Ingredients with the exception of:	10
	- green Fodder (roughages)	30(#)
	- 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
	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	

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	Feed Ingredients with the exception of: <ul style="list-style-type: none"> - feed ingredients of animal origin with the exception of marine crustaceans such as marine krill - marine crustaceans such as marine krill - phosphates - calcium carbonate - magnesium oxide - calcareous marine algae - vermiculite (E561) complementary feedingstuffs (supplements/concentrates) containing less than 4% phosphorus containing more than 4% phosphorus Complete farm feeds with the exception of: <ul style="list-style-type: none"> - complete feeds for lactating cattle, sheep and goats - other - complete feeds for pigs - complete feeds for poultry complete feeds for chicks 	150 500 3000 2000 350 600 1000 3000 500 125 per 1% phosphorus 150 30 50 100 350 250
4. Mercury	Feed ingredients except feed ingredients produced by the processing of fish or other marine animals Feed ingredients produced by the processing of fish or other marine animals Complete feeds except for dogs and cats. - Complete feeds for dogs and	0,1 0,5 0,1 0,4

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)
5. Nitrites 6. Cadmium <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>	cats	
	Concentrates/supplements except complementary food for dogs and cats	0,2
	Fish meal	60 (expressed as sodium nitrite)
	Complete feeds excluding: ingredients intended for pets except birds and aquarium fish.	15 (expressed as sodium nitrite)
	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	5	

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	7% phosphorus	
	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
	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 Pigs: Piglets up to 12 weeks	25 170

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)
	Other pigs	25
	Bovine:	
	Bovine before the start of ruminaton	
	-Milk replacers	15
	-Other complete feedingstuffs	15
	Other bovine	35
	Ovine	15
	Fish	25
	Crustaceans	50
	Other species	25
8.Nickel	Fodder fats	50(based on fat)
9.Zinc	Feed for free-range meat pigs	90
	Pet animals	250
	Fish	200
	Milk replacers	200
	Other species	150
1. Aflatoxin B1	Feed ingredients with the exception of:	0.02
	- Groundnut, copra, palm-kernel, cotton seed, maize and products derived from the processing thereof	0,05
	Complete farm feeds for cattle, sheep and goats with the exception of:	0,05
	- dairy cattle	0,005

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)
	- calves and lambs	0,01
	Complete feeds for pigs and poultry (except young animals)	0,02
	Other complete farm feeds (including pets)	0,01
	-Maize products intended for feedlot	300ppb
	Supplement/concentrates for cattle, sheep and goats (except for dairy animals, calves and lambs)	0,05
2. Aflotoxin G1	-Oilseed by-products	0.005
	-Maize	0.005
	-Groundnuts	0.005
	-Cottonseed	0.005
3. DON (Deoxynivalenol)	Feeding stuffs on full ration basis for:	
	-Pigs	1
	-Cattle	5
	-Calves up to 4 months	2
	-Dairy cattle	3
	-Poultry	4
	-Pets	1
4. Fumonisin B1	-Horses and pets	5
	-Pigs	10
	-Beef and poultry	50
5. Ochratoxin A	Feeding stuffs on full ration basis for:	
	-Sows,pigs and piglets	0.05
	-Poultry	0.2
6. Trichothecene	-Barley and cereal grains	0.02

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. Moniliformin	Feeding stuff for non-ruminants Complete feeding stuff for -Horse -Pig -Beef -Poultry Maize and maize by-products	0.1 5 10 50 50 0.1
8. Mycophenolic acid	-Silage	1.4
9. Zearalenon	Feeding stuffs on full ration basis for: -Sows and pigs -Young pigs -Young cattle and dairy cattle	0.25 0.1 0.5 0.05
10. Nivalenol	-Cereal grains	0.43µg/kg
11. Patulin	-Feedstuff for cattle	5000
12. Citrinin	-Wheat and oats	4,5
13. Acrylamide	-Layers	2.5
14. Plant toxins		
14.1 Tannins	- Feeding stuff for cattle, sheep and goats	30000
14.2 Trypsin inhibitors	- Soya beans for all animals	88
14.3 Cyanogens	- All farm feeds containing underground cereals	186
14.4 Glucosinolates	- Rape seeds for non-ruminants	100mmol

