# Agricultural Marketing Authority (Grain, Oilseed and Products) By-laws, 2013

## ARRANGEMENT OF SECTIONS

*Section*



IT is hereby notified that the Minister of Agriculture, Mechanisation and Irrigation Development has, in terms of section

50 of the Agricultural Marketing Authority Act [*Chapter 18:24*] (Act No. 26 of 2004), made the following regulations:—

*Title*

1. These regulations may be cited as the Agricultural Marketing Authority (Grain, Oilseed and Oilseed Products) Regulations, 2013.

*Objects*

2. The objects of these regulations are to—

(a) regulate the participation in the production, buying or processing of any grain, oilseeds and products by producers, buyers or processors; and

(b) promote orderly marketing and fair trade practices in the grain and oilseeds industry; and

(c) promote production of grain and oilseeds, including contract farming; and

(d) provide a mechanism for enforcement of contractual obligations to protect the investment of farmers, contractors and suppliers.

*Interpretation*

3. In these regulations—

"broker" means any person or organisation who is engaged in the facilitation of the buying and selling of grain, oilseeds and products;

"contractor" means a registered buyer who is party to a grain or oilseeds production contract;

"Grain or Oilseeds Contract" means a contractual arrangement between a grower and a contractor under which the contractor provides or finances the purchase of agreed inputs in return for the grower selling a volume equivalent to the inputs given to him or her by the contractor.

"contract crop" means grain or oilseeds grown under a grain or oilseed contract.

"Committee" means the Grain and Oilseeds Technical Committee (GOTC) appointed in terms of these regulations;

"grade" means a grade of grain or oilseeds specified in the Second Schedule;

"grain" means maize, wheat, barley, sorghum, rice, pearl millet (mhunga) finger millet (rapoko), round nuts (nyimo), sugarbeans, cowpeas, Michigan pea beans and sesame;

"Grain and Oilseed Industry Stakeholder Association" means the body referred to in section 4;

"grain product" means products derived from processing grains;

"oilseed" means soya beans, sunflower, groundnuts;

"oilseed product" means products derived from processing oilseeds;

"trader" means any registered person or organisation engaged in the buying and selling of grain, oilseeds or products derived therefrom.

*Grain and Oilseeds Technical Committee*

4. (1) All functions which under the Act the Board may exercise in relation to any agricultural commodity shall, in terms of these regulations, be exercised on its behalf by a committee of the Board established in terms of section 13 of the Act to be known as the Grain and Oilseeds Technical Committee.

(2) The members of the Committee shall be chosen for their knowledge, expertise or experience in any facet of the grain and oilseed industry and shall include—

(a) one member of the Board who shall be the Chairperson of the Committee;

(b) three members of the Agricultural Marketing Authority Management; and

(c) eleven other members, nominated from the following organisations—

(i) Grain and oilseed producers, Farmers' Unions; and

(ii) Grain Marketing Board; and

(iii) Grain and Oilseeds Processors; and

(iv) Grain and Oilseed Traders; and

(v) Ministry of Agriculture, Mechanisation and Irrigation Development; and

(vi) Consumer Council of Zimbabwe; and

(vii) Association of Bakers; and

(viii) Zimbabwe Seed Trade Association; and

(ix) Zimbabwe Fertiliser Trade; and

(x) Retailers Association of Zimbabwe; and

(xi) Bankers Association of Zimbabwe.

(3) The general function of the Committee shall be to review and make recommendations to the Authority on—

(a) the promotion of the development of the grain and oilseed industry through the growing, processing, manufacture, preparation or marketing of grain, oilseeds and products; and

(b) a framework that promotes production and ensures orderly marketing of grains, oilseeds and products and protection of investment by growers and contractors; and

(c) the standards relating to the quality, classification, grading, moisture content, packing of grain, oilseeds and products; and

(d) the fair trade practices in the grain and oilseeds industry.

*Requirement of registration of buyers, brokers, contractors, processors, traders and or their respective associations*

5. (1) No individual or body may—

(a) purchase any grain or oilseeds, whether contract or otherwise, with a view to marketing it; or

(b) be a party to a contract whereby he or she finances the growing of grain or oilseeds by a grower for subsequent purchase from the grower; or

(c) import, export or be issued with any licence to import or export grain, oilseeds or products; or

(d) purport to represent the interests of any group of growers, buyers, contractors or processors;

unless such individual or body is registered as a buyer, broker, contractor, processor, trader, or grain and oilseed industry stakeholder association, as the case may be, with the Authority.

(2) Every contractor shall be required to submit a performance guarantee at the time of registration indicating ability to provide inputs and purchase grain or oilseeds.

(3) The Authority shall, at the time of registration, issue a certificate to the registered buyers, brokers, contractors, processors, traders and or their respective associations upon meeting set requirements and receipt of payment of the prescribed fee set out in the Second Schedule.

*Registration of buyers, brokers, traders, growers, contractors and processors and their respective associations*

6. (1) Every—

(a) grain industry stakeholder association shall register with the Authority;

(b) buyer, broker and trader shall register with the Authority on or before the 31st of March each year;

(c) contractor shall register with the Authority on or before the 30th of September each year;

(d) processor shall register with the Authority on or before the 31st of March each year.

(2) Every grain industry stakeholder association, buyer, broker, trader, grower, contractor and processor shall when applying for registration complete and submit to the Committee **Form AMAG 1, AMAG 2, AMAG 3, AMAG 4** or **AMAG 5**, as the case may be, as

set out in the First Schedule together with the prescribed fee, set out in the Second Schedule.

(3) Any buyers, brokers, traders, growers, contractors and processors who make a late application for registration shall in writing state full justification for the delay and pay the prescribed late registration fee set out in the Second Schedule.

*Purchase of contract and non-contract grains and oilseeds*

7. (1) A grower and a contractor may by mutual agreement enter into a volume based contract which shall be binding.

(2) The Committee shall, before the beginning of the production season, determine the minimum input package to be advanced by contractors to growers and cut off dates for input distribution on recommendation by Department of Agricultural Technical and Extension Services.

(3) A contractor shall complement Government in the delivery of technical and extension services to contracted growers.

(4) A contractor who fails to deliver inputs in good time to a grower or fails to pay the purchase price as agreed in the contract within the agreed time frames, shall be liable for any losses which the grower can show resulted from the late delivery of inputs or the failure to pay the purchase price as agreed in the contract within the agreed time frames.

(5) Contract grains and oilseeds shall not be purchased by any person other than the contractor to whom the grower concerned is contracted.

(6) A contractor and a grower shall agree on a price or pricing model that takes into account the cost of inputs and services of the contract grains and oilseeds.

(7) A grower shall not divert inputs delivered under contract to any use other than the production of the grain or oilseeds which he or she had agreed to produce exclusively to the contractor.

(8) Any grower who diverts such inputs to other use shall compensate the aggrieved contractor with an equivalent value of the output or business the contractor would have lost.

