

GOVERNMENT NOTICE No. 58 published on 15/03/2013

THE GRAZING-LAND AND ANIMAL FEED RESOURCES ACT  
(CAP. 180)

REGULATIONS

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**THE GRAZING-LAND AND ANIMAL FEED RESOURCES ACT**

(CAP. 180)

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**REGULATIONS**  
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*(Made under section 44)*

**THE GRAZING-LAND AND ANIMAL FEED RESOURCES (STANDARDS**  
**OF ANIMAL FEED RESOURCES) REGULATIONS, 2013**

**PART I**  
**PRELIMINARY PROVISIONS**

Citation

1. These regulations may be cited as the **Grazing-land and Animal Feed Resources (Standards of Animal Feed Resources) Regulations, 2013.**

## *Grazing-Land and Animal Feed Resources*

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Application

2. These Regulations shall apply to Animal Feed Resources produced or utilized in Mainland Tanzania.

Interpretation

3. In these Regulations, unless the context requires otherwise-

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“Act” means the Grazing-land and Animal Feed Resources Act; and

“adulteration” means the substitution of any substance, the concealment of damaged or inferior substances, or the addition of substances to increase bulk or weight or to reduce quality or strength or to make it appear better or of greater value.

### PART II STANDARDS OF ANIMAL FEED RESOURCES

Chemical  
composition  
of feed ingredient

4.-(1) A person shall not manufacture, sell, expose for sale, export or import animal feed ingredient unless it conforms to standard nutrient composition set out in the First Schedule.

(2) A feed manufacturer shall not use a feed ingredient that contains anti-nutritional factors, toxic substances or any other deleterious substances above the acceptable level as set out in the Third Schedule.

Contaminants in feed  
ingredient

5.-(1) A feed manufacturer shall not use feed ingredient contaminated with injurious chemicals and microbes or physical materials unless it conforms to acceptable levels provided in the Fourth Schedule.

(2) Subject to the provisions of sub-regulation (1), a feed dealer, supplier or seller shall not expose feed ingredient to injurious chemical, microbes or physical materials.

(3) Notwithstanding the provisions of sub-regulation (1), feed ingredient shall not contain-

- (a) more than one-half of one per cent of the seeds of weeds listed in the Fifth Schedule, except when screenings are sold or offered for sale singly, in which case the screenings may contain any amount not exceeding one per cent of such materials and an additional one per cent of wild mustard and hare's ear mustard seed;
- (b) mould or material damaged from heat or any other cause that would render it unfit for feed or make it unsafe for feeding in proportions commonly used; and
- (c) mycotoxins exceeding 10 parts per billion.

Composition of  
formula feed

6.-(1) A feed manufacturer, dealer, supplier or retailer shall sell formula feed that conforms to standard set out in the Second Schedule;

(2) Notwithstanding the provisions of sub-regulation (1), the mineral feed shall contain the amount of minerals not less or exceeding levels provided in the Sixth Schedule;

(3) A feed manufacturer shall use certain raw materials with guiding inclusion level as set out in Third Schedule.

Contaminants of  
formula feed

7.-(1) A feed manufacturer, feed dealer, supplier or seller shall not sell formula feed contaminated with injurious chemical and microbes or physical materials unless it conforms to acceptable levels provided in the Third and Sixth Schedules.

(2) Subject to the provisions of sub-regulation (1), a feed dealer, supplier or seller shall not expose formula feed to injurious chemicals, microbes or physical materials.

(3) Notwithstanding the provisions of sub-regulation (1), the animal feed formula shall not contain-

- (a) mould or damaged material from heat or any other cause that would, render it unfit for feeding, or make it unsafe for feeding in proportions commonly used;
- (b) any product of animal origin that has not been properly processed in accordance with Good Manufacturing Practice;
- (c) any extraneous material except in such amounts as are unavoidable or inherent in good manufacturing practice;
- (d) any dust or any dirty material, except as a declared ingredient or as a recognized tolerance in a declared ingredient;
- (e) in the case of a feed that is chopped, crushed or ground, more than 15 viable seeds per 30 grams of the weeds listed in the Fifth Schedule;
- (f) mycotoxins exceeding 10 parts per billion; and
- (g) any material in quantities that could, when fed in proportions commonly used or as specified in the feeding directions, result in the production of an article of food that is prohibited from sale by virtue of The Tanzania Food, Drugs and Cosmetics Act.

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Adulteration of  
ingredient and  
formula feed

8.-(1) A person shall not adulterate feed ingredient or formula feed intended for sale for the

purpose of feeding animal in accordance with these regulations.

An adulterant of feed ingredient referred in sub-regulation (1) shall include *inter alia* mixing of-

- (a) common salt, ammonium compounds or sand with fish meal;
- (b) cobs with maize;
- (c) water with molasses;
- (d) common salt, sand, limestone, marble water or soil with mineral mixture or premixes;
- (e) ground rice husks or saw dust with rice or wheat bran;
- (f) groundnut husks, urea or non-edible cakes with groundnut cake; or
- (g) any other material or substance which alter composition of the feed ingredient.

(2) Poultry formula feed adulteration shall include mixing-

- (a) high proportion of fibrous materials;
- (b) inferior quality oil seed meals; or
- (c) any other adulterated feed ingredient.

