

**ZAMBIAN AGRICULTURAL
DERIVATIVE CONTRACT
SPECIFICATIONS**

**IN CO-OPERATION WITH
ZAMACE LIMITED**

ZAMBIAN AGRICULTURAL DERIVATIVES CONTRACT SPECIFICATIONS

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A. GENERAL CONTRACT SPECIFICATIONS

1. DEFINITIONS

In these contract specifications, words and expressions that are defined in the Derivatives rules, unless stated otherwise or inconsistent with the context in which they appear, bear the meanings assigned to them in the Derivatives rules, and the following words and expressions have the following meanings:

| | |
|---|---|
| “agricultural product” | has the same meaning as that contained in section 2 of the Derivative rules and in the context of these contract specifications means the products underlying the JSE listed securities traded on the JSE Commodities trading system and refers to the following grains - a) white maize; b) wheat and; c) soybeans; |
| “agricultural derivatives” | has the same meaning as that contained in section 2 of the Derivative rules; |
| “approved silo” | means a warehouse or storage site operated by a JSE approved storage operator and approved for each marketing season in terms of the requirements set out in Appendix D; |
| “commodity derivatives market” | has the same meaning as that contained in section 2 of the Derivative rules; |
| “commodity securities” | has the same meaning as that contained in section 2 of the Derivative rules; |
| “delivery notice” | means a document which is presented to the JSE by a short position holder desiring to make delivery of warehouse receipts in satisfaction of a agricultural derivatives futures contract, in the manner set out in these contract specifications; |
| “Exchange for Physical” | means a transaction whereby a position in the underlying is traded with an existing open futures contract position. The transaction may involve the JSE processing the actual delivery between the short and long position holder or alternatively facilitating the cash settlement at the current mark-to-market value; |
| “Governing Law” | transactions on the JSE and all matters relating to these contract specifications will be governed by South African law unless specific reference is made to the Agricultural Credits Act of the Republic of Zambia 35 of 2010 in which instance the provisions of that Act will apply; |
| “JSE Commodities trading system” | has the same meaning as that contained in section 2 of the Derivative rules; |
| “JSE warehouse receipt” | means a negotiable document of title in terms of which the holder thereof may demand delivery to him by the storage operator of grain of a quality and quantity as described on the receipt, subject to payment of the storage operators storage costs as provided for in terms of the receipt. JSE warehouse receipts have to be issued by an approved storage operator in electronic form (Appendix B) and on the terms set out in these contract specifications. In addition to these the receipts are negotiable receipts as contemplated in the Agricultural Credits Act of the Republic of Zambia, 35 of 2010 and must be issued in accordance of the provisions of this statute; |

“ZAMACE”

Is a company incorporated in Zambia and with whom the JSE has a cooperation agreement to assist with and promote the trading of Zambian registered grain products. ZAMACE Limited is further the Zambian Government appointed Authorised Agency as per section six of the Agricultural Credits Act, 2010

2. TRADING SPECIFICATIONS

2.1 Price

- (a) The contract price is quoted in US Dollars currency per metric ton, with minimum fluctuations of one dollar per metric ton) representing product in bulk. Until the first position day of a contract, the daily fluctuation in the contract price may be limited from time to time by an amount determined by the JSE. For details of these daily fluctuations or price limits see Appendix H.
- (b) The contract price, subject to sections (c), (d) and (e) below, reflects the full consideration payable by the buyer for delivery of JSE warehouse receipts through the JSE in accordance with these contract specifications. The differentials reflected in sections (c), (d) and (e) are subject to review from time to time as determined by the JSE
- (c) The seller and buyer are responsible for payment of storage and handling charges in terms of 3.1(d) of these contract specifications.
- (d) The contract price, on invoicing, must be adjusted for location differentials as determined by the JSE, in accordance with 3.1(b) of these contract specifications.
- (e) The contract price is exclusive of any value added tax (“VAT”) which may be or may become payable thereon. Should VAT be applicable this will be added to the contract price on invoicing and is payable by the buyer.

2.2 Ownership and risk

- (a) Unless the seller is in default, the risk passes from the seller to the buyer at the close of business on the delivery day for which the seller has given notice of delivery, being delivery of warehouse receipts through the JSE.
- (b) The right, title and interest of the seller in the product passes to the buyer when the buyer’s payment therefore is received, in full, by the JSE or by a settlement agent appointed by the JSE.

2.3 Trading days and hours

Trading days are all business days, except for a day which is defined by the JSE as not a trading day. The last trading day is the fifth business day before the last business day of an expiry month. Trading on a trading day commences at 09h00 and ends at 12h00. The JSE will give a minimum of 14 days notice in declaring a business day as not a trading day, provided that the JSE will endeavour to do so before the expiry month in question begins trading. All national holidays declared in Zambia will also be considered when counting the business days to last trading day.

2.4 Expiry months

Hedging months are March, May, July, September and December.

2.5 JSE

All contracts are (without prejudice to any other provision of these contract specifications) subject to the JSE procedures as may from time to time be adopted by the JSE, provided always that, if any conflict

between the JSE procedures and this contract specification arises, the provisions of these contract specifications will prevail. The JSE may at its discretion at any time alter or add to the administrative procedures and any such amendment must be circulated to derivatives members and may effect existing as well as new contracts.

2.6 Exclusion of liability

The JSE is not liable for the condition of silos or acts of storage operators, for their availability or suitability for the storage of agricultural product or for the performance by operators of such silos of any responsibilities they may assume towards derivatives members or other persons in relation to these contract specifications or otherwise. Persons acquiring JSE warehouse receipts, placing agricultural product into such silos or taking delivery of goods from the same will accordingly have no claim against the JSE or its representatives for any loss or damage thereby incurred, however such loss or damage may be caused.

No holder of a JSE warehouse receipt nor any other person will have any claim against the JSE, or any derivatives member, representative or employee, arising from any breach or wrongful act or omission of the storage operator, including but not limited to non-delivery or defective delivery of approved products eg maize, unsuitability or poor quality of the approved products, or the insolvency of a storage operator.

The transferor of a JSE warehouse receipt, who on the first occasion is the depositor, endorses the receipt and warrants that on the transfer date they are the owner of the agricultural product covered by the receipt and, other than the silo owner's lien shown on the face of the receipt, there are no liens or other encumbrances on the said agricultural product except as stated thereon. Should any dispute arise between any parties relating to the transfer of the JSE warehouse receipt, such persons agree that their claims will be limited to monetary claims and that no person will be entitled to claim that they retain ownership or a real right to the product represented by the receipt after transfer of this receipt. In particular, no person will be entitled to vindicate property alleged to belong to such person and to the extent necessary waives any vindicatory remedies.

2.7 Margins

Initial margin payable in terms of the contract, as determined by the JSE, is specified from time to time by the JSE. Initial margin will be held by the JSE until all delivery obligations have been fulfilled

The JSE may call for additional margin at any time and from time to time as may be deemed necessary to preserve the security of the contract

2.8 Default

- (a) Upon failure by the seller to make delivery for the contract in terms of these contract specifications, the seller will be in default and the default procedures set out in section 12 of the Derivatives Rules will apply. The defaulting party will be liable for a minimum penalty determined by the JSE at its discretion.
- (b) Upon failure by the buyer to receive delivery for the contract and make payment therefore in accordance with these contract specifications, the buyer will be in default and the default procedures set out in section 12 of the Derivatives Rules will apply. The defaulting party will be liable for a minimum penalty determined by the JSE at its discretion.

3. DELIVERY PROCEDURES

3.1 Delivery procedure

The detailed delivery procedure is described in Appendix F.