(9) A grower shall sell non-contract grains and oilseeds to any buyer as registered by the Authority.

(10) Any buyer who purchases contracted grain or oilseeds shall compensate the aggrieved contractor with an equivalent volume and quality of such grain or oilseeds and the aggrieved contractor shall be compensated at the price determined by the Committee within twenty-one days of the determination.

*Standards of classification and quality of grains, oilseeds and products*

8. All grains and grain products shall be classified in a grade specified in the Third Schedule in accordance with the standards of classification prescribed for that grade.

*Submission of returns and keeping of records by brokers, buyers, contractors, processors and traders*

9. (1) Every contractor shall complete and deliver to the Authority a preliminary return on estimates of hectares of grains to be contracted by 30th September every year and a final return of hectares of grains planted and a harvest estimate by the 31st January each year.

(2) Every contractor shall submit a schedule specifying growers contracted, indicating crop, value of inputs, agreed outputs to facilitate registration of stop orders by 31st January each year.

(3) Every broker, buyer, contractor, processor and trader shall during the marketing season beginning 1st April of each year to 31st March of the following year, complete and deliver to the Authority—

(a) no later than the second week of every month details of the quantity and value of grain purchased and sold by him or her in the month just ended; and

(b) an end of marketing season return no later than the second week of April every year.

(4) The records referred to in subsections (1), (2) and (3) shall be produced for inspection at the request of any inspector of the Authority.

*Cancellation of registration*

10. (1) The Authority may cancel the registration of any person in terms of section 5 or 6 if such person has—

(a) in the opinion of the Authority, not carried on business in the capacity in respect of which he or she was registered for a period of twelve months; or

(b) notified the Authority of his or her intention to discontinue the operations in respect of which he or she has been registered and has made written application for the removal of his or her name from the register; or

(c) furnished false information in terms of subsection (2) or failed to furnish any information required by or in terms of subsection (2); or

(d) in the case of a buyer or contractor, engaged in any activity specified in section 20(e), whether or not the buyer or contractor has been prosecuted or convicted therefor.

(2) A person who is registered under section 5 or 6 shall continue to be bound by all the obligations, conditions and restrictions affecting him or her under these regulations until he or she has received notice, in writing, from the Authority to the effect that his or her registration has been cancelled.

(3) A person who is aggrieved by the cancellation of his or her registration in terms of subsection (1) shall have a right of appeal to the Board whose decision shall be final.

*Disputes*

11. (1) The Committee shall determine any disputes arising from grain and oilseed contracts.

(2) Any person who is aggrieved by the decision of the Committee may within thirty days from the date on which a decision was made make an appeal to the Agricultural Marketing Authority Board.

(3) Notwithstanding the provisions of subsection (2), nothing shall preclude any person from approaching a competent court to seek any relief that may be available at law.

*Offences and penalties*

12. (1) Any person who—

(a) makes a deliberately false statement in a form required to be submitted in terms of these regulations;

(b) being a contracted grower—

(i) sells, transfers or otherwise disposes of any inputs provided to him or her by a contractor pursuant to a contract, without informing and obtaining the prior approval of the contractor; or

(ii) sells, transfers or otherwise disposes of any grain or oilseed product to a person other than the contractor to whom the grower is contracted to sell grain or oilseed, unless the grower has informed and obtained the prior approval of the contractor therefor; or

(iii) who is already a party to a grain or oilseed contract, enters into such a contract with another contractor without informing that contractor of the prior contract;

(c) being a contractor—

(i) enters into a grain or oilseed contract with a grower whom the contractor knows is already a party to such a contract with another contractor, without informing and obtaining the prior approval of that other contractor; or

(ii) buys or otherwise acquires any grain or oilseed product from a grower whom the contractor knows is already a party to a seed cotton contract with another contractor;

(d) fails or fails timeously to submit the periodical returns required by section 9;

(e) fails in terms of section 9(4) to produce to an inspector for examination the records required to be kept under these regulations;

shall be guilty of an offence and liable to a fine not exceeding level four, or imprisonment for a period not exceeding three months, or to both such fine and such imprisonment.

(2) Any person who commits the offences set out in the Fourth Schedule shall be liable to pay the penalties set out in the same Schedule.

FIRST SCHEDULE (Section 6)
FORMS

Form AMAG 1

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

REGISTRATION OF GRAIN INDUSTRY STAKEHOLDER ASSOCIATION

1. Name and address of Association .....

.....

.....

2. Number of members represented by the Association at the time of registration

.....

.....

3. ***Attach written justification for registration****

I, the undersigned declare that the information provided in this Form is true and correct.

*Name in full* *Authorised Signatory*

Designation .....

Date

Form AMAG 1A

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

## CERTIFICATE OF REGISTRATION AS A GRAIN INDUSTRY STAKEHOLDER ASSOCIATION

This is to certify that ..... is registered with the Grain and Oilseeds Technical Committee in terms of section 6 of the Agricultural Marketing Authority (Grains, Oilseed and Products) Regulations, 2013, as a grain industry stakeholder association, with effect from the date hereof, and has furnished the following as the address/ addresses of the premises where the association shall operate:

(i) .....

(ii) .....

(iii) .....

The registration number allocated by the Authority is.....

..... .....

Date *for* Chief Executive Officer of the Authority

Form AMAG 2

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS)
REGULATIONS, 2013

**REGISTRATION OF A CONTRACTOR OR PROCESSOR**

☐ **Contractor** ☐ **Processor**

*Preliminary*

1. Name of applicant .....

.....

.....

2. Identification particulars (National Registration or Passport Number)

.....

.....

3. Address (Personal if registering as an individual and business address if otherwise) .....

.....

4. ***Attach written justification for registration****

_____ _____

*Name in full* *Authorised Signatory*

Designation .....

Date

Form AMAG 2A

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

CERTIFICATE OF REGISTRATION AS A CONTRACTOR/PROCESSOR

This is to certify that .....
is registered with the Grain and Oilseeds Technical Committee in terms of section 6 of the Agricultural Marketing Authority (Grains, Oilseed and Products) Regulations, 2013, as a contractor/processor, with effect from the date hereof, and has furnished the following as the address/addresses of the premises where the contractor/processor shall operate:

has furnished the following as the address/addresses of the premises where he or she shall operate:

(i) .....

(ii) .....

(iii) .....

The registration number allocated by the Authority is.....

..... .....

Date *for* Chief Executive Officer of the Authority

Form AMAG 3

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

REGISTRATION OF A BUYER/BROKER/TRADER

☐ **Buyer** ☐ **Broker** ☐ **Trader**

*Preliminary*

1. Name of applicant .....

.....

.....

2. Identification particulars (National Registration or Passport Number)

.....

.....

3. Address (Personal if registering as an individual and business address if otherwise) .....

.....

4. ***Attach written justification for registration****

_____ _____

*Name in full* *Authorised Signatory*

Designation .....

