

Government of Karnataka
Department of Agricultural Marketing

Office of the Director
of Agricultural Marketing
No.16, 2nd, Raj Bhavan Road,
Bangalore 560001

Subject: Quality parameters, grading, quality certification and
other related matters for copra sold in online markets – reg.

Preamble

It is necessary to specify quality parameters, grading, quality certification and other related matters for copra sold in markets as specified under Rule 91-O (1) of the Karnataka Agricultural Produce Marketing (Regulation and Development) Rules, 1968 ("Rules") and hence the following order is issued under Rule 91-O (2) of the Rules.

Order no. KruMaE/Niyavi/Avyava/315/13-14, dated:21/02/2014

1. Title

This order shall be called as **Quality parameters, Grading, Quality Certification and other related matters for Copra sold in the Unified Market Platform.**

2. Assaying parameters

Copra being brought to the markets specified under rule 91-O (1) of the Rules shall be categorised as Tiptur Ball Copra Large, Tiptur Ball Copra Medium, Tiptur Ball Copra Small and Tiptur Ball Copra Mixed. The parameters which shall be assayed in respect of each of the aforesaid varieties shall be as specified in Schedule 1 to this order.

3. Sampling procedure

- (1) The lot brought by the seller may be in packed form (in gunny bags) or may be in the form of a heap. Each lot shall be kept separated either as a stack or as a heap for sampling.
- (2) If the lot is brought in packed form, then a bulk sample has to be prepared from the lot. This involves a two stage process – determining the number of bags from which the commodity would be drawn and selecting that many number of bags from amongst the bags in the lot.
- (3) The number of bags from which the commodity would be drawn is a number equal to the integral part of the square root of the total number of the bags, subject to a minimum of two bags. For example, if the number of bags is 40, then the square root of 40 is 6.32 and so the number of bags to be sampled shall be 6.
- (4) For selection of bags at random, a random number table shall be used. In the absence of such a table, the first bag in the stack of bags shall be marked and thereafter every n th bag shall be taken out, where $n =$ the whole number derived by dividing the number of bags in the lot by the number of bags to be taken out. If the number of bags is 40 and the number of bags to be sampled is 6 as per (3) above, then $n = (40/6) = 6.67$, rounded off to 7. The bags to be taken out would then be 7, 13, 19, 25, 31 and 37.
- (5) The copra in the bags so selected would form the bulk from which samples would be drawn.
- (6) A test sample of approximately 5 Kgs shall be drawn at random. A cluster of upto 7 cups shall be taken from different spots in the bulk sample for

obtaining the test sample. The test sample shall be the sample used for the physical tests. The test sample will be made into five portions and sealed using petro bulk seal. A sample identity slip as per Schedule 2 to this order shall be attached in each of the sample. These samples will be distributed as under.

- One sample to Farmer/Trader for his reference;
- One sample to APMC for display for traders to inspect;
- One sample to APMC for dispute resolution;
- One sample to the assaying agency for analysis; and
- One sample for record with the assaying agency.

(7) Particulars are entered in a register to have a record of the samples drawn. This register shall be in a format C1 to C4 as per Schedule 3 to this order.

4. Assaying procedure

- (1) The sample shall be subjected to physical analysis as detailed in Schedule 4 to this order.
- (2) The assaying agency shall issue a certificate specifying the quality parameters and the period for which the assaying certificate is valid. Thereafter, details of the quality of the lot shall be entered in the United Market Platform.

5. Other matters

The depositor shall be responsible to comply with the provisions prescribed under the Food and Safety Standards Act, 2006 and other applicable provisions of law.

6. Disputes on assaying

Any dispute in this regard shall be settled by the Disputes Committee for Online Markets set up by the respective market committee under Rule 91-P

(1) of the Karnataka Agricultural Produce Marketing (Development and Regulation) Rules, 1968 and the guidelines issued by the Director of Agricultural Marketing under Rule 91-P (7) of the said Rules.

7. Disposal of samples

After the commodity is sold and delivered to the buyer, the requirement to preserve the samples taken would cease. Three lots of samples, namely, the sample maintained by the APMC for display for traders to inspect, the sample maintained by the APMC for dispute resolution and the one retained by the assaying agency for reference may be aggregated and disposed of by Rashtriya e-Market Services Private Limited any time after fifteen days of the delivery of the commodity to the buyer. The proceeds realised due to such disposal shall be credited to the account of the said company.

8. Removal of difficulties

Any difficulty in the implementation of this order shall be referred to the Director of Agricultural Marketing, who shall issue clarifications as deemed necessary.

(P.S. Vastrad)
Director

To

1. The Managing Director, Rashtriya e Market Services Limited, Bangalore.
2. Chairman/Secretary, Agricultural Produce Marketing Committee, Tumkur, Tiptur, Arasikere and Chamarajanagar.
3. The Additional Director (Enforcement), Department of Agricultural Marketing.
4. The Deputy Director (Enforcement), Department of Agricultural Marketing, Northern Zone, Hubli and Southern Zone, Bangalore.
Deputy Director/Assistant Director, Department of Agricultural Marketing, Tumkur, Hassan and Chamarajanagar.