(a) Method of delivery

A short position holder who wishes to make delivery in satisfaction of a futures contract must provide the JSE, through a clearing or trading member, with an electronic delivery notice in the format as required via the automated trading system. The short futures position indicated by the delivery notice will be assigned by the JSE to a long position holder(s) as described in 3.1(f) below. The JSE will notify the clearing member representing the long position holder of the delivery which has been assigned and will furnish the clearing member representing the short position holder with an invoice representing the notice of delivery.

Delivery by a short position holder to an assigned long position holder will take place through delivery to the JSE of JSE warehouse receipts on a delivery day, subject to compliance with all the terms of these contract specifications.

(b) Delivery points and location differentials

The delivery points and location differentials will be determined by the JSE to reflect delivery points that meet the requirements as set out in Appendix D and location differentials reflecting the differential between the registered delivery point and Lusaka, Zambia. The JSE may decide to facilitate delivery of a product at a zero location differential thereby trading no single reference point.

(c) Validity of JSE warehouse receipts

In order to be valid for delivery against futures contracts, JSE warehouse receipts must comply with the requirements set out in Appendix E.

(d) Storage and handling

For delivery in completion of a futures contract the following will apply:

(i) The depositor will be responsible for all handling costs payable to the storage operator, including both inloading and unloading of product onto truck.

(ii) The storage costs on product deposited in a previous marketing season must be paid up to and including the last calendar day of the marketing season and endorsed on the JSE warehouse receipt.

(iii) The seller will be responsible for storage charges up to and including the delivery day for which the seller has given notice of delivery, being delivery through the JSE.

(iv) Outstanding storage on JSE warehouse receipts is subject to the storage tariff as specified by the JSE. This rate includes all storage costs payable to the storage operator. The rate will be quoted in US cents per metric ton per day. Such outstanding storage charges due from the seller, which have not been endorsed on the JSE warehouse receipt by the storage operator as paid, will be deducted from the seller's proceeds by the JSE. Any prepaid storage will not be reimbursed to the seller.

(v) All outstanding storage costs on a product deposited in a previous marketing season must be paid up to and including the last calendar day of the marketing season. If the outstanding storage is not paid up within one calendar month after the last calendar day of the marketing season, the storage operator reserves the right to apply a 10% penalty to the total outstanding storage amount.

(e) Delivery notices and notice days

A short position holder wishing to make delivery against open futures contracts must provide the JSE, through the clearing or trading member, an electronic delivery notice in the form required by the JSE, on a notice day. A delivery notice must be delivered as per Appendix F on the business day prior to the intended delivery day. The first notice day on which notices may be delivered, will be the last business day of the month prior to the expiry month. The last notice day will be the second last business day of the expiry month. A notice day must be a business day, provided that the JSE may declare particular days not to be notice days. The JSE will give 14 days notice in declaring a business day as not a notice day, provided that the JSE will endeavour to do so before the expiry month in question begins trading.

(f) Assignment of delivery notices

The JSE will assign delivery notices on the notice day on which the notice is received, based on open long positions at the close of trading on that day. Assignment will take place by allocation of delivery notices to long position holders based on the following:

- (i) Exchange for Physical (EFP): both the buyer and seller notify the exchange prior to allocation that they have reached agreement and that the underlying warehouse receipts will be exchanged between the two parties. The EFP is processed at the current mtm value with the possibility of the basis premium for the approved silo included in the final invoicing and therefore part of the JSE's settlement process.
- (ii) Matching of basis premiums as represented by stock held on JSE warehouse receipts: registered clients and members will have an opportunity to bid or offer on preferred silo locations and match these basis premium orders within a prescribed time frame. All orders matched will at the end of the trading period require a futures position in order to complete the physical delivery process with the basis premium included in the invoicing process facilitated by the JSE. The basis premium bid or offered must be a Dollar amount per ton and can be defined as the value over and above the JSE price less published location differential (where applicable).
- (iii) Any remaining product on JSE warehouse receipts part of a delivery notice that is not matched as per point (ii) above within the matching session will then be allocated to the best remaining bid available at the close, should no bids be available then this product will be randomly allocated.
- (iv) Random allocation according to a defined methodology: the remaining deliveries will be processed using the published algorithm. The detailed algorithm in use is available on the commodities market web page.

(g) Date of delivery and delivery days

Delivery against an open futures position may take place on any delivery day during the expiry month, as elected by the seller. The first permissible delivery day will be the first business day of an expiry month. The last permissible delivery day will be two business day following last trading day. A delivery day must be a business day both in South Africa and Zambia, provided that the JSE may declare particular days not to be delivery days. The JSE will give a minimum of 14 days notice in declaring a business day as not a delivery day, provided that the JSE will endeavour to do so before the expiry month in question begins trading. Delivery against an open futures position in an expiry month, may take place on one or more delivery days. Open short positions at the close of trading on the last trading day must be settled by delivery of JSE warehouse receipts on one of the remaining delivery days.

(h) Invoicing and payment

An invoice reflecting the amount payable upon delivery will be included in the daily account summary by the JSE to the clearing member representing the assigned long position holder and payment will take place by 12h00 on the delivery day. Payment will be made at the mark-

to-market price (process defined in Appendix I) for the trading day immediately preceding delivery day as determined by the JSE, where required adjusted for value added tax, location differentials, grade discounts (if applicable), outstanding storage in terms of the contract specification and basis premiums resulting from the matching of JSE warehouse receipts or available bids at the market close.

(i) Valid delivery against an open futures position

Valid and acceptable delivery against an open futures position will only be accomplished if the delivery of the JSE warehouse receipt enables the long position holder to take possession of the underlying commodity as detailed on the receipt.

Valid and acceptable delivery will not be accomplished if a short position holder delivers a JSE warehouse receipt against an open futures position and the long position holder cannot take possession of the underlying commodity due to the default of the storage operator, unless the short position holder can prove that, at the time of the delivery of the receipt, the long position holder could have obtained possession of the underlying commodity from the storage operator.

3.2 Alternative delivery procedures

- (a) Notwithstanding any other provision of this contract specification, a seller and buyer may agree to offset their open futures positions against one another and make delivery in a manner other than provided for in this contract.
- (b) In the event that the seller and buyer do so agree, they must each immediately give notice of that fact to the JSE in such form and containing such details as may from time to time be prescribed by the JSE.
- (c) Upon receipt of such notices, the JSE will liquidate the parties' contracts and positions at the price agreed between the parties and will cease, in respect of any arrangement made pursuant to this rule, to owe any obligations in respect of such contracts and positions towards the seller, the buyer or any other person.

4. EXCHANGE MONITORING

To assist the JSE in monitoring the operation of contracts (but without obliging it to do so and without prejudice to any other power which it might have) the JSE may, at any time and from time to time, require derivatives members and other persons in whose name contracts subject to the contract specifications are registered with the JSE to supply to it such information as it thinks fit. Where appropriate the JSE may require such information to be supplied to it through the clearing member

B. INDIVIDUAL FUTURES CONTRACT SPECIFICATIONS

5.1 WHITE MAIZE FUTURES CONTRACT

- (a) means white maize of Zambian or Southern Africa origin of the grade A as defined in Appendix J;
- (b) maize marketing season is defined as the calendar year beginning on 1 June and ending on 31 May, applicable to all contract expiry months falling in that period;
- (c) contract unit means 10 metric tons of white maize in bulk storage in an approved silo.
- (d) the ZAMA contract code represents Zambian white maize in bulk storage in an approved silo that may be delivered in satisfaction of maize futures contracts by way of JSE warehouse receipts. Short position holders may elect to make delivery on any delivery day in the expiry month. Short positions that remain at the close of business on the last trading day, must be settled by physical delivery by the last delivery day.