Date _____

Form AMAG 3A

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

## CERTIFICATE OF REGISTRATION AS A BUYER/BROKER/TRADER

This is to certify that ..... is registered with the Grain and Oilseeds Technical Committee in terms of section 6 of the Agricultural Marketing Authority (Grains, Oilseed and Products) Regulations, 2013, as a buyer/broker/trader, with effect from the date hereof, and has furnished the following as the address/addresses of the premises where the buyer/broker/trader shall operate:

has furnished the following as the address/addresses of the premises where he or she shall operate:

(i) .....

(ii) .....

(iii) .....

The registration number allocated by the Authority is.....

..... .....

Date *for* Chief Executive Officer of the Authority

Form AMAG 4

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

REGISTRATION OF A GROWER

*Preliminary*

1. Name of applicant .....

.....

.....

2. Identification particulars (National Registration or Passport Number)

.....

.....

3. Farm Classification (Communal land, A1 or A2/Commercial) .....

.....

4. Address (Personal if registering as an individual and business address if otherwise) .....

.....

5. ***Attach written justification for registration****

*Name in full* *Authorised Signatory*

Designation .....

Date

Form AMAG 4A

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

## CERTIFICATE OF REGISTRATION AS A GROWER

This is to certify that.....
is registered with the Grain and Oilseeds Technical Committee in terms of section 6 of the Agricultural Marketing Authority (Grains, Oilseed and Products) Regulations, 2013, as a grower, with effect from the date hereof, and has furnished the following as the address/addresses of the premises where the grower shall operate:

has furnished the following as the address/addresses of the premises where he or she shall operate:

(i) .....

(ii) .....

(iii) .....

The registration number allocated by the Authority is.....

..... .....

Date *for* Chief Executive Officer of the Authority

Form AMAG 5

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

REGISTRATION OF A SERVICE HAMMER MILLER

*Preliminary*

1. Name of applicant .....

.....

.....

2. Identification particulars (National Registration or Passport Number)

.....

.....

3. Address (Personal if registering as an individual and business address if otherwise) .....

.....

4. ***Attach written justification for registration****

_____ _____

*Name in full* *Authorised Signatory*

Designation .....

Date _____

Form AMAG 5A

AGRICULTURAL MARKETING AUTHORITY (GRAINS, OILSEED AND PRODUCTS) REGULATIONS, 2013

## CERTIFICATE OF REGISTRATION AS A SERVICE HAMMER MILLER

This is to certify that..... is registered with the Grain and Oilseeds Technical Committee in terms of section 6 of the Agricultural Marketing Authority (Grains, Oilseed and Products) Regulations, 2013, as a service hammer miller, with effect from the date hereof, and has furnished the following as the address/addresses of the premises where the service hammer miller shall operate:

has furnished the following as the address/addresses of the premises where he or she shall operate:

(i) .....

(ii) .....

(iii) .....

The registration number allocated by the Authority is.....

..... .....

Date *for* Chief Executive Officer of the Authority

SECOND SCHEDULE (*Section 6*)

FEES

| *Form No.* | *Form description* | Fee US$ |
|---|---|---|
| AMAG 1 | Application for registration as Grain Industry Stakeholder Association | 500,00 |
| | On late registration | 500,00 |
| AMAG 2 | Application for registration as a contractor or processor | 1000,00 |
| | On late registration | 2000,00 |
| AMAG 3 | Application for registration as a buyer, broker or trader | 1000,00 |
| | On late registration | 2000,00 |
| AMAG 4 | Application for registration as a grower | 1,00 |
| | On late registration | 2,00 |
| AMAG 5 | Application for service hammer miller | 2,00 |
| | On late registration | 5,00 |

THIRD SCHEDULE (*Section 8*)

STANDARDS OF CLASSIFICATION AND QUALITY OF GRAINS, OILSEEDS AND PRODUCTS

MAIZE – WHITE AND YELLOW – UNMIXED

| GRADE | A | B | C | D | UG |
|---|---|---|---|---|---|
| Moisture Content (% max) | 12,5 | 12,5 | 12,5 | 12,5 | 12,5 |
| Test Density (kg/hl min) | 70,0 | 68,0 | 66,0 | - | - |
| Extraneous Matter (% max) | 0,5 | 0,75 | 1,0 | 4,0 | - |
| Trash (% max) | 0,1 | 0,1 | 0,25 | 0,3 | - |
| Broken + Chipped (% max) | 8,0 | - | - | - | - |
| Brown Pigmented (% max) | 6,0 | 8,0 | - | - | - |
| Defective (% max) (discoloured, diseased, germinated, insect damaged, other coloured, shriveled, stained, undeveloped) | 6,0 | 12,0 | 17,0 | 22 | - |
| Aflatoxin (ppb – max) | 20,0 | 20,0 | 20,0 | 20,0 | - |

WHEAT

| GRADE | PREMIUM | STANDARD | UNILITY 1 | UTILITY 2 | UG |
|---|---|---|---|---|---|
| Moisture Content (% max) | 12,5 | 12,5 | 12,5 | 12,5 | 12,5 |
| Test Density (kg/hl min) | 73,0 | 73,0 | 73,0 | 73,0 | <73,0 |
| Extraneous Matter (% max) | 2 | 2 | 2 | 2 | > 2 |
| Broken (% max) | 3,0 | 3,0 | 3,0 | 3,0 | > 3 |
| Grit (% max) | 0,4 | 0,4 | 0,4 | 0,4 | > 0,4 |
| Defective (% max) (discoloured, diseased, insect damaged, unthreshed, undeveloped wheat) | 2,0 | 2,0 | 4,0 | 4,0 | > 4.0 |
| Germinated Wheat (% max) | 2,0 | 2,0 | 3,0 | 3,0 | > 3,0 |
| Falling Number (sec min) | 230,0 | 230,0 | 220,0 | 180,0 | 62,0 |
| Protein (% min) | 11,0 | 10,0 | 9,0 | 8,0 | < 8.0 |

MHUNGA AND RAPOKO

| GRADE | A | B |
|---|---|---|
| moisture content (% max) | 12,5 | 12,5 |
| test density (kg/hl min) | 80,0 | 76,0 |
| extraneous matter (% max) | 1,0 | 1,5 |
| broken (% max) | 1,0 | 1,5 |
| defective (% max) | 8,0 | 20,0 |
| unthrashed (% max) | 1,0 | 1,5 |

SORGHUM – RED AND WHITE – UNMIXED

| GRADE | A | B | C | D |
|---|---|---|---|---|
| Moisture Content (% max) | 12,5 | 12,5 | 12,5 | 12,5 |
| Test Density (kg/hl min) | 70,0 | 68,0 | 65,0 | - |
| Extraneous Matter (% max) | 1,0 | 2,0 | 3,0 | - |
| Broken/Chipped (% max) | 4,0 | 8,0 | 12,0 | |
| Defective (% max) | 4,0 | 5,0 | 8,0 | - |
| Unthrashed (% max) | 5,0 | 10,0 | 15,0 | - |
| Other Types (% max) | 3,0 | 4,0 | 5,0 | |
| Germinative Test (% min) | 80,0 | 75,0 | - | - |