Exemptions of  
standard ingredient  
or formula feed

9. Without prejudice to the generality of the provisions of Regulations (4), (5), (6), and (7) a person shall be exempted from abiding to animal feed resource standards if the ingredient or formula feed is-

- (a) manufactured for experimental purposes or research;
- (b) imported for research purposes and importer has submitted request to the Director in writing before the importation;
- (c) the request made to the Director shall

include the information pertaining to the location of the test, a complete description of the ingredients in the feed to be tested, the total quantity of feed required to conduct the test and the quantity of each shipment, and the date and port of entry through which the feed is to be imported, and has received the approval of the Director for the importation and accepts responsibility for the safe disposal of all animal or product produced; and

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- (d) containing a medicine manufactured pursuant to The Tanzania Food, Drugs and Cosmetics Act for the purposes of conducting new drug clinical testing and is packaged in containers containing not more than 5 kg net mass, and intended for feeding to animals and their products not intended for human consumption.

### PART III

## GOOD MANUFACTURING PRACTICES REQUIREMENTS FOR ANIMAL FEED PRODUCTION

Good manufacturing practices in production of ingredient and formula feed

10.-(1) Any feed manufacturer shall abide to Good Manufacturing Practices (GMP) for animal feed production as set out in the Seventh Schedule.

(2) A feed manufacturer shall put in place approved Standard Operating Procedures (SOP) for various activities in manufacturing process.

(3) Subject to the provisions of sub-regulation (2) the SOPs shall include *inter alia*-

- (a) cleanliness and personnel;
- (b) receiving, storage and issuance of raw material;

- (c) manufacturing (production, packaging and labeling);
- (d) quality control;
- (e) storage of finished product;
- (f) disposal of unsuitable raw material; and
- (g) procedure for recall of defected product.

(4) A feed manufacturer shall institute housekeeping measures to ensure good hygiene and safety of the products.

(5) A feed manufacturer shall transport ingredients and finished products Formula Feed as per Act.

#### PART IV GENERAL PROVISIONS

Import and Export of  
Animal Feed

11.-(1) Any person shall not import or export formula feed or ingredient unless conform to standards set out in these regulations.

(2) Subject to sub regulation (1), a person shall not import or export into Mainland Tanzania any animal feed resources unless he obtains a permit from the authority.

(3) Any person who contravenes sub-regulation (1) and (2) commits an offence.

Offence and  
Penalties

12.-(1) Any person who contravenes or fails to comply with any of the provisions of these regulations shall be guilty of an offence and shall be liable on conviction to a fine not less than one million shillings or to imprisonment for a term not less than six months or to both.

(2) Where an offence under the Act or these Regulations is a subsequent offence and to which no penalty is provided in respect of the continuance thereof,



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the person who commits that offence, shall in addition to any other penalty, be liable to a fine not exceeding shillings one million or to imprisonment for a term not exceeding six months or to both.

## FIRST SCHEDULE

(Made under regulation 4(1))

S/N	ARTICLE	NUTRIENT COMPOSITION OF FEED INGREDIENTS CHEMICAL/NUTRIENT COMPOSITION OF PARTICULAR TO BE CONTAINED IN PRESCRIBED STATEMENT						
		DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)	
A	GRAIN AND CEREALS							
	Barley	88	12.5	11.5	1.8	4.9	2.4	
	Bulrush millet	88	14.7	6-11	5.0	2.0	2.5	
	Finger millet	88	12.3	11.9	3.6	6.2	2.8	
	Maize	88	12.1 - 13.9	9.1 - 10.4	2.2 - 2.4	3.6 - 4.1	1.3 - 1.5	
	Whole maize cob	89	2.5	2.8 - 3.1	0.6 - 0.7	32.2 - 35.8	1.6 - 1.8	
	Oat feed (grain or crushed)	88	4.3 - 9.9	11.8 - 13.3	4.6 - 5.2	10.7 - 12.0	3.1 - 3.4	
	Rice	88	13.7 - 16.2	8.0 - 9.0	0.8 - 0.9	0.8 - 0.9	0.9 - 1.0	
	Sorghum (white)	90	21.8	11.5 - 12.7	2.7 - 3.4	2.6 - 2.8	1.7 - 1.9	
	Sorghum (red)	90	13.6	12 - 13	4.3	4.1	1.7	
	Triticale	89	12.1 - 13.9	14.7 - 16.5	1.5 - 1.6	2.9 - 3.3	1.8 - 2.0	
	Wheat	89	17.0 - 18.94	14.9 - 17.1	1.8 - 2.0	2.5 - 2.8	1.6 - 1.8	
B	GRAIN/CEREAL	DM % MINIMUM	ENERGY	CP	CFAT	CFIB	ASH	

BYPRODUCTS	(ME MJ/KG)	(% of DM)	(% of DM)	(% of DM)	(% of DM)	(% of DM)
Maize bran	10.5	12.2 - 68.5	2.8 - 6.2	7.7	1.2	
Maize cobs	-	2.1 - 2.8	0.8 - 0.9	32.8 - 36.3	1.3 - 2.8	
Hominy meal	11.5	10.3 - 11.4	5.1 - 7.2	4.8 - 5.3	2.8 - 3.1	
Maize gluten	12.6	22.9 - 25.5	2.2 - 2.5	8.7 - 9.7	6.7 - 10.8	
Maize germ cake or meal	13.3	20.0 - 22	8.0	12	5.4	
Rice groats & bran	18.9	2.8 - 3.1	1.0	39 - 43	19 - 21	
Rice polishing	5.4	8.0 - 9.0	0.8 - 0.9	11.7 - 13	0.9 - 1	
Wheat bran	4.0	12 - 17.4	3.8 - 4.3	10.0 - 11.3	5.9 - 6.6	
Wheat mildings	4.9	16.4 - 18.4	4.2 - 4.7	7.8 - 8.8	4.5 - 5.5	
Wheat pollard	16.5	25.0	7.0	3.5	5.3	
Oat meal by products	11.3 - 13.9	10 - 11	4.5 - 6.9	13.4	4.0	
Other by-products resulting from processing maize, rice, barley, wheat, millet, oats, or any other cereal not otherwise specifically mentioned in this schedule	>10.5	> 4	>2	>4	>0.5	
<b>C OIL SEEDS AND OIL SEED BY PRODUCT</b>	<b>DM % MINIMUM</b>	<b>ENERGY (ME MJ/KG)</b>	<b>CP (% of DM)</b>	<b>CFAT (% of DM)</b>	<b>CFIB (% of DM)</b>	<b>ASH (% of DM)</b>
Cashew nuts	90	11.6-	20.5 - 21.5	46.1 - 47.0	1.1 - 9.4	2.8 - 3.4
Cashew nut cake	94	9.8-	31.1	7.4	20.1	6.0
Cashew nut - Extracted meal	94	7.6	41.6	1.0	1.6	5.5
Castor oil cake	93	9.5	17.5 - 35.4	0.9 - 4.8	11.9 - 29.7	6.5
Coconut	91	12.0	21.3 - 3.4	2.1 - 8.0	14.4 - 15.8	5.9 - 6.7