Delivery in completion of the contract may be subject to a fee for both the short position holder making delivery and the long position holder taking delivery as may be determined by the JSE from time to time.

- (e) No participant (defined as a member or registered client) or associated group of participants may hold in excess of 60,000 contracts (expected to be equivalent to 20% of the annual crop) of a particular delivery month contract within 10 days of the first delivery day of the month in question, except during the harvest period from May up to and including September, the position limit will allow for a maximum of 105,000 contracts (expected to be equivalent to 35% of the annual crop).

5.2 BREAD MILLING WHEAT FUTURES CONTRACT

- (a) means bread milling wheat of the grade B1 as defined in Appendix J originating in Zambia or Southern Africa and wheat of sound, fair and merchantable quality which is fit for human consumption. The par grade traded is grade B1 however grade B2 and grade B3 will be accepted for delivery in completion of a futures contract at a cash discount as defined by the JSE from time to time.
- (b) wheat marketing season means the calendar year beginning on 1 September and ending on 31 August, applicable to the all contract expiry months falling in that period;
- (c) contract unit means 10 metric tons of wheat in bulk storage.
- (d) the ZAWE contract code represents wheat in bulk storage in an approved silo that may be delivered in satisfaction of wheat futures contracts by way of delivery of JSE warehouse receipts. Short position holders may elect to make delivery on any delivery day in the expiry month. Short positions that remain at the close of business on the last trading day, must be settled by delivery by the last delivery day.

Delivery in completion of the contract may be subject to a fee for both the short position holder making delivery and the long position holder taking delivery as may be determined by the JSE from time to time.

- (e) No participant (defined as a member or registered client) or associated group of participants may hold in excess of 12,000 contracts (expected to be equivalent to 40% of the annual crop) of a particular delivery month contract within 10 days of the first delivery day of the month in question, except during the harvest period from September up to and including December, the position limit will allow for a maximum of 15,000 contracts (expected to be equivalent to 50% of the annual crop).

5.3 SOYA BEANS FUTURES CONTRACT

- (a) means Soya beans from any origin meeting the grading standards of Grade A as defined in Appendix J
- (b) soya beans marketing season means the calendar year beginning on 1 April and ending 31 March the following year, applicable to all contract expiry months falling in that period.
- (c) contract unit means 10 metric tons of soya beans in bulk storage.
- (d) the ZASO contract code represents soya beans in bulk storage in an approved silo may be delivered in satisfaction of a soya beans futures contract by way of delivery of JSE warehouse receipts. Short position holders may elect to make delivery on any delivery day in the expiry month. Short positions which remain at the close of business on the last trading day must be settled by delivery by the last delivery day.

Delivery in completion of the contract may be subject to a fee for both the short position holder making delivery and the long position holder taking delivery as may be determined by the JSE from time to time.

- (f) No participant (defined as a member or registered client) or associated group of participants may hold in excess of 8,000 contracts (expected to be equivalent to 40% of the annual crop) of a particular delivery month contract within 10 days of the first delivery day of the month in question, except during the harvest period from May up to and including September, the position limit will allow for a maximum of 10,000 contracts (expected to be equivalent to 50% of the annual crop).

6. OPTION CONTRACT SPECIFICATIONS

The following specifications are applicable to all agricultural derivatives traded unless otherwise stated:

| | |
|--------------------------------|--|
| Underlying instrument: | One agricultural derivatives futures contract |
| Option type: | The option type is an American style option and may be exercised at any time before or on expiry date. |
| Contract size: | White Maize, Bread Milling Wheat and Soya beans: The size of one option contract is 10 (ten) tons of the underlying commodity. |
| Price quotation: | Options will be quoted in US Dollars per option contract. |
| Strike price: | The strike prices will be in intervals of \$ 5 per ton. |
| Expiry dates and times: | Close of trade on fifth last business day of the month preceding the expiration month of the underlying futures contract. |
| Exercise: | Long position holders may exercise/abandon their options during market hours at any time up to and including 15 minutes prior to the expiration date; provided that all in-the-money options shall be automatically exercised by the exchange at expiration. |
| Mark-to-market: | <p>The mark-to-market (mtm) price of the option will be calculated through the Black Scholes options pricing model utilising the underlying futures and volatility mtm of the specific expiry. The daily mtm process is further defined in Appendix I.</p> <p>The futures mtm on option expiration day will take place 60 minutes earlier and published via the JSE Commodities Trading System</p> |
| | |

APPENDICES TO THE ZAMBIAN AGRICULTURAL DERIVATIVES CONTRACT SPECIFICATIONS

In these appendices, words and expressions that are defined in the Derivatives rules will, unless stated otherwise or inconsistent with the context in which they appear, bear the meanings assigned to them in the Derivatives rules.

APPENDIX A : Approved silos

The current list is available directly from the JSE or can be found on the web page <http://www.jse.co.za/commodities>.

APPENDIX B : JSE warehouse receipts

A copy of the electronic JSE warehouse receipt is available to all registered participants from the preferred service provider, Electronic Silo Certificates (www.silocerts.co.za).

APPENDIX C: Requirements for Approved Storage Operators in Zambia

1 Financial standing

- 1.1 The storage operator shall be in good financial standing and credit, and shall have an ongoing net financial worth as determined by the storage capacity of the storage operator. Financial net worth shall be determined as the aggregate of all classes of ordinary and preference shares, share premiums, capital redemption reserve funds, disclosed distributable reserves (including policy holder and member reserves), fully subordinated liabilities or liabilities repayable at the sole option of the company, specifically excluding any non-distributable reserves and tax reserves. The net financial worth required is measured in US Dollars and will be referenced back to the applicants local currency (includes all registered delivery points):
- US \$1.2 million for a storage capacity of up to and including 30,000 metric tons,
 - US \$2.4 million for a storage capacity of up to and including 60,000 metric tons,
 - US \$3.6 million for a storage capacity of up to and including 100,000 metric tons,
 - US \$5.0 million for a storage capacity over 100,000 metric tons
- 1.2 Notwithstanding the above, the requirement for additional financial guarantees may be called upon at any time at the discretion of the JSE. In the event that this is required, the warehouse owner will have *15 working days* to provide the guarantee in the form as specified by the JSE.
- 1.3 The storage operator shall annually furnish the JSE with its audited financial statements within one month from the date the financial statements are finalised. Should the financial position change whereby the financial obligations cannot be met as defined in section 1.1 and 1.2 of Appendix C, the JSE must be informed immediately.
- 1.4 The JSE reserves the right to request un-audited financial statements at any time and which must be supplied within 15 working days.
- 1.5 If a storage operator, for any reason fails to deliver the quantity and quality of the commodity as reflected on the face of the receipt, apart from the exceptional circumstances mentioned in section 6.4 and 6.5 of the same appendix, and as stipulated in the *Zambian Agricultural Derivatives Contract Specifications*, the storage operator shall within 24 hours of notification by the JSE pay a cash settlement to the holder of the receipt. The cash settlement value will be determined by the JSE by referencing the near month mark-to-market price of the applicable product as traded on the JSE, discounting any differentials and grade discounts that may be applicable. In addition thereto, the storage operator will be liable for a cash penalty of an additional 30% of the cash settlement value as determined by the JSE, of which a portion will be payable to the holder of the receipt.

2 Experience, Expertise and Equipment

The storage operator and management shall have a well referenced two year successful operational track record, in the opinion of the JSE, and have adequate experience and technical expertise in the handling and storing of the commodity. Each warehouse registered with the JSE by the storage operator shall have the necessary equipment and appliances for the convenient and expeditious receiving, storage and outloading of the commodity in bags or bulk according to accepted warehouse management practices. In accordance with local practices, the site does not have to meet all weather requirements provided product is accessible to the buyer within 72 hours from requesting out loading.