SUGAR BEANS/EDIBLE BEANS

| GRADE | A | B |
|---|---|---|
| Moisture Content (% max) | 11,0 | 11,0 |
| Test Density (kg/hl min) | 70,0 | 67,0 |
| Stones (% max) | 0,5 | 1,0 |
| Extraneous Matter (% max) | 1,0 | - |
| Stained (% max) | 1,0 | - |
| Purple Stained (% max) | 1,0 | 2,5 |
| Other Coloured (% max) | 2,0 | 4,0 |
| Defective (% max) | 2,5 | 5,0 |
| Splits (% max) | 10 | 20 |

COWPEAS

| | GRADE | | |
|---|---|---|---|
| | A | B | C |
| Moisture Content (% max) | 12,5 | 12,5 | 12,5 |
| Test Density (kg/hl min) | 75,0 | 70,0 | 70,0 |
| Extraneous Matter (% max) | 0,25 | 0,50 | 0,50 |
| Stones (% max) | 0,0 | 0,5 | 0,5 |
| Defectives (% max) | 6,00 | 12,00 | 12,00 |
| Splits (% max) | 4,00 | 8,00 | 12,00 |
| Other Coloured (% max) | 5,0 | - | - |
| Aflatoxin (ppb) | 20 | 20 | - |

NYIMO

| SPECIFICATION | | CLASS | | |
|---|---|---|---|---|
| | | A | B | C |
| 1. | Maximum meter reading | 12,5 | 12,5 | 12,5 |
| 2. | Minimum test density | 76,00 | 74,00 | 74,00 |
| 3. | Maximum percentage stones | 0,00 | 0,50 | 0,50 |
| 4. | Maximum percentage split defective nyimo | 6,00 | 12,00 | 12,00 |
| 5. | Maximum percentage split kernels | 4,00 | 8,00 | 12,00 |
| 6. | Maximum percentage extraneous matter | 0,25 | 0,50 | 0,50 |
| 7. | Maximum percentage other coloured and types | 5,00 | 5,00 | 5,00 |
| 8. | Colour | Cream/White/ Red/Brown/ BlackUnmixed | Mixed | Mixed |

SOYABEANS

| GRADE | A | B | C |
|---|---|---|---|
| Moisture Content (% max) | 11,0 | 11,0 | 11,0 |
| Test Density (kg/hl min) | 75,0 | 72,0 | 70,0 |
| Extraneous Matter (% max) | 1,0 | 2,0 | 3,0 |
| Stones (% max) | 0,5 | 1,0 | 2,0 |
| Stained (% max) | 1,0 | 2,0 | 3,0 |
| Purple Stained (% max) | 1,0 | 2,0 | 3,0 |
| Defective (% max) | 2,0 | 10,0 | 20,0 |
| Other Types (% max) | 1,0 | 2,0 | 3,0 |
| Spits (% max) | 20,0 | 30,0 | - |
| Oil Content (% min) | 22,0 | 20,0 | 17,0 |

GROUNDNUTS – UNSHELLED (US) AND SHELLED (S)

| GRADE | | A | B | C |
|---|---|---|---|---|
| Moisture Content (% max) | US | 9,0 | 9,0 | 9,0 |
| | S | 7,0 | 7,0 | 7,0 |
| Test Density (kg/hl min) | US | 25,0 | 20,0 | 15,0 |
| Extraneous Matter (% max) | US | 8,0 | 10,0 | 12,0 |
| | S | 1,0 | 2,0 | 3,0 |
| Broken Shells (% max) | | 7,0 | 10,0 | 15,0 |
| Kernel Recovery (% min) | | 55,0 | 55,0 | - |
| Sound Mature Kernels (% min) | US | 70,0 | 65,0 | 60,0 |
| | S | 70,0 | 65,0 | 60,0 |
| Splits (% max) | | 5,0 | 10,0 | 15,0 |
| Skinned (% max) | S | 5,0 | 10,0 | 15,0 |
| Shelled in unshelled | | 3,0 | 3,0 | 3,0 |
| Diseased Kernels (% max) | | 3,0 | 3,0 | 5,0 |
| Aflatoxin (ppb-max) | | 20,0 | 20,0 | - |
| Oil (% min) | | 45,0 | 40,0 | - |

US= Unshelled

S= Shelled

SUNFLOWER

| GRADE | AA | BB | CC |
|---|---|---|---|
| Moisture Content (% max) | 9,5 | 9,5 | 9,5 |
| Test Density (kg/hl min) | 40,0 | 32,0 | 24,0 |
| Extraneous Matter (% max) | 1,0 | 2,0 | 5,0 |
| Decorticated Seed (% max) | 5,0 | 7,0 | - |
| Defective (% max) | 5,0 | 7,0 | - |
| Oil Content (% min) | 40,0 | 35 | 30 |
| Aflatoxin (ppb-t max) | 20 | 20 | - |

## STANDARD SPECIFICATION FOR MAIZE ROLLER MEAL

### 1. SCOPE

1.1 This standard specifies requirements and the methods of test for maize roller meal.

### 2. DEFINITIONS

For the purpose of this standard, the following definitions shall apply:

2.1 Best Before Date
A date no later than 48 hours prior to the expiration of the estimated shelf life of a food product.

2.2 Maize
Maize includes the maize endosperm, the maize bran, maize germ and maize tip cap.

2.3 Maize Roller Meal
Maize roller meal shall be the product obtained entirely from cleaned milling grades of maize by a process of breaking down maize using chilled rolls and from which a portion of bran not less than 10% has been abstracted.

2.4 Milled Grades
Milling grades shall be as specified in SAZS 388.

### 3. PRODUCT REQUIREMENTS

3.1 Description
Maize roller meal shall have a characteristic taste and smell and shall be free from insect, fungal and mould infestation, rodent contamination, dirt and other extraneous matter.

3.2 Chemical Requirements
Maize roller meal shall comply with the requirements given in the table below:

**Table – Chemical Requirements for Maize Roller Meal**

| Characteristic | Requirement (by mass) |
|---|---|
| Moisture, %max | 13 |
| Maize oil, % max<br>% min | 3,5<br>1,5 |
| Crude fibre, % | 0,7 – 1,6 |
| Total ash, % max | 1,5 |
| Acid insoluble ash, % max | 0,9 |
| Microbiological standards (mould & yeast) | Nil |

3.3 Granularity

Maize roller meal shall be of such granularity as permits at least 95% passing through a mesh of 800 microns (26 mesh) aperture. The remaining 5% shall be able to pass through a 350 microns (14 mesh) sieve.

3.4 Maize roller meal shall not contain permitted additives of micronutrients.

3.5 Maize roller meal shall not contain mycotoxin in excess of 20 parts per billion.

## 4. PACKAGING AND MARKING

4.1 Maize roller meal shall be packed in bags made of paper, cloth, low-density polyethylene or coated woven polypropylene protected from dust and moisture.

