



TBS/AFDC 09 (5548) P3

## DRAFT TANZANIA STANDARD

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### Maize bran as animal feed – Specification

DRAFT STANDARD FOR COMMENTS ONLY

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TANZANIA BUREAU OF STANDARDS

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## **Maize bran as animal feed – Specification**

### **0 FOREWORD**

Maize bran is widely used in the formulation of animal feeds at both industrial and farm levels. This Tanzania standard lays down specifications aiming at ensuring the safety and quality of maize bran produced or traded in the country for use in the manufacture of animal feeds.

In the preparation of this Tanzania Standard substantial assistance was drawn from East African standard, EAS 230 – 2001 Maize bran as Animal Feed – Specification.

In reporting the results of a test or analysis made in accordance with this Tanzania Standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4 (see clause 2).

### **1.0 SCOPE**

This Tanzania Standard prescribes the requirements, methods of sampling and test for maize bran as animal feed.

### **2.0 REFERENCES**

The following referenced standards are indispensable for the application of this draft standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standard (including any amendments) applies.

TZS 4, Rounding off numerical values.

TZS 34-1, Animal feeds and feeding stuffs – Sampling and test methods – Part 1: General.

TZS 34-3, Animal feeds and feeding stuffs – Sampling and test methods – Part 3: Microbiological

TZS 538, Labelling of pre-packaged foods — General requirements

ISO 6579-1 – Microbiology of food and animal feeding stuffs – Horizontal method for the detection of *Salmonella spp.*

ISO 16654 – Microbiology of food and animal feeding stuffs – Horizontal method for the detection of *Escherichia coli*

### **3.0 TERMS AND DEFINITIONS**

For the purpose of this draft Tanzania standard, the following terms and definitions shall apply:

#### **maize bran**

coarse portion, composed mainly of the seed coat, that is separated on sieving of the crushed maize grain to yield fine flour usually in a flour mill

## 4.0 REQUIREMENTS

### 4.1 General requirements

4.1.1 Maize bran shall be free from harmful constituents, metallic objects, adulterants, fungal and microbial contamination, insects and rodent infestation, and other extraneous matter.

4.1.2 Also, it should be free flowing without clumps and discolouration.

### 4.2 Specific requirements

4.2.1 maize bran for animal feeding shall also conform to the requirements detailed in Table 1.

**Table 1: Requirements for maize bran for animal feed**

S/No	Characteristics	Requirements	Methods of test (See clause 2)
1	Moisture, %, max	12.0	TZS 34-1
2	Crude protein (6.25 X N), %, Min	6.0	TZS 34-1
3	Crude fibre, %, max	12.0	TZS 34-1
4	Free fatty acids (of crude fat), %, max	20.0	TZS 34-1
5	Crude fat, %, max	8.0	TZS 34-1
6	Ash (total), %, max	1.0	TZS 34-1

**NOTE** – All values obtained are calculated from samples on dry basis except for those dealing with moisture

## 5 HYGIENE

6.1 The product shall be prepared under strict hygienic conditions according to TZS 109 (see clause 2).

6.2 Maize bran shall comply with microbiological limits as shown in Table 4;

**Table 2: Status for microbiological tolerance in animal feeds**

S/No.	Microorganism	Status	Test methods (see clause 2)
1.	<i>Salmonella spp</i>	Absent	ISO 6579-1
2.	<i>Escherichia coli</i>	Absent	ISO 16654

## 6.0 CONTAMINANTS

### 6.1 Pesticide residues

Maize bran shall comply with pesticide residues limits as prescribed in the Codex Alimentarius Commission.

## **6.2 Aflatoxins**

Aflatoxins content maximum limit in maize bran shall be 10 ppb.

## **7.0 SAMPLING AND TESTS**

### **7.1 Sampling**

Sampling of maize bran for animal feeding shall be done according to TZS 34-1 and TZS 34-3 (see clause 2).

### **7.2 Tests**

Testing of maize bran for animal feeding shall be done according to test methods prescribed in Tables 1 and 2.

## **8.0 PACKAGING AND MARKING**

### **8.1 Packaging**

Maize bran for animal feeding shall be packed in clean and sound containers capable of protecting the product from moisture ingress, contamination and spillage during normal handling and transportation. The containers shall be sealed/stitched in a manner that the product will be effectively protected.

### **8.2 Marking**

8.2.1 Maize bran containers shall be marked and labelled in accordance with TZS 538 (see clause 2). In addition, each container shall be legibly and indelibly marked with the following information:

- a) Name of the product;
- b) Name and address of the manufacturer;
- c) Batch or code number;
- d) Date of production;
- e) Net mass;
- f) Expiry date;
- g) Country of origin;
- h) Storage instructions;
- i) Guaranteed analysis

**8.3** The container may also be marked with TBS Certification Mark.

**NOTE** – The TBS Standards Mark of Quality may be used by the manufacturers only under license from TBS. Particulars of conditions under which the licenses are granted may be obtained from TBS.