All weather conditions can further be defined as being able to provide the required, in and out loading service under reasonable wet and windy conditions.

Each individual silo shall be operated by properly trained and qualified personnel.

3 Legal standing

The storage operator shall be a legal entity registered in either the Republic of South Africa or country where storage is provided.

4 Compliance with Rules of the JSE and Terms of the JSE Futures Contract

- 4.1 The storage operator is bound by, and shall comply with, the Rules of JSE, and the terms of the *Zambian Agricultural Derivatives Contract Specifications* and Appendices thereto insofar as they relate to JSE

warehouse receipts issued by such storage operator. The storage operator shall store all commodities covered by JSE warehouse receipts on the basis and terms as stipulated in the JSE's Rules, Contract Specifications and Appendices thereto.

- 4.2 The storage operator undertakes and warrants that it will not conclude any concurrent storage agreements that may have terms that are inconsistent or in conflict with the JSE's Rules, Contract Specifications and Appendices thereto with any party in respect of commodities stored in terms of JSE warehouse receipts. In the event of such inconsistency or conflict, the provisions of the JSE's Rules, Contract Specifications and Appendices thereto will prevail.

5 **Record-keeping, Inspection and Reporting**

- 5.1 The storage operator shall maintain proper records, including the date of receipt, quantity, quality and warehouse location of the commodity, reflected on every JSE warehouse receipt issued to enable the JSE to verify and audit the commodities stored by the storage operator.
- 5.2 The JSE is entitled to appoint a suitably qualified person to ascertain whether the storage operator complies with the rules and directives of the JSE. The inspection will independently confirm that the monthly reporting requirements as per 5.6 are correct and will be arranged in consultation with the management of the storage operator.
- 5.3 The storage operator shall enter into agreement with the preferred service provider in order to issue electronic JSE warehouse receipts. The storage operator shall notify the JSE of its presentation or redemption through the required monthly reporting as indicated in section 5.6 of this appendix. All electronic JSE warehouse receipts issued and cancelled by the storage operator will be available online via the preferred service provider.
- 5.4 The storage operator shall, to the satisfaction of the JSE, ensure:
 - 5.4.1 that all electronic JSE warehouse receipt number ranges issued to storage operators or their nominated third party are kept secure;
 - 5.4.2 that a register is maintained of all JSE warehouse receipts received;
 - 5.4.3 that a register is maintained of all JSE warehouse receipts issued;
- 5.5 The warehouse owner shall furnish the JSE with a list of employees authorized to issue electronic JSE warehouse receipts utilising the electronic warehouse receipt system.
- 5.6 The storage operator shall submit monthly returns in the prescribed format to the JSE reflecting the total tonnage of JSE traded grain products in storage per type, quality and location as represented by JSE warehouse receipts, any other form of warehouse receipts and grain held on folio (includes grain held for third parties) per registered delivery point. The returns must be approved by a senior member of the management team and will remain confidential within the JSE.
- 5.7 The storage operator shall biannually furnish the JSE with written confirmation from its external auditors, within one month of this process being completed, confirming that there is sufficient physical product of the required quality and quantity stored by the storage operator, to meet all its obligations to depositors and/or warehouse receipt holders (both JSE and any other warehouse receipts issued).

6 **Further duties of the storage operator**

- 6.1 The storage operator shall, after receipt of the commodity, store the product on behalf of the holder of the JSE warehouse receipt and take good and reasonable care of the commodity according to accepted warehouse management practice applicable to the storage of the commodity. Other than storage costs, no additional costs to maintain the quality of the product, shall be levied on the receipt holder.
- 6.2 The storage operator shall identify the country of origin of all commodities stored by it. If the storage operator holds commodities from different countries of origin, such commodities have to be stored separately in compliance with all the delivery requirements of a futures contract.
- 6.3 The JSE warehouse receipt issued by the storage operator to the holder, shall be irrefutable proof of the net weight and quality of the commodity stored on behalf of the holder of the receipt in the storage operators facilities.
- 6.4 The location indicated on the warehouse receipt reflects the registered delivery location of the product where the product should be made available.

- 6.5 With specific reference to the out loading of wheat, the storage operator undertakes to out load the quality of wheat as indicated on the face of the receipt. The JSE however accepts that circumstances may exist due to the complexities of storing wheat that result in the specific quality not being available, in this instance the storage operator may out load one grade category better or worse, based on the quality indicated on the face of the receipt. The difference in grade quality will either be reimbursed or collected from the holder of the JSE warehouse receipt using the grade discounts as defined by the JSE for that marketing season with the adjustment applied at the time of out loading.
- 6.6 The storage operator acknowledges and warrants that it is not the owner of the commodity covered by the receipt (except for receipts issued in its own name). The storage operator further warrants that the lien shown on the face of the receipt is the only security it holds for payment of the storage costs of the commodity covered by the receipt.
- 6.7 The storage operator stores the grain for the depositor, who shall pay storage charges in terms of a tariff as determined by the JSE for such storage.
- 6.8 Should grain so deposited become merged with grain already contained in the warehouse, the resulting bulk of grain shall constitute the joint property of the various depositors, each of whom shall hold an undivided share therein expressed as a fraction equal in extent to the quotient of the total mass of the bulk from time to time, divided by the mass of each individual deposit of grain, and adjusted according to the same formula whenever a portion of the bulk of grain is withdrawn from the warehouse by one or more of the co-owners, or a further deposit of grain is made.
- 6.9 The storage operator is authorised to act as the agent in rem suam of each depositor in binding them to the co-ownership of the grain, to adjust the composition of such co-ownership and to adjust each co-owner's share as and when a withdrawal of grain is made from the warehouse by any of the co-owners, or a further deposit of grain is made.
- 6.10 The storage operator holds the grain for and on behalf of each of the co-owners during the currency of the storage and acknowledges that he is not the owner or co-owner thereof.
- 6.11 The storage operator acknowledges that the depositors may alienate their respective shares, in which event this receipt will be transferred to the purchaser pursuant to such sale.
- 6.12 Upon the aforesaid transfer of the warehouse receipt, the storage operator will henceforth hold the grain on behalf of the newly constituted body of co-owners including the transferee of the JSE warehouse receipt and declares that he will acknowledge and abide by the rights of every such subsequent holder of the JSE warehouse receipt in terms of the provisions recorded herein and in terms of the Rules of the JSE.

7 Insurance

- 7.1 Storage operator shall have current and adequate insurance policies in place with reputable insurers as determined by the JSE ensuring that the silo buildings, equipment and all commodities stored therein are comprehensively insured against the following minimum risks: fire, earthquake, earth tremor, malicious damage, storm, flood, spontaneous combustion and explosion, lightning, terrorism, theft, and public violence. The warehouse owner shall also have insurance in place to cover damages suffered as a result of fraud by its employees.
- 7.2 The storage operator shall annually furnish the JSE with a declaration from its insurer certifying the details of the amount and risks for which the storage operator is insured. Included in the annual declaration from the insurer must be details about events, specific to the grain products traded on the JSE, that resulted in any claims by the storage operator for the previous year. The storage operator shall inform its insurer that it stores commodities on behalf of the holders of JSE warehouse receipts.

8 Handling Procedures

Storage operator shall during normal working hours inload and outload the commodity consecutively without giving unreasonable preference to one receipt holder, depositor or owner of the commodity over another. The commodity shall, on request within a reasonable notice period by a receipt holder, be out loaded at the minimum rate as defined in Appendix D section 2. Storage operators shall not be responsible for a delay in delivery whilst a condition of force majeure exists. All commodities inloaded and outloaded shall be subject to adequate and accurate grading and weighing procedures. Weighing equipment shall be on site and certified in accordance with section 18 of the Weights and Measures Act Chapter 403 Volume 23 of the Laws of Zambia as amended from time to time. A certificate of

verification as issued by the Zambia Weights and Measures Agency must be available and evidence provided to the JSE on an annual basis.