4.2 Marking

Each bag shall be labeled in accordance with the Zimbabwe Food and Food Standards (Food Labelling) Regulations and marked to contain the undermentioned:

(i) name of product: Mealie meal (Maize Roller Meal);

(ii) name and physical address of the manufacturer;

(iii) batch or code number;

(iv) net mass;

(v) best before date;

(vi) ingredients; and

(vii) Buy Zimbabwe logo.

## 5. HANDLING AND STORAGE

Maize roller meal shall be handled and stored under strict hygienic conditions.

## 6. METHODS OF TEST

6.1 Determination of Crude Fibre

6.1.1 Reagents

6.1.1.1 Dilute sulfuric acid – 1.25% w/v, prepared from Analar sulfuric acid.

6.1.1.2 Sodium hydroxide solution – 1.25% w/v prepared from Analar sodium hydroxide pellets.

6.1.1.3 Prepared asbestos – spread asbestos, acid washed, medium fibre, on an evaporating dish and heat in a furnace fo 16 h at a temperature of 600°C. Remove from furnace, cool and boil with dilute sulfuric acid for 30 min, filter, wash thoroughly with water. Boil the acid washed asbestos with sodium hydroxide solution (1.25%) for 30 min, filter, wash once with dilute sulfuric acid and wash thoroughly with water. Dry and ignite for 2 h at 600°C. Store in glass stoppered container.

6.1.2 Procedure

6.1.2.1 Weigh accurately 2 g of well-mixed sample into an extraction thimble and extract using anhydrous ether in a Soxhlet apparatus for 2 h.

6.1.2.2 Transfer sample to a one litre flask using a brush, add 1 g of prepared asbestos and 200 ml of boiling dilute sulfuric acid.

6.1.2.3 Connect to a reflux condenser and boil for 30 min. Rotate the flask frequently to bring the particles sticking to te sides of the flask into contact with the sulfuric acid.

6.1.2.4 Remove flask and filter under suction using 200 mesh stainless steel screen easily washed of digested residue.

6.1.2.5 Wash with 75 ml boiling water.

6.1.2.6 Drain filter, dry and transfer to the flask using 200 ml boiling sodium hydroxide solution.

6.1.2.7 Boil for 30 min and filter as before.

6.1.2.8 Wash with 25 ml boiling dilute sulfuric acid, followed by three 50 ml portions of boiling water and finally with 25 ml of methyl alcohol.

6.1.2.9 Transfer the residue to a porcelain ashing dish by blowing back through the filter. Dry the dish for 2 h at 130 $\pm$2°C. Cool in a desiccators and weigh. Ignite the dish at 600±20° C for 50 min and re-weigh. Report the difference in weight as crude fibre per cent.

6.2 Determination of Acid Insoluble Ash

6.2.1 Reagent
Dilute hydrochloric acid 5N, approximately prepared from Analar hydrochloric acid.

6.2.2 Procedure

6.2.2.1 Dissolve the ash obtained from the determination of total ash I 25 ml of dilute hydrochloric acid, cover the porcelain dish with a clock glass and heat on a water bath for 10 min.

6.2.2.2 Allow to cool and filter the contents of the dish through Whatman filter paper No. 42.

6.2.2.3 Wash the filter with water until the washings are free from acid. Return the filter paper and residue to the dish.

6.2.2.4 Incinerate over a small flame and remove the dish to muffle furnace.

6.2.2.5 Ignite at 600° C for one hour.

6.2.2.6 Cool the dish in a desiccators and weigh.

6.2.2.7 Repeat the heating, cooling and weighing at half hour intervals until the difference between two successive weighings is less than one milligramme. Report the results as percentage of the original sample.

## STANDARD SPECIFICATION FOR WHEAT FLOUR

### 1. SCOPE

This Standard covers wheat flour, classified according to the following groups:

(a) Standard white flour, cake flour, self raising flour and biscuit flour.

(b) Standard brown flour, wholemeal flour and crakka wheat flour.

*NOTE.* The titles of the publications referred to in this standard are listed in the Preface.

### 2. DEFINITIONS

For the purpose of this standard the following definitions shall apply:

2.1 Biscuit Flour.
Flour which complies with the requirements of standard white flour.

2.2 Break Wheat Flour/Crakka Wheat Flour
Flour obtainable by passing 100% clean wheat through a single stage of milling.

2.3 Cake Flour
Flour which is produced either on a divide system or straight run having a lower ash content and brighter colour than standard white flour.

2.4 Self-raising Flour
Flour which consists of standard white flour to which has been added baking powder ingredients to produce carbon dioxide gas to a minimum of 0.40% and to a maximum of 0.65%.

2.5 Standard Brown Flour
Flour which consists of standard white flour (base flour) to which has been added clean selected bran, mass fraction to a maximum of 14%.

2.6 Standard White Flour
The product which is derived from the milling of wheat, which passes through a 200 $\mu$ sieve whether or not any of the wheat has been malted or subjected to any of the wheat has been malted or subjected to any process and whether or not the product contains enzyme active preparations and does not include separated wheat offals, separated wheat germ or semolina.

2.7 Standard Wholemeal Flour
Flour which consists of standard white flour to which has been added clean selected bran, and which comprises of a minimum bran content of 14% and a maximum of 22% of the total product.

## 3.0 HYGIENE REQUIREMENTS

3.1 The product covered by the provisions of this standard shall be prepared in accordance with the appropriate and relevant Government Acts and Regulations.

## 4.0 COMPOSITIONAL REQUIREMENTS

4.1 Chemical Characteristics

When tested in accordance with the methods in Column 9 of Table 1, the chemical constituents of wheat flour shall comply with the requirements specified in the same table.

4.2 Physical Characteristics

When tested in accordance with the methods in Column 9 of Table 1, the physical characteristics of wheat flour shall comply with the requirements specified in the same table.

4.3 Trace Elements and Phyto-pharmaceutical Residues

The maximum level of trace elements and of phytopharmaceutical residues shall conform to the limits specified in the Zimbabwe Food and Food Standards (Flour, Bread and Cereals) Regulations.