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)
14.5 Mimosine	- All farm animals	25000
14.7 Quinolizidine Alkaloids	- Lupin	10000
14.8 S-methyle cysteine sulphoxide (non-protein amino acid)	- Foliage and plant seeds	40000
14.9 Lectins	- Winged Beans	40
	- Lima Beans	59
	- Jack Beans	73
15. Phosphoric Acid Esters		
15.1 Malathion	- All feedstuffs	1
15.2 Fenithrothion	- All feedstuff	1
15.3 Pirimiphos (Methyl)	- All feedstuffs	1
16. Nitrosamines		
16.1 Nitrosodiethylamine	- All feedstuff	0.01
16.2 Nitrosodimethylamine)	- All feedstuffs	0.01
17. Animal Toxin		
17.1 Ruminant meat and bone meal	- Poultry and swine	0
17.2 Prion Proteins	-Cattle, sheep and goats	0
18. Dioxin	Meat and meat products:	
Sum of dioxins, furans and dioxin-like PCB's	- Ruminants	4,0
	- Poultry and farm game	1,5
	- Pigs	12.0
	Feed material of plant origin	
	- Ruminants	2
	- Poultry and farm game	0.75
	- Pigs	6
	Feed Additives	6
	Liver of terrestrial animals and derived products	200µg/kg
	Frying fats and oils	250µg/kg(based on fat)
19. Polychlorbiphenols (Pcb's)	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)
	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
20. Hydrocyanic acid	Feed ingredients with the exception of:	50
	Linseed	250
	Linseed cakes	350
	Manioc products and almond cakes	100
	Complete feeds with the exception of:	50
21. 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
22. Free gossypol	Feed ingredients with the	20

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)
	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)	1 200 5 000 20 500 100 60
23. Theobromine	Complete farm feeds with the exception of: - complete feeds for adult cattle	300 700
24. 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 piglets) and poultry	100 4 000 (expressed as allyl isothiocyanate) 150 (expressed as allyl isothiocyanate) 1 000 (expressed as allyl isothiocyanate) 500 (expressed as allyl isothiocyanate)
25. Vinyl thioxazolidone (vinylloxazolidine thione)	Complete feeds for poultry with the exception of: - complete feeds for laying hens	1 000 500
26. Rye ergot (<i>Claviceps purpurea</i>)	All farm feeds containing unground cereals	1 000
27. Weed seeds and unground and uncrushed fruit containing	All farm feeds	3 000

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)
alkaloids, glucosides or other toxic substances separately or in combination including		
(a) <i>Lolium temulentum</i> L,		1 000
(b) <i>Lolium remotum</i> Schrank,		1 000
(c) <i>Datura stramonium</i> L.		1 000
28. Castor oil plant – <i>Ricinus communis</i> L.	All farm feeds	10 (expressed in terms of castor-oil plant husks)
29. <i>Crotalaria</i> spp.	All animals feeds	100
30. Aldrin singly or combined expressed as dieldrin	All farm feeds with the exception of:	0,01
	- fats	0,02
31. Polycyclic Aromatic Hydrocarbons (Pah's)	Fodder fats	50ug (Based on fat)
32. Dieldrin/Aldrin	Complete feeding stuff for	
	- Cow	0.05
	-Laying hen	0.025
	-Broiler	0.025
33. Dibenzofurans	-Layers	5000
	-Broilers	5000
34. Camphechlor (Toxaphene)	All farm feeds	0,1
35. 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
36. Chlordane	Feeding stuff for fish	0.05
37. Chloropyrifos	Feeding stuff for	
	-Cow	0.3
	-Poultry	0.01
38. DDT (sum of DDT- TDE and DDE-isomers, expressed as DDT)	All farm feeds with the exception of:	0,05
	- fats	0,5
39. 2,4-Dichlorophenoxyacetic acid	Feeding stuff for	
	-Poultry	18
	-Goats	480
40. Endosulfan (sum of alpha- and beta-somers and of	All farm feeds with the exception of	0,1