A condition of force majeure, resulting in a delay in out loading by a storage operator, is defined as:

The storage operator shall not be responsible for any delay in despatch or delivery of commodity or any part thereof occasioned by any act of God, action by government, strikes within Zambia, lock-out, combination of workmen, break-down of machinery, power failure or fire, or for any other reason beyond his direct control, provided that the storage operator despatches written notice (can be e-mail or fax) to the other party (with a copy to JSE) within twenty four hours of establishing the occurrence. Unless otherwise mutually agreed, the storage operator invoking Force Majeure is entitled to an extension in the time allowed for the despatch of the commodity. Neither party shall have a claim against the other for delays or non-fulfilment under this clause provided that the party invoking this clause shall have supplied, if so requested by the other, satisfactory evidence indicating that they had undertaken reasonable steps to avoid the delay or non-fulfilment.

9 Disputes

- 9.1 The storage operator shall report all disputes relating to these requirements and JSE warehouse receipts as soon as they occur, directly to the JSE.
- 9.2 Any dispute that may arise between a storage operator and the holder of a JSE warehouse receipt that has been delivered or received in fulfilment of a party's obligations in respect of a futures contract listed and traded on the JSE, will be resolved by arbitration.
- 9.3 The provisions of the South African Arbitration Act, 1965 (Act No 42 of 1965) shall apply to the arbitration proceedings. The arbitration shall be held at the offices of the JSE and the arbitrator shall be appointed by the JSE. The JSE and/or the arbitrator may request any party to such a dispute to furnish the arbitrator with written particulars of the dispute and the JSE and/or the arbitrator may call for additional information relating to the dispute, if necessary.
- 9.4 Subject the arbitrator's award, the parties shall be jointly liable for the costs of the arbitration and shall be obliged to pay to the JSE such amount as the JSE may determine before the arbitration proceedings commence. Should any party fail or refuse to pay on demand any costs due, an award dismissing his claim or defence with costs shall be made by the arbitrator.
- 9.5 The arbitrator shall make his award within five days of the conclusion of the arbitration proceedings. The arbitrator shall give due weight to the customs and practices of the JSE applicable to transactions concluded on the Commodity Derivatives market of the JSE. The arbitration proceedings shall be conducted without any legal representation by any of the parties unless the arbitrator in his sole discretion decides otherwise. The arbitrator's award shall be final and binding on the parties and the arbitrator shall not be obliged to give reasons for his award.

10 Decision by JSE final

- 10.1 With any new application, an official market notice will be distributed affording Commodity Derivative Members 15 business days to provide comment regarding the new application.
- 10.2 A final market notice will be distributed confirming if the application was successful.
- 10.3 Once approved, the JSE reserves the right to limit a storage operator in terms of the quantity (in tonnage terms) of JSE warehouse receipts that may be issued at any one time. This restriction will be communicated to the market via an official notice.

APPENDIX D: Requirements for Approved Silos or Warehouses**1. General**

- 1.1 The approved warehouse must have a minimum storage capacity of 10 000 metric tons (maize equivalent) and the necessary mechanical equipment in working order for the effective and expeditious inloading, storage and outloading of grain in bags or bulk.
- 1.2 The warehouse must be so located such as to allow the outloading of product via road at the required load-out rate. Warehouses that have both road and rail access will be identified with the location differential recognising this service.
- 1.3 The warehouse must be so located that access is possible via a road network with the warehouse owner responsible to maintain access to the inloading and outloading areas within the silo complex.
- 1.4 Any new application will require confirmation through a JSE appointed auditor, of the maximum storage capacity, in and out loading capabilities including all weather facilities of the individual warehouse. Any costs associated to this process will be for the account of the warehouse applicant.
- 1.5 The property whereon the registered warehouse is situated must be owned by the warehouse owner or a minimum five year lease of the property must be in place. The JSE reserves the right to call for additional guarantees from the storage operator should the lease near expiry.

2. Minimum load-out rate

The warehouse shall have a minimum load-out rate of 200 tons in bags or bulk of the commodity on a maize equivalent basis per 9 (nine) hour working day, subject to the requirements described in paragraph 8 of Appendix C.

3. Decision by JSE final

With any new application specific to the storage of any product, an official market notice will be distributed affording Commodity Derivative members 15 business days to provide comment regarding the new application.

4. Deregistration of an approved warehouse

- 4.1 If an approved warehouse fails to meet any of the requirements for approved warehouses for any reason whatsoever, the JSE will deregister the warehouse with immediate effect.
- 4.2 The failure of a registered storage operator to, at any time, comply with the requirements for approved storage operator as stipulated in Appendix C to the contract specifications will result in the immediate deregistration of all the storage operator approved warehouses.
- 4.3 In the event of a change of ownership of approved warehouses, the new storage operator and all its registered warehouses have to meet the requirements of Appendices C and D of the contract specifications. If any of these requirements are not met, the storage operator and/or its relevant registered warehouses will be deregistered with immediate effect.
- 4.4 Once deregistered, the storage operator together with the JSE, will do everything within reason to collect all JSE warehouse receipts still available in the market. The storage operator will transfer all physical stock onto the holders name who presented the original warehouse receipt and if need be replace with the storage operators own warehouse receipt at no additional cost.
- 4.5 The obligations of the storage operator as grain storer, remain the same throughout the process, to provide the holder of the warehouse receipt with the required grade, of the defined quantity at the listed delivery point referencing the storage date last paid to.
- 4.6 The JSE reserves the right to appoint a collateral manager, to manage the deregistration process. This will only be applicable if the deregistration is a result of mismanagement of physical stock by the storage operator thereby not able to honour JSE warehouse receipts issued. Should the deregistration be due to no fault of the storage operator the intervention of a collateral manager will not be required.

5. Voluntary deregistration of an approved warehouse

- 5.1 A storage operator must apply in writing to the JSE if it desires to deregister an approved warehouse. The JSE will publish the application by notice to all Commodity Derivative members. The members of the Commodity Derivatives Market will be afforded 15 business days to lodge any objections to the intended deregistration of the warehouse.
- 5.2 If the JSE is of the opinion that the application for the deregistration of the warehouse will be prejudicial to the interests of any party or to the Commodity Derivatives market, it may prescribe further conditions for the intended deregistration of the approved warehouse.
- 5.3 The JSE will publish its decision relating to the intended deregistration of an approved warehouse by notice to the applicant and Commodity Derivative Members.
- 5.4 Once deregistered, the storage operator will continue to honour all conditions indicated on the warehouse receipt and will be required to follow the same deregistration process as defined in section 4 above.

APPENDIX E: Procedures for issue, transfer, delivery and presentation of electronic JSE warehouse receipts

Electronic JSE warehouse receipts

1. Electronic JSE warehouse receipts must be issued by an authorised storage operator using electronic receipt numbers as allocated by the JSE
2. The JSE will at all times have access to the database of electronic JSE warehouse receipts hosted by the preferred service provider containing the details of the issued receipt together with a full history of the transfer of ownership of the commodity covered by the receipt.
3. Only registered participants of the preferred service provider and agricultural clients of the JSE will have access to electronic receipts and be able to deliver them onto the JSE in fulfilment of futures contracts.
4. To be acceptable for delivery in satisfaction of a futures contract, a electronic JSE warehouse receipt must have been issued by a storage operator with transfer of ownership of the underlying commodity facilitated electronically via the preferred service provider
5. Upon presentation of an electronic JSE warehouse receipt to a storage operator for physical delivery of the commodity, the JSE will on request by the storage operator confirm the identity of the current holder of the silo receipt by reference to its records of transfer in the electronic database. The database will be updated once the storage operator cancels the warehouse receipt.
6. In order to participate in the delivery process, all market participants intending to make use of the physical delivery process will be required to enter into agreement with the preferred service provider of electronic JSE warehouse receipts.