Schedule 1

Assaying parameters for copra

Each variety of ball copra shall be assayed for the following parameters –

Sl. No.	Parameters	Tiptur Ball copra			
		Large	Medium	Small	Mixed
1	Minimum diameter in millimetres	85	75	60	60 and above
3	Maximum mouldy and black kernels by count (%)	2	2	2	2
4	Maximum wrinkled kernels by count (%)	13	10	10	13
5	Maximum chips by weight (%)	1	1	1	1
6	Maximum moisture content by weight (%)	7	7	7	9

Description in respect of each of the above parameter is as follows –

Parameter	Description
Diameter	Measuring thread and calibrated measuring scale
Mouldy and black kernels	Mouldy & black kernels include balls in which more than 5% of the inner surface is covered with mould and dark brown to black in colour
Wrinkled kernels	Wrinkled kernels include balls that are shrunk out of normal shape or are not fully matured or developed or have a rubbery structure and uneven surface. Such kernels are often discoloured
Chips	Chips include pieces of kernels, which are smaller in size
Moisture content	By Moisture meter

Schedule 2

Format of Sample identity slip to be placed with the petro bulk seal

Sample identity slip	
Name of commodity	Ball Copra
Market arrived	Tipturmarket/Arasikere market/..... sub market
Date of drawing of the sample	
Name of the farmer	
Lot number	
Supervisor name	
Signature of supervisor with date	
Signature of the Farmer/Seller	

Schedule 3

Format of register to be maintained

Form C1

Name of the commodity – Tiptur Bal Copra Large

APMC: Tiptur/Arasikere/Tumkur/.....

Sl. No.	Date	Quantity/No of bags	Lot number	Name of the farmer /trader	Contact number	Signature of the supervisor

End of the page:

Signature of APMC official

Name:

Date :

Schedule 3

Format of register to be maintained

Form C2

Name of the commodity – TipturBal Copra Medium

APMC: Tiptur/Arasikere/Tumkur/.....

Sl. No.	Date	Quantity/No of bags	Lot number	Name of the farmer /trader	Contact number	Signature of the supervisor

End of the page:

Signature of APMC official

Name:

Date :

Schedule 3

Format of register to be maintained

Form C3

Name of the commodity – TipturBal Copra Small

APMC: Tiptur/Arasikere/Tumkur/.....

Sl. No.	Date	Quantity/No of bags	Lot number	Name of the farmer /trader	Contact number	Signature of the supervisor

End of the page:

Signature of APMC official

Name:

Date :

Format of register to be maintained

Form C4

Name of the commodity – TipturBal Copra Mixed

APMC: Tiptur/Arasikere/Tumkur/.....

Sl. No.	Date	Quantity/No of bags	Lot number	Name of the farmer /trader	Contact number	Signature of the supervisor

End of the page:

Signature of APMC official

Name:

Date :

Schedule 4

Physical analysis of copra

1. Measurement of size (diameter)
 - (a) Take the ball copra and measure the vertical diameter (a) in centimetres and the horizontal diameter (b) in centimetres using a thread and calibrated scale.
 - (b) The diameter of the copra is $(a+b)/2$ and is expressed in centimetres.
 - (c) The diameter of all the remaining copra in the sample is calculated in a similar manner.

2. Assessing chip content
 - (a) Take the above sample.
 - (b) Separate chips (as defined in Schedule 2) in the sample.
 - (c) Weigh the chips so collected (W_2).
 - (d) The percent of chips is $(W_2/W_0)*100$.

3. Assessing mouldy and black kernels
 - (a) Take the above sample (after removing the foreign matter and chips) and count the number of ball copra in the sample (N_0).
 - (b) Examine each ball copra for having mouldy and black kernel.
 - (c) Separate mouldy and black kernel cups and count (N_1).
 - (d) The percent of mouldy and black kernels is $(N_1/N_0)*100$.

4. Assessing wrinkled kernels
 - (a) Take the above sample (after removing mouldy and black kernels) and count the number of ball copra in the sample (N_3).
 - (b) Examine each kernel to assess if wrinkles are present or not.
 - (c) Separate all wrinkled kernels and count (N_4).
 - (d) The percent of wrinkled kernels is $(N_4/N_3)*100$.

5. Moisture content

The procedure described below is applicable for moisture meters manufactured by the Kerala State Agro Industries Corporation Limited. If any other moisture meter is used for testing, then (a) to (c) below shall be as per the instructions of the manufacturer of the equipment.

- (a) Ensure that the cap is intact on the instrument. The cap is not only a protective device but is also a functionally integral part of the meter. Without the cap “calibration” of meter is not possible and shall never be attempted.
- (b) Switch on the meter by turning the control knob clock wise to hear a clicking sound. The indicator lamp on the centre of the dial glows and the needle of the meter moves towards a reading of 23%. Then slowly turn the knob clockwise till the needle perfectly coincides with the mark “CAL”. This preliminary procedure is called “Calibration” of the meter.
- (c) Gently remove the cap from the instrument. The needle returns to zero. (At this stage do not activate the control knob). The meter is now ready for moisture-testing.
- (d) Firmly hold the meter with its dial upwards in one hand and the copra kernel in the other hand. Gently pierce the kernel with the pair of the sensor pins up to a minimum 8 millimetres, release the pressure applied and wait for 3 seconds. The moisture-content can be read on the dial of the meter (M_1). The procedure can be repeated at 2 or 3 points for reading the average value (M_2) and (M_3). The average moisture for the copra kernel is $V_1 = (M_1+M_2+M_3)/3$
- (e) Repeat the above for the sample and note down the values for each kernel – V_1, V_2, \dots, V_n . The average moisture content in the lot is then computed as $(V_1, V_2, \dots, V_n)/n$.

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