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)
endosulfansulphate expressed as endosulfan)	- maize - oilseeds - complete feeds for fish	0,2 0,5 0,005
41. Endrin (sum of endrin and delta-ketoi-endrin, expressed as endrin)	All farm feeds with the exception of: - fats	0,01 0,05
42. Heptachlor (sum of heptachlor and of heptachlor-epoxide, expressed as oxidized)	All farm feeds with the exception of: - fats	0,01 0,2
43. Hexachlorobenzene (HCB)	All farm feeds with the exception of: - fats	0,01 0,2
44. Hexachlorocyclo-hexane (HCH)	All farm feeds with the exception of fat	0,02
45.1 alpha-isomer	All farm feeds with the exception of: - fats	0,02 0,2
45.2 beta-isomer	Compound farm feed with the exception of: - feeding stuffs for dairy cattle Feed ingredients with the exception of: - fats	0,01 0,005 0,01 0,1
46.3 gamma-isomer	All farm feeds with the exception of: - fats	0,2 2,0
47. Methoxichlor	Feeding stuff for -Cows -Poultry	800 0,02
48. Parathion	Protein concentrates for pigs and poultry	3
49. Melamine and its derivatives	Feed ingredients and complete feed for livestock	0,5
50. Melamine and its derivatives	Feed ingredients and complete pet foods	0,001
51 Cyanuric acid	Feed ingredients and complete feed for all species	0,001

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)
52 NPN sources	Complete pet foods Complete monogastric feed	0.0001 1000
53. Sand	Raw material of plant origin	1000
54 Mould & Yeast:	Compound Feed & Feedingstuffs	Absent in 25g
54.1 Salmonella	Raw material (feedingstuffs)	Absent in 25g
54.2 Enterobacteriaceae	Compound feed	Absent in 25g
	Raw material (feedingstuffs)	Absent in 1g
54.3 <i>Listeria monocytogenes</i>	Compound feed	Absent in 1g
	Raw material (feedingstuffs)	Absent in 25g
54.4 <i>Escherichia Coli</i> 0157:H7	Compound feed	Absent in 25g
	Raw material (feedingstuffs)	Absent in 20g
54.5 <i>Clostridium</i> sp.	Compound feed	Absent in 20g
	Raw material (feedingstuffs)	Absent in 20g
C. BOTANICAL IMPURITIES <i>Apricots – Prunus armeniaca L.</i> <i>Bitter almond – Prunus dulcis</i> (Mill.) D.A. Webb var. <i>amara</i> (DC.) Focke (= <i>Prunus amygdalus</i> Batsch var. <i>amara</i> (DC.) Focke) <i>Unhusked beech mast – Fagus silvatica</i> (L). <i>Camelina – Camelina sativa</i> (L). Crantz <i>Mowrah, Bassia,</i>	Compound feed	Absent in 20g
		Seeds and fruit of the plant

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>Madhuca – <i>Madhuca longifolia</i> (L.) Macbr. (=<i>Bassia longifolia</i> L. = <i>Illipe malabroum</i> Eng1.) <i>Madhuca indica</i> Gmelin (= <i>Bassia latifolia</i> (Roxb.) = <i>Illipe latifolia</i> (Roscb.) F. Mueller)</p> <p>Purghera – <i>Jatropha curcas</i> L.</p> <p>Croton – <i>Croton tiglium</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>Chinese mustard – <i>Brassica Juncea</i> (L.) Czern and Coss. Ssp. <i>Junica var lutea</i> Batelin</p> <p>Black mustard – <i>Brassica nigra</i> (L.) Koch</p> <p>Ethiopian mustard – <i>Brassica carinata</i> A. Braun</p>	<p>All farm feeds</p>	<p>species listed opposite as well their processed derivatives may only be present in feed ingredients in trace quantities not quantitatively determinable.</p>

* 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.