APPENDIX F: Procedures for the physical delivery and close -out of agricultural derivatives futures contracts

1. Procedures for physical delivery of futures contracts on or before the last trading day

1.1 Notice day (business day prior to delivery day)

- 1.1.1. A delivery notice detailing a list of JSE warehouse receipts to be tendered for physical delivery in the required format must be submitted to the JSE by no later than 14h15.
- 1.1.2. Electronic JSE warehouse receipts are required to be available at the JSE no later than 14h15 on notice day. The receipts are checked for authenticity and acceptability in terms of the contract and the electronic record held in the database.
- 1.1.3. Physical delivery may be effected by an exchange for physicals ("EFP") provided that both the short and long position holder have informed the JSE, in writing, of its intention to effect delivery in this manner. The JSE will, after receipt of the written confirmation, record and process the physical delivery and will account to the parties for the premiums and discounts applicable to the JSE warehouse receipt. If the market participants elect to process the EFP without the corresponding invoicing, an equal and opposite futures positions will be booked by the JSE to close out the positions.
- 1.1.4. If not processed as an EFP, short position holder may elect to effect physical delivery in completion of a futures contract by offering to sell the commodities covered by JSE warehouse receipts at a basis premium.
 - a) A short position holder may only utilise this delivery process if the JSE is in possession of the relevant JSE warehouse receipts. The basis premium functionality will only be available from notice day through until last trading day for the specific delivery month.
 - b) Any registered client or member may accept the short position holder's offer to sell the underlying commodity at a basis premium. If this bid is successful and the market participant does not have a corresponding long position, a long futures position including a corresponding short futures position will be created at the mtm of the notice day in order to complete the physical delivery process.
 - c) Basis premiums may be bid or offered via a separate trading screen with the end result being that the basis transaction is included in the final invoicing of the delivery and assignment notices in completion of a futures contract.
 - d) Basis premium orders not matched on the day may be carried over to the next trading session as per the "good till date" order instruction.
 - e) Position keeping will be managed down to sub account level either at member or client level when matching JSE warehouse receipts. Should either the long or short market participant not have a position to effect the physical delivery, an equal and opposite futures position will be created at the mtm of the notice day.
 - f) The basis premium matching process will commence at 09h00 and close at 14h15 with a further 15 minute admin period to finalise physical delivery allocations required in completion of a futures contract.
 - g) The basis premiums will be matched on price and time order priority.
 - h) Should JSE warehouse receipts require splitting to accommodate the tonnages matched at a basis premium this will be facilitated by the JSE.
- 1.1.5. The short futures position holder will be able to flag via the trading system the JSE warehouse receipts tendered for delivery on notice day regardless of whether a basis premium is matched. In this case prior to random assignment, the JSE warehouse receipts will be allocated to the highest bidder(s) still remaining at the close in order to pass on the highest available basis premium.
- 1.1.6. Finally, specific to JSE warehouse receipts flagged for delivery on notice day and not able to secure a basis premium, random assignment per warehouse receipt will take place.
- 1.1.7. The JSE systems will close out all short and long futures position as a result of the physical delivery tendered and ensure a unique delivery position is created to identify the process and maintain the required initial margin until the delivery is complete.

-
- 1.1.8 The JSE will distribute both delivery and assignment invoices using the mark-to-market of the day to the clearing member representing the short and long position holder.

1.2 Delivery day (business day following notice day)

- 1.2.1. The JSE confirms with the clearing member the payment required from the long position holder by 12h00 and arranges to settle the same amount with the short position holders clearing member.
- 1.2.2. The JSE systems close out the unique delivery position and authorises the repayment of initial margins for the following business day.
- 1.2.3. All electronic JSE warehouse receipts will be released to the respective long position holders account at 14h00, unless otherwise requested by the clearing member.

2. Procedures for physical delivery of futures contracts after the last trading day (contract expiry day)

2.1 Last trading day

The last trading day will be the fifth business day before the last business day of an expiry month. The JSE systems will close out all remaining futures positions specific to the delivery month into unique delivery positions at the mark-to-market price of the day. Initial margin requirement may increase further at this specific instance. .

2.2 Notice day

The procedures as described in 1.1 will prevail except no basis premium functionality will be accommodated as described via 1.1.4 and 1.1.5. For invoicing purposes the mark-to-market price on the last trading day will apply for the remainder of the delivery period.

Following last trading day all remaining futures position holders for the specific delivery month will be required to tender notice of delivery on or before last notice day (second last business day of the month). No additional basis premiums will be recognised in the invoicing process.

2.3 Delivery day

The procedure as described in 1.2 above will prevail.

APPENDIX G: SOUTH AFRICA RESERVE BANK DISPENSATION AS PER EXCHANGE CONTROL CIRCULAR 21/2012

The Dispensation reads as follows:

“Special dispensation granted to the JSE Limited to provide Zambian referenced grain derivative contracts in United States Dollar to non-residents and qualifying South African and Common Monetary Area Corporate entities.

Authorised Dealers are advised that, in line with the Government’s objective of positioning South Africa as a financial centre for investments into the rest of Africa, the Minister of Finance has granted approval to the JSE Limited (“JSE”) to offer Zambian reference grain derivative contracts for the trading and settlement in United States Dollar (“USD”).

This dispensation specifically applies to non-residents and qualifying South African and other Common Monetary Area (“CMA”) corporate entities directly and actively involved in the agricultural grain industry, ie. grain traders, silo operators and end users (eg. Millers).

South African qualifying corporate entities must first approach the JSE for approval, whereafter a suitable application must be submitted through an Authorised Dealer to the Financial Surveillance Department of the South African Reserve Bank, in order to trade and settle the Zambian referenced grain derivative contracts in USD.

Qualifying corporate entities of the CMA must obtain written approval from their respective authorities prior to approaching the JSE and submitting an application to the Financial Surveillance Department of the South African Reserve Bank.

The following conditions will be applicable to approved qualifying South African and other CMA corporate entities:

- A USD ring-fenced account (ie a special styled Customer Foreign Currency account) must be opened with an Authorised Dealer acting as the clearing bank;
- No funds may be transferred into or withdrawn from the USD ring-fenced account for any other purpose except meeting the trading obligations of the Zambian referenced grain derivative contracts;
- Initial and maintenance margins may be placed into this account to meet the obligations to the JSE prior to taking out a trading position provided that the activity is undertaken within 30 business days;
- Maintenance margins may not exceed 90 per cent of the nominal value of the position held;
- Any trading proceeds may be retained in the USD ring-fenced account to fund the ongoing margin requirements relating to Zambian referenced grain derivative contracts;
- Should no open trading position be held for 30 business days, all funds in the USD ring-fenced account, whether margins or proceeds, must be converted and returned to the clients linked Rand account; and
- The USD ring-fenced account may not be overdrawn

Payments in respect of physical delivery from the USD ring-fenced account should be treated as an advance payment for imports and the applicable sections of the Exchange Control Rulings must be complied with. Category 101 should be used for reporting the transactions in terms of the electronic cross-border foreign exchange transaction reporting system and the wording ZAMBIAN GRAIN should be annotated in the Subject attribute under the AdhocRequirements element. The application reference number and date must be reflected in the Description attribute. Payments may be effected against an assignment notice issued by the JSE.