Copra cake	91	13.1	20	9.2-12.2	10.2-13.4	6.8-8.4
Cotton seeds	92.2	3.8	21.7-72.5	2.0-5.0	18.2-19.8	3.5-3.8
Cotton seed hulls	90.4		3.8-4.2	1.5 1.7/3.2	43.2-47.8	2.6-2.9
Cotton seed cake/meal (not decorticated)	90	7.8	24-37.1	6.9	16.8	4.6
Cotton seed cake/meal (decorticated)	90	10.3	45.7	8.9	8.7	6.7
Groundnut cake	92	14.5	46.2-55.7	7.5-7.7	4.5-8.7	4.4-8.2
Kapok (Sufi) seed cake or meal	93	17.6	26.9	7.0	25.7	6.3
Linseed cake and meal (extracted)	93	11.6	31.5-39	6.3	10.4	5.6
Palm cake or meal	93	11	13-21.3	0.8-10.3	6.7-17.5	3.9-7.8
Palm kernel not extracted	93	10.9	9.5	44.2	5.9	2.8
Pumpkin seed meal	90	13.5	16	10	14	3-5.3-
Rapeseed cake or meal	93	35.3	35.3-44	1.5-9.6	8.3-13	12.3-
Safflower seed meal	92	6.3	42-47	1.2-1.3	20.9-32.6	7.8-8.5
Safflower meal (sol. extraction)	92	4.9	22-25	1.2-1.3	13.4-14.7	5.3-5.8
Simsim (sesame) seed	93		24-44.4	11.9	4.5-11	8.9
Simsim oil cake or meal	93	19.4	24-49.2	2.4-6.9	5.2-11	11.4-12.3
Soybean meal (full fat)	92	-	41.5	20.4 22.2	4.8	5.2
Soybean cake (extruded)	92	14.5	50.3	1.7-5.4	5.8	6.3
Soybean cake (not extruded)	92	15.1	18	1-1.7	31	5.2
Sunflower seed	92	16.1	18	17	31	6.6
Sunflower seed cake or meal (decorticated)	92	10	14.9-43.0	15.2	11-13.4	6.7

	Sunflower seed cake or meal (un decorticated)	92		6	18 - 29.7	8.0-29.3	26.9 - 32.3	7.2
	Water melon seed meal	90		10.8	8.4 - 16.8	21.1	25.6	4.3
D	BY-PRODUCTS OF BREWERY	DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)	
	Dried brewery/ distillery spent grains	94	10.8	25.9	1.3 - 6.8	17.5 - 19	7.4 - 9.3	
	Wet brewery mash / distillery spent grain	94	6.8	17.0 - 21.4	8.6 - 9	13.2 - 16.5	4.8	
	Malt culms	94	6.6	27.5	8.6 - 9	6	4.8	
	Sorghum brewers waste (Chibuku)	94	8.9	24.5	6.9	4.7	2.1 - 3.4	
	Brewers yeast	94	14.1	42.9 - 49.9	1.1	10.2	6.6	

	BY PRODUCT OF SUGAR INDUSTRY	DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)	SUGARS (%)
	Dried plain beet pulp	77	10.8	9.0	0.5	10 - 18	> 3.5	absorbent < 10% Sugar
	Dried Molasses beet pulp	77.9	8.8	6.1 - 8.5	0.2	08.9 - 1.4	9.6	absorbent < 10% Sugar
	Molasses sugar cane	77	9.5	3.0	0	0.3	8.6	absorbent < 10% Sugar
	Sugar cane bagasse (treated or untreated)	77	9.5	4.3	0	0.7	8.6 - 9.4	absorbent < 10% Sugar