**Table 1 – Chemical and Physical Requirements**

| 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Characteristics | Standard white flour | | Cake flour | | Self raising flour | | Biscuit flour | | Standard brown flour | | Crakka wheat flour | | Standard wholemeal flour | |
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| Gluten (wet) % | 20 | 35 | 20 | 30 | 20 | 35 | 20 | 35 | 20 | 30 | | | 20 | 30 |
| Total ash (Dry) % | | 0,85 | | 0,55 | | 1,2 | | 0,85 | | 0,85 | | | | |
| Moisture content % | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 | | 14 |
| Carbon dioxide (mass fraction) % | | | | | 0,4 | 0,65 | | | | | | | | |
| Falling number at 97° s | 250 | 500 | 250 | 500 | 200 | | 200 | 500 | 250 | 500 | | | | |
| Flour particle size $\mu$m | 112 | 200 | | 212 | | 212 | | 212 | 200 (base flour) | | | | | |
| Colour | 1.5 | 2.5 | | 1.5 | 1.5 | 3 | 1.5 | 3 | | | | | | |
| Bran Mass Fraction % | | | | | | | | | | 14 | | | 14 | 22 |
| Extraction Rate % | 74 | 78 | 66 | 70 | 74 | 78 | 75 | 80 | 80 | 86 | 100 | 100 | 95 | 98 |
| Protein | 11.5 | | 9.0 | | 10.5 | | 11.5 | | 11.5 | | 11.5 | | 11.5 | |

## 5. SAMPLING AND COMPLIANCE

5.1 Sampling

5.1.1 When the product is packaged in bags of 5 kg or less, then from a given lot, a sample of packages shall be randomly selected as shown in Table 2.

**Table 2 – Sample Size to be Selected**

| Lot size (packages) | Number of packages to be selected |
|---|---|
| Up to 100 | 4 |
| 101 to 500 | 5 |
| 501 to 1 000 | 7 |
| 1 001 and above | 10 |

5.1.2 When the product is package in bags of 50 kg, the number of product units to be sampled, shall be determined in accordance with the lot size, as shown in Table 3.

**Table 3 – Scale of Sampling**

| Lot size (bags) | Percentage of bags to be sampled |
|---|---|
| 2 to 20 | 20 |
| 21 to 60 | 10 |
| 61 to 200 | 7 |
| 201 to 500 | 5 |
| 501 to 1 000 | 4 |
| 1 001 and above | 3 |

**Preparation of Composite Sample**

Using an appropriate sampling instrument, adequate quantities of the product shall e withdrawn from the selected bags, according to Table 2 or Table 3, and thoroughly mixed and the size of which shall be approximately 2 kg. This composite sample shall be immediately transferred to a clean, dry, tightly stoppered glass container for testing purposes.

5.3 Compliance with the Standard

The lot shall be deemed to comply with the standard if the composite sample conforms to the requirements laid down in Clause 4.

## 6. PACKAGING AND MARKING

6.1 Packaging

Wheat flour shall be packaged in clean, dry, sound and sealed bags, made of suitable material.

6.2 Marking

The following specific information, shall be shown on the bag or label:

(a) the name of the product and brand name, if any;

(b) the name and address of the manufacturer and/or packer;

(c) net content by mass;

(d) best before date;

(e) country of origin; and

(f) Buy Zimbabwe logo.

## STANDARD SPECIFICATION FOR POULTRY FEEDS

## 1. SCOPE

1.1 This Standard specifies requirements for the following types of poultry diets:

(a) chick, broiler and duckling diets;

(b) turkey starter diet;

(c) growers' diet for chickens and ducklings;

(d) turkey rearers' diet;

(e) turkey growers' diet;

(f) layers' diet for ducks and turkeys.

It provides for:

(a) a complete feed or

(b) maize-free concentrates to be mixed with maize-meal to make a mash.

1.2 Where this Standard conflicts in any way with the relevant Government Acts and Regulations, the requirements of Government Acts Regulations take precedence over those in this standard.

1.3 This standard makes reference to the following:

AOAC: Official Method of Analysis

AOCS: Official Methods and Recommended Practices

SAZS 530: Standards Association of Zimbabwe Animal Feeding stuffs – Sampling and preparation test samples.

SAZS 532: Salt.

SAZS 542: Animal feeding stuffs – Determination of available lysine.

SAZS 543: Animal feeding staffs – Determination of total nitrogen content and calculation of crude protein content.

SAZS 544: Animal feeding staffs – Determination of crude ash.

SAZS 545: Animal feeding staffs – Determination of calcium content – Titrimetric method.

SAZS 546: Animal feeding stuffs – Determination of total phosphorous content – Spectrophotometric method.

SAZS 547: Animal feeding staffs – Determination of moisture content.

SAZS 548: Animal feeding staffs – Determination of aflatocin B1 content.

SAZS 549: Animal feeding stuffs – determination of urea content.

SAZS 550: Animal feeding stuffs – Determination of free and total gossypol.

SAZS 567: Animal feeding stuffs – Determination of sodium chloride content.

## 2. DEFINITIONS

For the purpose of this Standard, the following definitions shall apply:

2.1 Broiler Diet

A diet intended for feeding as a mash to meet type chickens.

2.2 Chick, Broiler And Duckling Diet

A diet intended for feeding to chicks, broilers and ducklings as a mash up to the age of 6 weeks.

2.3 Crude Fat

The expression "crude fat" shall be construed as having the same meaning as the word "fat" where mentioned in the Zimbabwe Farm Feeds Regulations.

2.4 Growers' Diet For Chickens And Ducklings

A diet intended for feeding to chickens and ducklings over the age of 6 weeks.

2.5 Diet

A diet intended for feeding to chickens, ducks and turkeys from 2 weeks prior to point of lay and throughout the laying period.

2.6 Maize-Free Concentrate

A concentrate intended for mixing with straight-run maize-meal to produce a mash, as defined below.

2.7 Mash

A feed in the form of mash or pellets, intended for feeding without additional grain.

2.8 Turkey Growes' Diet

A diet intended for feeding to turkeys over the age of 6 to 12 weeks.

2.9 Turkey Rearer's Diet

A diet intended for feeding to turkeys over the age 12 weeks.

2.10 Turkey Starter Diet

A diet intended for feeding to turkeys as mash up to the age of 6 weeks.

## 3.0 INGREDIENTS

3.1 General

All ingredients shall be free from adulterants and foreign material. Materials of animal origin shall have been sterilized prior to use.

3.2 Blood Meal

Blood meal shall be limited to a maximum of 2% of the total feed.

3.3 Oilseed Cake Meal

Cotton seed cake meal, palm kernel meal, coconut cake meal, linseed cake meal and sesame cake meal, individually or combined, shall not constitute more than 5% of a mash. No cotton seed cake meal shall be included in feeds for laying chickens or ducks.

3.4 Rice Bran And Rice Pollard

Rice bran and rice pollard, individually or combined, shall not constitute more than 2.5% of a mash or more than 5% of other feeds.

3.5 Limestone Flour

Limestone flour incorporated in any feed shall contain not less than 90% calcium carbonate.

3.6 Prohibited Ingredients

Urea and other non-protein nitrogenous substances shall not be added to the product, with the exception of amino-acids. The use of coccidiostats in diets for ducks and ducklings is prohibited.

3.7 Common Salt

Not less than 2,5 g/kg and not more than 5 g/kg of common salt shall be present in a feed.

The common salt comply with the requirements of SAZS 532.

3.8 Coccidiostats, Anti-Oxidants And Yolk Colouring Compounds

Where coccidiostats are incorporated, a statement of their nature shall be included on the label. Yolk colouring compounds and anti-oxidants may be used in poultry feeds.