In the event of a merchanting transaction the applicable Section of the Exchange Control Rulings must be complied with. Category 315 should be used for reporting the transaction in terms of the electronic cross-border foreign exchange transaction reporting system and the wording ZAMBIAN GRAIN should be annotated in the Subject attribute under the AdhocRequirements element. The application reference number and date must be reflected in the Description attribute. A delivery notice issued by the JSE may be accepted in confirmation of the merchanting transaction.

Non-resident participants may participate in the Zambian referenced grain derivative contracts and be able to move funds in and out of their USD accounts (ie. a Foreign Currency Account) held with an Authorised Dealer acting as a clearing bank.

The macro-prudential limit of the applicable Authorised Dealer acting as a clearing bank will only be affected in the event of a default by the member of the JSE.

This dispensation will be monitored and reviewed on an ongoing basis is granted for a period of two years.”

This dispensation was extended in January 2017.

APPENDIX H: Daily price limits applicable to the contract until first business day of the delivery month

| | Everyday price limit | Extended price limit |
|--------------------|-----------------------------|-----------------------------|
| White Maize – ZAMA | \$10/t | \$15/t |
| Wheat - ZAWE: | \$20/t | \$30/t |
| Soya beans - ZASO | \$20/t | \$30/t |

The price limit criteria can be described as follows:

- The spot month is excluded from all price limits and relevant triggers
- Price limits apply to all hedging months where open interest exists
- Based on the defined limit, prices can move up OR down using the previous days mark-to-market (mtm) as reference
- Should two or more hedging month contracts be marked-to-market (MTM) at the price limit for two consecutive trading sessions, an extended price limit of 150% of the daily price limit will be implemented for the next trading session.
- Extended limits will apply to all hedging months where an open interest exists, the market may trade up OR down at this extended limit
- The extended limit will remain until such time the return trigger criteria are met.
- For everyday price limits to be returned, the criteria is that two or more of the hedging months, regardless of market direction, must be MTM equal to or below the everyday limit **for two consecutive trading sessions**.
- The price limits are removed for a specific expiry month only as it enters the delivery month, based on first position day as published in the JSE commodity calendar.

APPENDIX I: Mark-to-Market procedure for future expiries and option volatility specific to the future expiry month

1. Future Contracts

MTM for the day, which is also referred to as the settlement price, will rely on a random sample selected any time in the last 5 minutes of trading at the discretion of the exchange.

- Based on the random snapshot selected, the MTM price is a function of referencing the last traded price **unless** there is a better bid or lower offer. If the closing bid is above the last traded price this will then be used MTM, alternatively if the offer is lower than the last traded price then the offer will be used as the MTM.
- Following this the spread relationship per product is determined across all expiries based on the sample set that was randomly selected.
- Then to recognize the liquid expiries within the MTM process, the most liquid expiry per product meeting the Volume Weighted Average Price (VWAP) criteria is selected as the reference from which all other expiries are adjusted by the spread difference, the following applies:
 - An expiry will be considered liquid on the trading day for the purpose of determining the MTM if **50 or more** contracts trade during the last 15 minutes of a trading session
 - Should multiple expiries per product meet this criteria, only the most liquid will be selected as the reference expiry month
 - Only on screen traded activity will be taken into account when determining the VWAP
 - Please note the VWAP will not be taken into consideration on the day should the following occur, in which case the random snapshots will prevail:
 1. where at least one expiry of the contract series is MTM at the daily price limit, or
 2. when the VWAP has resulted in the MTM for any of the expiries of the contract series to be outside of the daily price limits.
- Once the reference VWAP value is determined, it becomes the reference price from which all the other expiries are adjusted by the spread difference. This is done in order to maintain the same spread relationship amongst the contract expiries before and after the VWAP is recognized.
- In the event that no product has any expiries meeting the VWAP criteria, the random snapshot as selected will prevail without any further adjustments.

2. Options Volatility Mark-to-Market

The option volatility MTM will be determined as follows, two examples are included to clarify the process:

- Options traded **onscreen** over **the last hour of the** trading session will be considered for the MTM process.
- **The Defined strike range for products where price limits are applicable: strike prices considered for MTM will be based off the standard daily price limits of the product taking into account the futures mtm on the day. To avoid any confusion; should extended price limits apply no additional strike prices will be added.**
***AN EXAMPLE:** for WMAZ with R100 price limits and a R20 strike interval, 10 or 11 strike prices will be considered depending on the futures mtm of the day, at extended limits of R150 the JSE will continue to only reference the 10 or 11 strike prices. Similarly in the case of SOYA with R150 price limits, 14 or 15 strike prices will be considered depending on the futures mtm on the day.*
- **The Defined strike range for products where price limits are not applicable: strike prices 5% either side of the at-the-money option strike will be considered.**
- A **volume weighted average price (VWAP) will be calculated** considering all contracts traded within the defined strike range and during the option MTM period.
- A minimum number of **40 options contracts traded across the defined strike range** during the option MTM period is required when referencing a VWAP calculation for the day. This value will be considered as an indicator of the last traded volatility for the day.
- Volatility bids and offers will be considered in the final option MTM process referencing the delta option quotes: should there be **40 or more delta option contracts better bid or offered lower** than the VWAP calculation across the defined strike range quoted for no less than **15 minutes that starts at 11h30 for products that stop**

trading at 12h00 and 16h30 for products that stop trading at 17h00, the most aggressive volatility quote will be considered as an improvement on the VWAP calculation and referenced as the final option volatility MTM on the day.

AN EXAMPLE: if the VWAP calculation was 25% and there is a better volatility bid of 26% in 40 or more contracts (the 40 contracts can consist of a single or multiple quotes), then the MTM will move to 26%. If the VWAP calculation was 25% and there is a lower volatility offer of 23% on screen throughout the required period, then the MTM will move to 23%. Since quotes across the defined strike range will be considered during the 15 minute period including the orders quoted in the depth, should this improve on the VWAP calculation the MTM will be amended. Again considering the above scenario where 40 contracts are offered at 23% and 10 contracts trade during the 15 minute period, the 10 will be included in the VWAP calculation. Should this be the only 10 contracts traded for the day, and we have evidence that this was part of the 40 contracts available, in this case we will reference the lower offer and change the MTM to 23%. Should the lower offer not be part of a minimum 40 contracts, then if we do not see a minimum of 40 VWAP contracts traded the MTM will remain unchanged.

- On trading days when the futures market is **locked at the price limit** and options match on premium, the resulting trades and system calculated volatilities **will be excluded** from the VWAP calculations.

AN EXAMPLE: if, say, between 11h10 and 11h30 on a particular day the futures market is locked limits up and 20 naked option contracts traded during that period after which the market trades normally again off limits, such contracts will be excluded from the VWAP calculations.

- The exchange **reserves the right to make the final decision** regarding the option MTM volatility and may exercise its discretion as required.