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F	ANIMAL BY-PRODUCTS	DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)
	Blood meal	92	12	75 - 88	0.7 - 0.8	1	2.3 - 2.5
	Lake fish meal or any others	92	21	31 - 71	4.6 - 11.9	0.5 - 2.7	10.1 - 18.9
	Meat meal	93	10.5	56.6 - 66.0	12.5 - 16.8	2.7 - 2.9	12.9 - 16.6
	Meat and bone meal	93	9.2	53.8	10.4 - 11.2	2.4	27.8 - 29.7
	Sardines (dagaa)	92	12.5	60 - 71	4.6 - 11.9	0.5 - 2.7	10.1 - 25.1
	Sea fish meal or any other product obtained by drying and grinding or otherwise treating fish or fish waste from salty water, prawns head meal	92	12	> 45	< 10%	> 2.7	> 18.1
G	LEGUMINOUS SEEDS	DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)
	Bambara nut	91	10.5	21.3 - 25.4	0.2 - 7.5	3.9 - 6.7	2.1 - 3.3
	Beans/ meal ( <i>Phaseolus vulgaris</i> )	91	10.4	21 - 22	2.1	5.8	4.3
	Faba beans or bean meal	91	12.6	19 - 23	6.3	3	3.4
	Faba bean and pod meal	91	13.4	20	2.5	1.1	2.9
	Gram meal (chick pea)	90	13.4	20.1 - 22	4.5	4.9	2.8
	Gram bran	92	6.0	14.8	2.1	25.3	4.4
	Gram husks	92	5.5	11 - 13	1.1	12.7 - 8.3	7.0
	Lentil	88	11.5	19.5 - 25.5	2.0 - 3.5	3.5	2.2
	Pea meal (including all types of peas)	91	10.5	26	1.5	40	2.6

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Pea and pod meal ( <i>Pisum sativum</i> )	91	11.5	20 - 23	1.5	5.5	2.6	
Pigeon pea ( <i>Cajanus cajan</i> )	91	11.7	20.8	0.8	9.4	3.8	
H	FORAGE CROPS AND OTHER MULTI-PURPOSE TREES	DM % MINIMUM	ENERGY (ME- MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)
	Acacia seed meal Protein	90	12.7	7.3 - 46.2	1.6	19.6	5.5 - 7.2
	Acacia seed meal and pod meal	90	8.7	8.8 - 37.8	1.4 - 6.0	10.9 - 24.7	3.7 - 6.3
	Alfalfa meal (Lucerne)	90	10.6	18 - 33	2.9	26	10.5 - 11.0
	Cassava leaf meal	90	1.54 - 1.9	16.7 - 39.9	3.8 - 10.5	4.8 - 23.6	5.7 - 12.5
	Clover meal	90	7.9 - 10.9	15 - 21.3	2.0 - 2.8	19.1 - 22.8	13 - 15
	Coffee husks or hulls fibre	90	9.8	17	0.5	36	10.2
	Coffee pulp	90	10.4	15.0	1.2	25	9.6
	Dried fodder crops (hay), grass	90	7 - 10.1	12 - 16	1.1 - 4.8	20 - 40	8.7 - 11.7
	Glyricidia leaf meal	90	10.5	22 - 25.9	1.3	65 - 77.8	10.9
	Leucaena leaf meal	90	10.3	17 - 38.4	1.8	31.7 - 54.4	10.8
	Leucaena pods and seeds	90	9.5	17.5 - 21.7	1.4	25.6 - 37.1	4.4 - 5.8
	Maize whole plant (at silking stage)	90	8.8	7.9 - 9	1.1	21 - 32.4	9.7
	Maize plant leaves (stripped/topped)	90	9.5	9 - 11.3	1.9	21 - 29.4	8.1
	Moringa oleifera leaf	90	7.8	29.7	43.5	19.9	14.7
	Potato vines (stem and leaves)	90	7.2	18.5 - 22.5	2.8	11.4 - 28.1	12.5 - 7.7
	Sisal waste (for ruminants)	90	7.1	3.8 - 7.2	2.6 - 2.8	28.9 - 35.6	15.5 - 5.9
	Citrus pulp	90	2.1	6.9 - 8.1	2.8 - 3.9	11.4 - 13.1	5.5 - 7.1
	Trichanthera leaves	90	10.1	24.5	3.2	13.4	29.1

I	ROOTS AND TUBERS	DM % MINIMUM	ENERGY (ME MJ/KG)	CP (% of DM)	CFAT (% of DM)	CFIB (% of DM)	ASH (% of DM)
	Cassava meal (Tapioca)	30.8 - 43.3	9.0 - 13.0	1.5 - 3.5	0.8 - 3.2	1 - 1.8	1.6 - 4.1
	Cassava peels	27.3 - 33.5	9.7	2.8 - 6.5	0.5 - 2.2	10.0 - 22.0	3.5 - 10.4
	Irish potatoes (unpeeled and boiled)	>33	11.7 - 13.2	8.1 - 10	<0.5	1 - 2.2	4.3 - 6.1
	Sweet potatoes (un-peeled and boiled)	>33	12.4 - 14.2	3.8 - 5	< 0.9	1.3 - 3.3	4.1
	Carrot (whole plant)	12	1.35	9.9	1.4	-	8.2
	Sugar beet top	>33	5.9 - 6.3	12.5	1.7 - 2.0	32.2 - 33.5	8.5 - 9.6
	Yams and coco-yams	33	13.8 - 14	7.1 - 8.7	0.7	1.9 - 2.4	3.4 - 5.2

J	MINERAL SOURCES	PROTEIN (%)	CALCIUM (%)	PHOSPHORUS (%)	ASH (%)	SODIUM (%)
	Bone meal	40.7	0.7 - 12	0.7 - 5.8	36.8 - 72.5	0.72
	Limestone	-	38	17.5	91	-
	Mono- or Dicalcium phosphate	-	24 - 25.5	14	91.5	-
	Oyster shell meal or similar products derived from crustaceans	38	1 - 16	1 - 8	>35	0.7 - 0.85
	Common Salt	0	0	0	-	87



SECOND SCHEDULE

(Made under regulation 6(1))