## 4.0 MOISTURE CONTENT

The moisture content shall be stated on the label.

## 5.0 GROWTH STIMULANTS, ANTIBIOTICS AND RELATED COMPOUNDS

5.1 General

Growth stimulants, antibiotics and related compounds added to a feed, shall be used at the levels accepted by the Drug Control Council of Zimbabwe, and the registration number shall be quoted on application for Mark Certification.

5.2 Copper Sulfate

The addition of copper sulfate is prohibited.

## 6.0 CHICK, BROILER AND DUCKLING DIETS

Chick, broiler and duckling diets shall comply with the requirements stated of Table 1.

**Table 1 – Chick, Broiler and Duckling Diets**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg<br>(i) Chicks and ducklings<br>(ii) Broilers (up to 4 weeks)<br>(iii) Broilers (over 4 weeks) | <br>180<br>210<br>190 | <br>-<br>-<br>- | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg:<br>(i) Chicks and ducklings<br>(ii) Broilers (up to 4 weeks) | <br>-<br>- | <br>60<br>50 | AOAC, AOCS |
| Metabolizable energy, MJ/kg (Mcal/kg):<br>(i) Chicks and ducklings<br>(ii) Broilers | <br>11.5<br>(2,75)<br>12.5 (3.0) | <br>-<br>- | - |
| Lysine, g/kg:<br>(i) Chicks and ducklings<br>(ii) Broilers (up to 4 weeks)<br>(iii) Broilers (over 4 weeks) | <br>10<br>11<br>9 | <br>-<br>-<br>- | SAZS 542, AOAC |
| Methionine, g/kg<br>(i) Chicks and ducklings<br>(ii) Broilers (up to 4 weeks)<br>(iii) Broilers (over 4 weeks) | <br>4<br>4,5<br>4 | <br>-<br>-<br>- | - |
| Calcium (ca), g/kg | 9 | 13 | SAZS 545, AAS |
| Total Phosphorus (P), g/kg | 7 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g.kg | 2.5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0.2 | - | AOAC, AAS |
| Choline, mg/kg | 300 | - | - |
| Folic Acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 40 | - | AOAC |
| Pantothenic acid, mg/kg | 13 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 4 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 10 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 2 000 | - | AOAC |
| Vitamin E, IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 2 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | - | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used, if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 7.0 TURKEY STARTER DIET – 0 TO 6 WEEKS

Turkey starter diet shall comply with the requirements of Table 2.

**Table 2 – Turkey Starter Diet – 0 To 6 Weeks**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 260 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 50 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg) | 12 (2,85) | - | - |
| Lysine, g/kg | 15 | - | SAZ 542, AOAC |
| Methionine, g/kg | 5,2 | - | - |
| Calcium (Ca), g/kg | 13 | 15 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 8 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2,5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0,2 | - | AOAC, AAS |
| Choline, mg/kg | 600 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 50 | - | AOAC |
| Pantothenic acid, mg/kg | 10 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 5 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 8 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 2 000 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 2 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | - | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used, if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 8. DIET FOR CHICKENS AND DUCKLINGS

Growers' diet for chickens and ducklings shall comply with the requirements of Table 3.

**Table 3 – Growers' Diet for Chickens and Ducklings**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 150 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 70 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg) | 11 (2,65) | - | - |
| Lysine, g/kg | 6 | - | SAZS 542, AOAC |
| Methionine, g/kg | 3 | - | - |
| Calcium (Ca), g/kg | 10 | 13 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 6 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2.5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0.2 | - | AOAC, AAS |
| Choline, mg/kg | 300 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 40 | - | AOAC |
| Pantothenic acid, mg/kg | 10 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 3 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 8 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 1 500 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 2 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used, if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 9.0 TURKEY REARERS' DIET FROM 6 TO 12 WEEKS

Turkey rearers' diet shall comply with the requirements of Table 4.

**Table 4 – Turkey Rearers' Diet from 6 to 12 Weeks**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 210 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 50 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg) | 12 (2,85) | - | - |
| Lysine, g/kg | 12,5 | - | SAZS 542, AOAC |
| Methionine, g/kg | 4,5 | - | - |
| Calcium (Ca), g/kg | 11 | 14 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 7 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2,5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0,2 | - | AOAC, AAS |
| Choline, mg/kg | 400 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 50 | - | AOAC |
| Pantothenic acid, mg/kg | 10 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 4 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 8 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 2 000 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 2 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used , if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 10. TURKEY GROWERS' DIET OVER THE AGE OF 12 WEEKS

Turkey growers' diet shall comply with the requirements of Table 5.

**Table 5– Turkey Growers' Diet Over the Age of 12 Weeks**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 180 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 70 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg) | 11 (2,65) | - | - |
| Lysine, g/kg | 10 | - | SAZS 542, AOAC |
| Methionine, g/kg | 3,5 | - | - |
| Calcium (Ca), g/kg | 10 | 13 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 6 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2,5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0,2 | - | AOAC, AAS |
| Choline, mg/kg | 400 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 50 | - | AOAC |
| Pantothenic acid, mg/kg | 10 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 4 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 7 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 1 500 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 1,5 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | - | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used , if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 11. LAYERS' DIET FOR FOWL

Layers' diet for fowl shall comply with the requirements of Table 6.

**Table 6 – Layers' Diet for Fowl**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 160 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 70 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg) | 11,3 (2,7) | - | - |
| Lysine, g/kg | 6,5 | - | SAZS 542, AOAC |
| Methionine, g/kg | 3 | - | - |
| Calcium (Ca), g/kg | 30 | 40 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 6 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2,5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0,2 | - | AOAC, AAS |
| Choline, mg/kg | 300 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 35 | - | AOAC |
| Pantothenic acid, mg/kg | 8 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 2,5 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 8 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 2 000 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 1,5 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used , if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 12. LAYERS' DIET FOR DUCKS AND TURKEYS

Layers' diet for ducks and turkeys shall comply with the requirements of Table 7.