Appendix J: Quality Specifications for deliverable Zambian Grain as agreed with ZAMACE

1. STANDARD SPECIFICATION FOR MAIZE

QUALITY STANDARD:

The maize shall have a good natural colour, be free from objectionable odour, contain no live insects, toxins and moulds and be fit for human consumption and shall comply with the following requirements

| QUALITY PARAMETER | UOM | GRADES | | |
|--|-------|-----------|-----------|-----------|
| | | A | B | C |
| Grades | | | | |
| Test Density | kg/hl | 67.25 min | 64.75 min | 61.75 min |
| Moisture | % | 12.5 max | 12.5 max | 12.5 max |
| Extraneous matters | % | 1.0 max | 1.5 max | 2.0 max |
| Broken Grains | % | 6.0 max | 7.0 max | 8.0 max |
| Other Coloured grains | % | 3.0 max | 4.0 max | 5.0 max |
| Total other Defective grains of which: | % | 11.0 max | 18.5 max | 26.0 max |
| a. Discoloured grains | % | 3.0 max | 6.0 max | 9.0 max |
| b. Insect/pest damaged grains | % | 3.0 max | 6.0 max | 9.0 max |
| c. Diseased grain | % | 2.0 max | 2.0 max | 2.0 max |
| d. Immature or Shrivelled grain | % | 1.0 max | 1.5 max | 2.0 max |
| e. Fugal damaged grains | % | 0.5 max | 1.0 max | 1.5 max |
| f. Germinated grains | % | NIL | NIL | NIL |
| g. Pass thru 4.5mm sieve | % | 1.5 max | 2.0 max | 2.5 max |
| | | | | |
| | | | | |

DEFINITIONS

Maize:

Refers to the seeds of *Zea mays* L.

Moisture Content:

The moisture content, expressed on a wet weight basis, shall be determined by an approved moisture meter calibrated according to a method prescribed by the Zambia Bureau of Standards

Extraneous Matter:

- a). Anything other than maize grain which will pass through a 4.5 mm sieve.
- b). Any animal or mineral or plant matter or grain other than maize, which will not pass through a 4.5 mm sieve.

Damaged Grain:

Means grain and pieces of grain which will pass through a 4.5 mm sieve.

Broken Grain:

Means maize, which has been broken, cracked or chipped to expose the white interior of the grain. It does not pass through the 4.5 mm sieve and has no other defects.

Other Coloured Grain:

Means grain that is coloured or partly coloured maize present in white maize or maize of any colour other than yellow present in yellow maize.

Defective Grain:

Means any grain which falls within one or other of the following categories

- a) insect/pest damaged grain
- b) fungal damaged grain
- c) diseased grain
- d) immature or shrivelled grain
- e) germinated grain
- f) discoloured grain

Insect/Pest Damaged Grain:

Means maize which has been damaged by any insect or animal pest.

Fungal Damaged Grain:

Means maize with visible mycelial/mould growth on its surface.

Diseased Grain:

Means maize which is obviously rotted by fungi, bacteria or other organisms of decay.

Immature or Shrivelled Grain:

Means immature maize which has indications of lack of maturity or full development and which may be thin and papery (almost see through) in appearance. Maize which is shrivelled over most of its surface.

Germinated Grain:

Means maize grain which shows any signs of germination.

Discoloured Grain:

Means grain discoloured by heating, fermentation or weathering.

Sieve:

A 4.5mm grading sieve is a device, the bottom (baseplate) of which is perforated with round-holes 4.5 mm in diameter, and used for the separation of fine extraneous material from grain.

2. STANDARD SPECIFICATION FOR WHEAT

QUALITY STANDARD:

The wheat shall have a good natural colour, be free from objectionable odour, contain no live insects and shall comply with the following requirements:

WHEAT STANDARD

| Quality Parameters | UOM | ZAMACE WHEAT GRADES | | | |
|---|----------|---------------------|--------------|--------------|--------------|
| | | B1 | B2 | B3 | B4 |
| Specific Weight | Kg/hl | 77 min | 76 min | 74 min | 72 min |
| Moisture | % | 13 max | 13 max | 13 max | 13 max |
| Protein | % | 12 min | 11 min | 10 min | 9 min |
| Hagberg Falling Number (tolerance of 30 sec. allowed to B1, B2 & B3 only, B4 excluded) | Sec | 250 min | 250 min | 250 min | 200 min |
| A. Screenings | % | 3 max | 3 max | 3 max | 3 max |
| B. Other Grains | % | 1 max | 1 max | 1 max | 1 max |
| C. Foreign matter | % | 1 max | 1 max | 1 max | 1 max |
| D. Damaged Kernels | % | 2 max | 2 max | 2 max | 2 max |
| Combined Deviations (A+B+C+D) | % | 5 max | 5 max | 5 max | 5 max |
| E. Heavily Frost Damaged Kernels | % | 5 max | 5 max | 5 max | 5 max |
| Field Fungi infected Kernels | % | 2 max | 2 max | 2 max | 2 max |
| Storage Fungi Infected Kernels | % | 0.5 max | 0.5 max | 0.5 max | 0.5 max |

DEFINITIONS

Wheat

Means bread milling wheat of Zambian origin.

Screenings

A 'Standard sieve' being a hand sieve manufactured of 0.8mm aluminium which consists of a slotted sieve with apertures 1.786mm wide and 12.7mm long, fits into a solid pan and is 330.2mm to 334mm in diameter.

Others Grains

Other grains, oilseeds, unthreshed ears and pods of other grains and oilseeds.

Foreign Matter

All material other than grain, oilseeds, and unthreshed ears and pods of other grain and oilseeds.

Damaged Kernels

Sprouted wheat kernels

Insect damaged wheat kernels

Immature Wheat Kernels

Of which heat damaged kernels should be 0.5% Maximum.

Protein:

Measured using the Inframatic supplied by Perten instruments.

Falling Number:

Measures the alpha-amylase enzyme activity in grains and flour to detect sprout damage. Falling number system by Perten Instrument is used to determine the falling number.

3.STANDARD SPECIFICATION FOR SOYA BEANS

QUALITY STANDARD:

The Soya beans shall have a good natural colour, be free from objectionable odour, contain no live insects, toxins and moulds and be fit for human consumption and shall comply with the following requirements

| QUALITY PARAMETER | UOM | GRADES | | |
|----------------------------------|-----|----------|----------|----------|
| | | A | B | C |
| Grades | | | | |
| Moisture | % | 12.0 max | 12.0 max | 12.0 max |
| Extraneous matters | % | 1.0 max | 2.0 max | 3.0 max |
| Total other Defective grains of: | % | 9.0 max | 11.5 max | 14.0 max |
| c. Immature or Shrivelled beans | % | 1.0 max | 1.5 max | 2.0 max |

DEFINITIONS

Soyabeans:

Means the seeds of *Glycine max*.

Moisture Content:

The moisture content expressed on a wet weight basis shall be determined by an approved moisture meter calibrated according to a method prescribed by the Zambia Bureau of Standards

Extraneous Matter:

- a). All matter, including soyabeans and pieces of soyabeans, which will pass through a 3.35 mm sieve.
- b). All matter, other than soyabeans and pieces of soyabeans, which will not pass through a 3.35 mm sieve.

Defective Soyabeans:

Means soyabeans or pieces of soyabeans retained on a 3.5 mm sieve after sieving, which fall within one or other of the following categories:

a). Discoloured Soyabeans:

Means soyabeans discoloured by heat due to fermentation.

b). Germinated Soyabeans:

Means sprouted soyabeans or soyabeans in which the process of germination is visible within the embryo.

c). Weather-damaged Soyabeans:

Means soyabeans and pieces of soyabeans in which the seed coats are discoloured by weather damage on one side or both sides.

d). Infected Soyabeans:

Means soyabeans and pieces of soyabeans which show any sign of disease, fungus or virus infection.

e). Immature Soyabeans:

Means soyabeans and pieces of soyabeans which are markedly shrivelled over more than half their area or which, in cross section, show an intense green colour.

f). Pest-damaged Soyabeans:

Means soyabeans and pieces of soyabeans which are visibly damaged by insects, birds or rodents.

Split Soyabeans:

Means pieces of soyabeans remaining on a 3.35 mm sieve after sieving, which are not defective, and include mechanically damaged soyabeans that are likely to split in handling.

Sieve:

A 3.35 mm grading sieve is a device, the bottom (baseplate) of which is perforated with round-holes 3.35 mm in diameter, and used for the separation of fine extraneous material from soyabeans.

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