STANDARDS FOR FORMULA FEED

(a) Poultry Feeds

1	FEED	BASIC NUTRIENTS							AMINO ACIDS		
		ME (Kcal/KgDM)	CP (%)	CF (%)	Cfat (%)	Ca (%)	P(%)	Lysine (%)	Meth. & Cyst. (%)	Tryph. (%)	
	Chick and duckling starter feed	2850	20	5	3-10	1.2	0.5	1.1	0.8	0.17	
	Growers starter	2700	15	7.5	3-10	1.0	0.5	1.6	0.27	0.16	
	Layers mash	2900	16	7.5	3-10	3-4	0.5	0.6	0.58	0.16	
	Broiler starter	3000	22	4	3-10	1.2	0.5	0.5*	1.2	0.17	
	Broiler finisher	3100	18	7.5	5-10	1.0	0.5	1.2	0.45	0.16	
	Breeders feed	2900	17	7.5	3-10	3.5	0.5	0.6	0.3	0.16	
	Turkey feed (Breeding)	2900	14	7.5	3-10	3.0	0.5	0.6	0.4	0.13	

(b) Cattle Feeds (Supplements)

NUTRIENTS	Calf meal (starter feed)		Calf rearer / Heifer grower		Dairy meal		Complete cattle feed		Fattening feed	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Crude protein	18.0	17.0	16.0	14.0	17.0	16.0	13.0	11.0	13.0	12.0
Oil/ Crude fat	4.0	3.0	4.0	2.0	4.0	3.0	4.0	0.0	4.0	0.0
Crude fibre	5.0	0.0	5.0	0.0	10.0	0.0	25.0	10.0	10.0	0.0

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(d) Sheep and Goat feed

FEED	BASIC REQUIREMENTS						
	Wt (Kg)	DE (Mcal/gDM)	ME (MCal/kgDM)	CP (%)	Ca (%)	P (%)	
Rams/Bucks	40 - 120	5.15 - 6.29	4.22 - 5.16	18.4 - 23.1	0.63 - 0.85	0.35 - 0.47	
Ewe/Does	30 - 80	2.4	2.0	8.9	0.3 - 0.25	0.28 - 0.24	
Lamb & goat finishing feed	30 - 55	3.65 - 5.85	2.99 - 4.80	14.3 - 20.9	4.8 - 5.0	3.0 - 3.1	
Breeding Ewes/Doe	50 - 80	2.4 - 2.9	2.0 - 2.4	8.9 - 11.5	0.3 - 0.52	0.28 - 0.34	

(e) Horse feed

FEED	BASIC REQUIREMENTS						
	Wt (Kg)	DE (Mcal/Kg/day)	CP(Kg/day)	Vitamin A 1000 IU/day	Ca g/day	P g/day	
Young horses	60 - 200	3.74 - 8.24	0.6 - 0.32	2.4 - 5.0	9 - 24	6 - 16	
Up to 400 Kg horses	365 - 400	13.8	0.54	10. - 11	18 - 20	11 - 13	
Breeding mares	450 - 500	16.3 - 16.4	0.63	12.5 - 13	23 - 25	17 - 14	
Mature horses	540 - 600	18.79 - 19.26	0.7	13 - 15	31 - 27-	20 - 17	

(d) Sheep and Goat feed

FEED	BASIC REQUIREMENTS						
	Wt (Kg)	DE (Mcal/gDM)	ME (MCal/kgDM)	CP (%)	Ca (%)	P (%)	
Rams/Bucks	40 - 120	5.15 - 6.29	4.22 - 5.16	18.4 - 23.1	0.63 - 0.85	0.35 - 0.47	
Ewe/Does	30 - 80	2.4	2.0	8.9	0.3 - 0.25	0.28 - 0.24	
Lamb & goat finishing feed	30 - 55	3.65 - 5.85	2.99 - 4.80	14.3 - 20.9	4.8 - 5.0	3.0 - 3.1	
Breeding Ewes/Doe	50 - 80	2.4 - 2.9	2.0 - 2.4	8.9 - 11.5	0.3 - 0.52	0.28 - 0.34	

(e) Horse feed

FEED	BASIC REQUIREMENTS						
	Wt (Kg)	DE (Mcal/Kg/day)	CP(Kg/day)	Vitamin A 1000 IU/day	Ca g/day	P g/day	
Young horses	60 - 200	3.74 - 8.24	0.6 - 0.32	2.4 - 5.0	9 - 24	6 - 16	
Up to 400 Kg horses	365 - 400	13.8	0.54	10. - 11	18 - 20	11 - 13	
Breeding mares	450 - 500	16.3 - 16.4	0.63	12.5 - 13	23 - 25	17 - 14	
Mature horses	540 - 600	18.79 - 19.26	0.7	13 - 15	31 - 27-	20 - 17	

(f) Pond fishmeal

FEED	BASIC REQUIREMENTS									
	ME (MJ/kgDM)		CP (%)		CF (%)		Ca (%)		P (%)	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Fingerlings	12.0	11.5	27	25	7.5	2.5	1.5	1.0	1.0	0.6
Grower	12.0	11.5	22.5	21.5	7.5	2.5	1.5	1.0	1.0	0.6
Pond fishmeal supplement feed (maintenance)	11.5	10.5	17.0	16.0	7.5	2.5	1.5	1.0	1.0	0.6

(g) Camel feed

BASIC REQUIREMENTS					
FEED	ME (MJ/kgDM)	CP (%)	CF (%)	Ca (%)	P (%)
Camel meal (For maintenance)	11.5	11-13	10 - 25	1.0	0.7