**Table 7– Layers' Diet for Ducks and Turkeys**

| Constituent | Min. | Max. | Test Method |
|---|---|---|---|
| Crude protein, g/kg | 160 | - | SAZS 543, AOAC or AOCS |
| Crude fibre, g/kg | - | 70 | AOAC, AOCS |
| Metabolizable energy, MJ/kg(Mcal/kg):<br>(i) Turkeys<br>(ii) Ducks | 11,3 (2,7)<br>10 (2,40 | - | - |
| Lysine, g/kg | 12,5 | - | SAZS 542, AOAC |
| Methionine, g/kg | 5 | - | - |
| Calcium (Ca), g/kg<br>(i) Turkeys<br>(ii) Ducks | 30<br>25 | 40<br>25 | SAZS 545, AAS |
| Total Phosporous (P), g/kg | 6 | - | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 2,5 | 5 | SAZS 567 |
| Manganese (Mn), mg/kg | 75 | - | AOAC |
| Zinc (Zn), mg/kg | 45 | - | AOAC, AAS |
| Selenium (Se), mg/kg | 0,15 | - | AOAC, AAS |
| Choline, mg/kg | 300 | - | - |
| Folic acid, mg/kg | 1 | - | AOAC |
| Niacin, mg/kg | 35 | - | AOAC |
| Pantothenic acid, mg/kg | 8 | - | AOAC |
| Pyridoxine, mg/kg | 4 | - | - |
| Riboflavin, mg/kg | 2,2 | - | AOAC |
| Thiamin, mg/kg | 2 | - | AOAC |
| Vitamin A, IU*/kg | 8 000 | - | AOAC |
| Vitamin $D_3$, IU*/kg | 2 000 | - | AOAC |
| Vitamin E IU*/kg | 20 | - | AOAC |
| Vitamin K, mg/kg | 1,5 | - | AOAC |
| Vitamin $B_{12}$, ug/kg | 20 | | AOAC |

* International Units

*NOTE 1*: In cases of dispute, the method used, if more than one is quoted, shall be mutually agreed upon between the parties concerned.

*NOTE 2*: AAS stands for Atomic Absorption Spectroscopy method.

*NOTE 3*: If the determination of crude ash is required, refer to SAZS 544.

## 13. MASH FEEDS

Mash feeds shall comply with the requirements for complete diets specified in Clauses 6 to 12, provided that, for layers' diets (Clauses 11 and 12), at the manufacturer's discretion, the label may carry a statement that calcium grit should also be fed.

## 14. MAIZE-FREE CONCENTRATES FOR MAKING UP A MASH

A maize-free concentrate for making up a mash shall be of such a composition that, when mixed with maize of the nominal composition given in the Appendix, and in the proportions stated by the manufacturer as being the requisite proportion of maize to be mixed with the concentrate, the resultant mash shall comply with the appropriate requirements for diets specified in Clauses 6 to 12 provided that, for layers diets (Clauses 11 and 12), at the manufacturer's discretion, the label may carry a statement that calcium grit should also be fed.

## 15. SAMPLING AND PREPARATION OF TEST SAMPLE

Methods of sampling animal feeding stuffs and the preparation of test samples, shall be in accordance with SAZS 530.

## 16. CONTAINERS

Poultry feeds shall be packed in containers which are sound and clean and which shall preferably be non-returnable.

## 17. MARKING

Every container holding 25kg or more of poultry feed purporting to comply with this standard shall bear the following information, which shall be printed either on the container or on the label attached thereto:

(a) the brand name;

(b) the batch number or date of manufacture (a code or mark may be used);

(c) a description of the type of poultry feed and an indication of the class of poultry to which it is to be fed;

(d) the declared contents of:

  (i) crude protein;

  (ii) crude fibre;

  (iii) crude fat;

  (iv) calcium (Ca);

(v) phosphorous (P), and

(vi) moisture;

(e) in the case of mashes for layers, a statement, to be at the manufacturer's discretion, that calcium grit should also be fed;

(f) in the case of maize-free mixtures, a statement of the proportions of maize-meal to be added;

(g) if coccidiostats, anti-oxidants and yolk colouring compounds are present, a statement of their nature (see 3.8); and

(h) a warning that feeds containing coccidiostats are unsuitable for feeding to ducks and ducklings.

## 18. UPPER LIMITS OF TOXINS AND ANTI-NUTRITIONAL FACTORS

Poultry shall comply with the requirements of Table 8.

**Table 8 – Upper Limits of Toxins and Anti-Nutritional Factors**

| Toxins and anti-Nutritional factors | Class of diets | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Chick and broiler starter diets | Duckling and turkey starter diets | Broiler finisher diet | Growers' diet for chickens | Turkey rears' diet | Duckling and turkey growers' diet | Layers' diet For fowl | Layers' diet For ducks and turkeys | Test Method |
| Aflatoxin B1 mcg/kg | 20 | 10 | 20 | 20 | 10 | 10 | 20 | 10 | SAZS 548 or AOAC |
| Free Gossypol mg/kg | 120 | 120 | 120 | 120 | 120 | 120 | 50 | 50 | SAZS 550 |
| Trypsin inhibitor (measured as urease activity) ApH | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | SAZS 549 |
| Trypsin inhibitor (measured as urease activity) % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | SAZS 549 |

* Percentage of activity of raw soya bean meal (as mg. Urea digested in 30 mins/g of Urea).

*NOTE*: In cases of dispute, the method used, if more than one sis quoted, shall be mutually agreed upon, between the parties concerned.

## APPENDIX – NOMINAL COMPOSITION OF WHITE MAIZE

This appendix forms part of the requirements of this standard.

**Table 9 – Nominal Composition of White Maize**

| Constituent | Nominal | Test Method |
|---|---|---|
| Crude protein, g/kg | 85 | SAZS 543, AOAC or AOCS |
| Crude fat, g/kg | 40 | AOAC, AOCS |
| Crude fibre, g/kg | - | AOAC, AOCS |
| Metabolizable energy (poultry), MJ/ kg(Mcal/kg) | 14,2 (3,40) | - |
| Lysine, g/kg | 2,4 | SAZS 542, AOAC |
| Methionine plus Cystine, g/kg | 3,7 | - |
| Tryptophan, g/kg | 0,8 | - |
| Calcium (Ca), g/kg | Nil | - |
| Copper (Cu), mg/kg | 3 | - |
| Manganese (Mn), mg/kg | 5 | AOAC |
| Total Phosporous (P), g/kg | 3 | SAZS 546, AOAC |
| Sodium Chloride (NaCl), g/kg | 0,08 | SAZS 567 |
| Iron (Fe), mg/kg | 35 | - |
| Zinc (Zn), mg/kg | 23 | AOAC, AAS |
| Choline, mg/kg | 440 | - |
| Riboflavin, mg/kg | 1,4 | AOAC |
| Pantothenic acid, mg/kg | 5 | AOAC |
| Niacin, mg/kg | 20 | AOAC |
| Vitamin A, IU*/kg | Nil | - |
| Vitamin D, IU*/kg | Nil | - |
| Moisture, g/kg | 100 | SAZS 547 |

* International Units

*NOTE*: AAS stands for Atomic Absorption Spectroscopy method

FOURTH SCHEDULE (*Section 12*)

OFFENCES AND PENALTIES

| Offence | Penalty |
|---|---|
| Operating without a certificate | US$100,00 |
| Failure to deliver contract inputs on time | Recover at opportunity cost (value of the loss of the contract product arising from the late delivery of inputs) plus US$100,00 |
| Diverting contract inputs to other use | US$100,00 |
| Failure to pay contract purchase price | Recover at opportunity cost of the contract plus US$100,00 |
| Buying or selling grain or oilseeds contracted by another contractor below 10 tonnes | US$100,00 |
| Buying or selling grain or oilseeds contracted by another contractor above10 tonnes | US$100,00 |
| Failure to submit returns timeously | US$100,00 |