(h) Rabbit meal

FEED	BASIC REQUIREMENTS									
	ME (MJ/kgDM)		CP (%)		CF (%)		Ca (%)		P (%)	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Grower /fattener	12.0	11.5	18.0	16.0	12.0	8.0	1.2	1.0	0.8	0.7
Lactating doe	12.0	11.5	19.0	18.0	12.0	8.0	1.4	1.2	0.9	0.8
Breeder	11.5	11.0	18.0	16.0	12.0	8.0	1.2	1.0	0.8	0.7

(d) Sheep and Goat feed

FEED	BASIC REQUIREMENTS					
	Wt (Kg)	DE (Mcal/gDM)	ME (MCal/kgDM)	CP (%)	Ca (%)	P (%)
Rams/Bucks	40 - 120	5.15 - 6.29	4.22 - 5.16	18.4 - 23.1	0.63 - 0.85	0.35 - 0.47
Ewe/Does	30 - 80	2.4	2.0	8.9	0.3 - 0.25	0.28 - 0.24
Lamb & goat finishing feed	30 - 55	3.65 - 5.85	2.99 - 4.80	14.3 - 20.9	4.8 - 5.0	3.0 - 3.1
Breeding Ewes/Doe	50 - 80	2.4 - 2.9	2.0 - 2.4	8.9 - 11.5	0.3 - 0.52	0.28 - 0.34

(e) Horse feed

FEED	BASIC REQUIREMENTS					
	Wt (Kg)	DE (Mcal/Kg/day)	CP(Kg/day)	Vitamin A 1000 IU/day	Ca g/day	P g/day
Young horses	60 - 200	3.74 - 8.24	0.6 - 0.32	2.4 - 5.0	9 - 24	6 - 16
Up to 400 Kg horses	365 - 400	13.8	0.54	10 - 11	18 - 20	11 - 13
Breeding mares	450 - 500	16.3 - 16.4	0.63	12.5 - 13	23 - 25	17 - 14
Mature horses	540 - 600	18.79 - 19.26	0.7	13 - 15	31 - 27-	20 - 17

(f) Pond fishmeal

FEED	BASIC REQUIREMENTS										
	ME (MJ/kgDM)		CP (%)		CF (%)		Ca (%)		P (%)		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
Fingerlings	12.0	11.5	27	25	7.5	2.5	1.5	1.0	1.0	0.6	
Grower	12.0	11.5	22.5	21.5	7.5	2.5	1.5	1.0	1.0	0.6	
Pond fishmeal supplement feed (maintenance)	11.5	10.5	17.0	16.0	7.5	2.5	1.5	1.0	1.0	0.6	

(g) Camel feed

FEED	BASIC REQUIREMENTS			
	ME (MJ/kgDM)	CP (%)	CF (%)	Ca (%)
Camel meal (For maintenance)	11.5	11-13	10 - 25	1.0

(h) Rabbit meal

FEED	BASIC REQUIREMENTS										
	ME (MJ/kgDM)		CP (%)		CF (%)		Ca (%)		P (%)		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
Grower /fattener	12.0	11.5	18.0	16.0	12.0	8.0	1.2	1.0	0.8	0.7	
Lactating doe	12.0	11.5	19.0	18.0	12.0	8.0	1.4	1.2	0.9	0.8	
Breeder	11.5	11.0	18.0	16.0	12.0	8.0	1.2	1.0	0.8	0.7	

THIRD SCHEDULE

(Made under regulation 4(2))

ANTINUTRITIONAL, TOXIC OR UNDESIRABLE FACTORS IN FEED INGREDIENTS

MATERIAL	UNDESIRABLE FACTOR	MAXIMUM LEVEL	PROCESSING METHODS	INCLUSION LEVELS (%)	
				Before processing	After processing
A	CEREALS AND CEREALS BY PRODUCTS				
	Barley, Bulrush millet, Finger millet, Maize, Whole maize cob, Maize flaked, Oat feed (grain or crushed), Rice, Sorghum (white), Sorghum (red), Triticale	10 ppb	Long storage required less than 8 moisur content	0	60
	Sorghum (white), Sorghum (red), Triticale	-	Soaking, heat treatment	5	30
B	ROOTS AND TUBER				
	Cassava whole	186 mg HCN/kg	soaking /boiling/pellet	5	60

Taro	Calcium oxalate		soaking /boiling	2.5	15
Yam	Alkaloids tannins	10-20 g/kg	soaking /boiling	2.5	15
Cassava meal (Tapioca)/root chips	Hydro cyanide (HCN)	186 mg HCN/kg	soaking /sundry		
Irish potatoes	Prussic acid		soaking /boiling		
Fresh Sweet potatoes	Prussic acid		soaking /boiling		
<b>C LEGUMINOUS SEEDS</b>					
Soybean meal	Trypsin inhibitor		heating/toasting, screw pressing,	2.5	40
Faba beans or bean meal	Tannins		heat treatment / Soaking /boiling	0 monogastric 20 ruminants	20 - 30
Castor bean	Ricin		Autoclaving or boiling for 10 - 15 min	0	20 in poultry 10 ruminants
Common beans (phasolous)	Trypsin inhibitor		heat treatment / Soaking /boiling	0 monogastric 20 ruminants	20 - 30
<b>D OIL SEEDS EXTRACTION RESIDUES</b>					
Cotton seed hulls	Gossypol, cyclopropenoid fatty acids	0.6-1.2g/kg free gossypols)	Use ferrous sulphate to deactivate	5 (depending upon gossypol level)	15
Cotton seed cake or meal (not decorticated/ decorticated)	Gossypol, cyclopropenoid fatty acids	0.6-1.2 g/kg (free gossypols)	Use ferrous sulphate to deactivate	5 (depending upon gossypol level)	15
Ground nut cake	Aflatoxin (Fungal metabolite)	<10 ppb	Use clean sample	0	5



	Lin seed	Prussic acid (Cyanogenetic glycoside)	Not more than 25%	heat treatment /boiling for 10 minutes	0	25 Cattle 5 Pig
E	<b>FORAGE CROPS AND OTHER MULTI-PURPOSE TREES</b>					
	Leucaena leaf meal	Mimosine	145 g/kg (seed) 25 g/kg (leaf)		2.5	10 poultry 20 ruminants
F	<b>MISCELLANEOUS INGREDIENTS</b>					
	Animal by products (Fish meal)	Salmonella species and enterobacter	0		0	Base on formulation and animal requirement
	Urea	Urea toxicity	0		1-2% in ruminants diets	1 dairy diets 2 beef & sheep diets

FOURTH SCHEDULE

(Made under regulation 5(1))

CONTAMINANTS IN FEED INGREDIENT

Deleterious substances regarded as injurious chemical and microbes or physical materials contaminants or toxic substances shall include:

S/N	CATEGORY	CONTAMINANTS	LEVELS (maximum)
1	Chemicals	Pesticides	0.05 ppm
		Aldrin	
		Carbaryl	
		Carbathiin	
		Dieldrin	
		Malathion	
		Toxaphene.	
2	Toxic metal	Mercury compounds	7 to 8 ppm
		Cadmium	7 ppm
		Lead	0.015 ppm
		Mercury	0.1 ppm
3	Physical contaminants	Weeds seeds	30g/kg
		Decomposed feeds	0
		Charcoal	0
		Cereals awns, hulls	1%
		Sand	0
		Soil	0
4	Living organism	Moulds	0
		Insects and their larva	0.5 %
	Chemicals	DDT	0
	Radioactive materials		0

FIFTH SCHEDULE

(Made under regulation 5(3)(a))

SEED OF WEEDS

COMMON NAME OF WEED SEEDS	SCIENTIFIC NAME
False flax, flat seeded	<i>Camelina parodiilbarra</i>
Mustard, black	<i>Brassica nigra(L.) Koch</i>
Mustard, hare's ear	<i>Conringia orientalis(L.) Dumort.</i>
Darnel	<i>Lolium temulentumL</i>
Mustard, Indian or oriental	<i>Brassica juncea(L.) Czern &amp; Coss</i>
Purple Cockle	<i>Agrostemma githagoL.</i>
Stinkweed	<i>Thlaspi arvensel.</i>
Chicory	<i>Cichorium intybusL.</i>
Field bindweed	<i>Convolvulus arvensisL.</i>
Field peppergrass	<i>Lepidium campestre(L.) R. Br.</i>
Couch grass	<i>Agropyron repens(L.) Beauv.</i>
Bladder Campion	<i>Silene cucubalus Wibel</i>
Horse nettle	<i>Solanum carolinenseL</i>
Leafy spurge	<i>Euphorbia esulaL.</i>
Purple cockle	<i>Agrostemma githagoL.</i>
Redroot pigweed	<i>Amaranthus retroflexusL.</i>
Ribgrass.	<i>Plantago lanceolataL.</i>
Perennial sow thistle	<i>Sonchus arvensisl.</i>
Ragweed, common	<i>Ambrosia artemisiifoliaL.</i>
Stickseed	<i>Lappula echinataGilib.</i>
Stinkweed	<i>Thlaspi arvensel.</i>
Toad flax	<i>Linaria vulgarisMill.</i>
White cockle	<i>Silene alba(Miller) E.H.L. Krause</i>
Wild carrot	<i>Daucus carotaL.</i>
Wild radish	<i>Raphanus raphanistrumL.</i>
Wild turnip	<i>Brassica campestrisL.</i>

## Grazing-Land and Animal Feed Resources

G.N. No. 58 (contd.)

### SIXTH SCHEDULE

(Made under regulation 6(2))

#### MINERAL CHEMICAL FEEDS (ELEMENTS FEED AND ACCEPTABLE LEVELS)

S/N	ITEM	MAXIMUM LEVEL%
1	MINERALS	
	Calcium (Ca),	0.2
	Magnesium (Mg),	0.2
	Sodium (Na),	0.2
	Potassium (K) .	0.2
	Sulphur (S) , and	0.2
	Salt (NaCl)-	0.2
	Macro minerals	0.1
	Zinc (Zn)	0.02
	Copper (Cu)	0.02
	Manganese (Mn)	0.02
	Iodine (I)	0.02
	Cobalt (Co)-	0.02
	Micro minerals	0.02
	Fluorine (F)	0.02
	Phosphorus (P)	0.02
	Iron (Fe)	0.1
2	Antibiotics	0.22
3	Medicating ingredients except antibiotics	0.25
4	Vitamin A Vitamin E	0.2
5	Vitamin D	0.25
6	Sugar (invert)	1.5

SEVENTH SCHEDULE

(Made under regulation 10(1))

GOOD MANUFACTURING PRACTICES (GMP) REQUIREMENTS FOR ANIMAL FEED PRODUCTION

S/N	ITEM	COMPONENT	REQUIREMENTS
1.	Facilities and Equipment	Buildings and grounds	<ul style="list-style-type: none"> <li>Buildings used for production of feed shall provide adequate space for equipment, processing, and orderly receipt and storage.</li> <li>Areas shall include access for routine maintenance and cleaning of equipment.</li> <li>Buildings and grounds shall be constructed and maintained in a manner to minimize vermin and pest infestation.</li> </ul>
		Equipment	<ul style="list-style-type: none"> <li>Equipment shall be capable of producing feed of intended potency and purity, and shall be maintained in a reasonably clean and orderly manner.</li> <li>Scales and liquid metering devices shall be accurate and of suitable size, design, construction, precision, and accuracy for their intended purposes.</li> <li>All equipment shall be designed, constructed, installed, and maintained so as to facilitate inspection and use of cleanout procedure(s).</li> </ul>
		Work and storage areas	<ul style="list-style-type: none"> <li>Work areas shall have enough space to allow related operations to take place</li> <li>Equipment used for the production or storage of compounded feeds and medicated feeds or ingredients shall be physically separated.</li> <li>Equipment used for the manufacture and storage of other items like fertilizers, herbicides, insecticides, fungicides, rodenticides, and other pesticides unless such articles are approved for use in the manufacture of animal feeds.</li> <li>Storing of any raw materials containing chromium or manganese shall be done in</li> </ul>

Grazing-Land and Animal Feed Resources

G.N. No. 58 (contd.)

			closed containers.
		Premises cleanliness	<p>In production of animal feedstuff the feed mill shall observe the following (to be taken into consideration in the preparation of SOPs)</p> <ol style="list-style-type: none"> <li>i. practicing of regular sweeping either by industrial vacuum system or manually;</li> <li>ii. removing dust from walls, edges, and equipment using low pressure air or by other means, and then sweep or vacuum the area at least once per month;</li> <li>iii. Keeping doors shut except during normal ingress and egress.</li> <li>iv. Maintaining and operating all process equipment in accordance with manufacturer's specifications and in a manner to minimize dust creation</li> </ol>
		Transportation	<ul style="list-style-type: none"> <li>• Feed should be in good condition and meet generally accepted quality standards. Feed and feed ingredients should be obtained and maintained in a stable condition so as to protect feed and feed ingredients from contamination by pests, or by chemical, physical or microbiological contaminants or other objectionable substances during transportation.</li> <li>• The vehicle used should be clean</li> </ul>
		Standard Operating Procedures (SOP)	<p>This should be in place to show how you handle the following item-</p> <ol style="list-style-type: none"> <li>1. Raw material handling (How to receive raw material, store and record )</li> <li>2. Cleaning procedures for machines and premises</li> <li>3. Feed and feed ingredients storage (Should be obtained and maintained in a stable condition so as to protect feed and feed ingredients from contamination by pests, or by chemical, physical or microbiological contaminants or other objectionable substances during production, handling, storage and transport).</li> <li>4. Micronutrients dispensing and handling</li> </ol>
2.	Product	Components	<ul style="list-style-type: none"> <li>• Adequate procedures shall be established and</li> </ul>

## Grazing-Land and Animal Feed Resources

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	Quality Assurance		<p>maintained for the identification, storage, and inventory control (receipt and use) of all feeds ingredients intended for use in the manufacture of feeds to aid in assuring the identity, strength, quality, and purity of these resources.</p> <ul style="list-style-type: none"> <li>• Packaged premixes, feed minerals and other medicated feeds shall be stored in designated areas in their original closed containers. These shall be identified and stored in a manner such that their identity, strength, quality, and purity will be maintained and be used in accordance with their labeled mixing directions.</li> </ul>
		Laboratory assays	<ul style="list-style-type: none"> <li>• The results of laboratory assays of feed ingredients components, including assays by feed inspector /control officials, indicate that the feed is not in according with the permissible limits specified.</li> <li>• Investigations and corrective action shall be implemented immediately by the firm and such records shall be maintained on the premises for a period of 1 year.</li> </ul>
		Equipment cleanout procedures.	<ul style="list-style-type: none"> <li>• Production and control procedures should be established and be in place to prevent unsafe carryover contamination of compounded feeds by residual medicated feed material in production and distribution systems.</li> </ul>
			<ul style="list-style-type: none"> <li>• Ensure that all employees involved in the manufacture of medicated feeds have an understanding of the manufacturing and control operation(s)</li> </ul>
			<ul style="list-style-type: none"> <li>•</li> </ul>
			<ul style="list-style-type: none"> <li>•</li> </ul>
		Labeling.	<ul style="list-style-type: none"> <li>• Labeling should be clear and informative i.e. explains feed or feed ingredients and their % composition of main nutrients, the species to use or intended for,</li> <li>• Label should have the lot identifier, the name of feed and the main feed ingredients.</li> <li>• Labeling should show the manufacturer and the place of origin.</li> </ul>

*Grazing-Land and Animal Feed Resources*

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			<ul style="list-style-type: none"> <li>• Labels shall be received, handled, and stored in a manner that prevents label mix-ups and assures that the correct labels are used for the manufactured feed.</li> <li>• All deliveries of feed resources, whether bagged or in bulk, shall be adequately labeled to assure that the feed can be properly used i.e. Labels must identify the product, drug content and purpose, and how the feed is to be used.</li> </ul>
3	Records	Formula, production, and distribution records.	<p>Records shall be maintained identifying the formulation, date of mixing, and if not for own use, date of shipment/delivery.</p> <p>The records shall be adequate to facilitate the recall of specific batches of medicated feed that have been distributed. Such records shall be retained on the premises for 1 year following the date of last distribution.</p>
		Inspections records	There will be routine biennial inspection for feed manufacturers are subject to at least one inspection during each two-year period. This inspection requirement is waived for those manufacturers not required to register
		Condemned/under standard materials items	Foreign matter, such as chaff, weed seeds, or dust, removed from cereal grains and other Control measure crops. Otherwise these should not be found along the premises.

Dar es Salaam,  
28<sup>th</sup> February, 2013

DAVID MATHAYO DAVID  
*Minister for Livestock and Fisheries Development*