

DEPARTMENT OF AGRICULTURE

No. R

VOLUNTARY SYSTEM RELATING TO THE GRADING, PACKING AND MARKING OF (PRODUCER) GROUNDNUTS PRESENTED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA

It is hereby notified for general information that the Department of Agriculture has decided to introduce a voluntary system of grading, packing and marking of (producer) groundnuts presented for sale in the Republic of South Africa, as set out in the Schedule hereto.

SCHEDULE

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SCHEDULE

Definitions

1. In this voluntary system unless inconsistent with the context --

"**blackened pods**" means pods, the shell of which are mouldy or blackened over more than half of their surface;

"**blemished kernels**" means whole kernels which show any coloured streaks or blotches in or on the testa or where the testa is showing a dark discolouration. Provided that where the discoloration is limited to the embryo or the veins shall not be regarded as blemished kernels, such kernels shall not be regarded as blemished kernels.

"**broken and open pods**" means pods of which the shells have been broken or which are open in any way;

"**broken kernels**" means kernels of which a part has been broken off;

"**chemical residues**" means residues of agricultural remedies which in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), are permissible for the treatment of pests and diseases and which do not exceed the prescribed maximum residue limit in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);

"**class**" means a class referred to in clause 3;

"**consignment**" means a quantity of groundnuts, which belongs to the same producer or owner, delivered at any one time under cover of the same consignment note, delivery note or receipt note, or delivered by the same vehicle, or if such a quantity is subdivided into different classes or grades, each quantity of each of the different classes or grades;

"**container**" means a bag, or any other immediate container or wrapper in which groundnuts are packed;

"**damaged testa**" means kernels of which the testa is loose, cracked or have split off for more than one third, excluding split kernels;

"**defective kernels**" means unsound kernels, blemished kernels, soiled kernels, damaged kernels, broken kernels and shrivelled kernels, and in the case of groundnuts in pods form, sun-cured kernels;

"**edible groundnuts**" means those kernels in a consignment which remain after being screened on a 6,75 mm slotted screen, 6,00 mm slotted screen and 7,20 mm round-hole screen and from which all defective kernels have been removed, and in the case of Class D on the 7,50 mm slotted screen, 6,75 mm slotted screen and the 7,70 mm round-hole screen;

"**expressing groundnuts**" means all kernels other than sundry and edible kernels;

"**foreign matter**" in relation to a consignment of groundnuts -

- (a) in a pod form, means all matter (including the raisins), excluding kernels, pods and sticks or parts thereof; and
- (b) in a kernel form, means all matter (including the raisins), excluding kernels, split kernels or parts of kernels;

"**grade**" means a grade referred to in clause 5;

"**Groundnuts**" means the underground fruit of the plant *Arachis hypogaea*, whether in kernel or pod form;

"**insect**" means any live insect which is injurious to stored groundnuts, irrespective of the stage of development of the insect;

"**inspector**" means the Executive Officer or an inspector under his or her control, or an Assignee or an employee of an Assignee;

"**kernels**" means the seeds and parts of seeds of groundnuts which are obtained after shelling the pods;

"**kernel content**" in relation to the consignment groundnuts in pod form, means the mass of the kernels in the consignment concerned, expressed as a percentage of the mass of the pods (after the foreign matter, sticks and shelled kernels have been removed) in the consignment concerned;

"**mould-infested kernels**" means kernels and parts of kernels -

- (a) Where mould growth appear and is visible to the naked eye; or
- (b) which are damaged or discoloured as a result of mould growth;

"**noxious seeds**" means the seeds or bits of seeds of plant species that may represent a hazard to human or animal health when consumed, including seeds of *Convolvulus spp.*, *Crotalaria spp.*, *Datura spp.*, *Ipomoea purpurea*, *Lolium temulentum*, *Ricinus communis* or *Xanthium spp.*;

"**one-kernelled pod**" means a pod which according to the formation of the shell thereof, contains a single kernel;

"**other class**" in relation to a specific sample of groundnuts, means any class other than the class of which that sample mainly consists;

"**pods**" means pods or parts of pods containing kernels, excluding the raisins;

"**raisins**" means hard, shrivelled small pods, with or without kernels, of which the kernel content cannot be recovered during the shelling process;

"**shelled kernels**" in relation to a consignment of groundnuts in a pod form, means the kernels in the consignment concerned which are not enclosed in shells;

"**shrivelled kernels**" means whole kernels with a wrinkled, grooved, dented or deformed appearance: Provided that whole kernels of which the veins are raised or crinkled, shall not be regarded as shrivelled kernels;

"**soiled kernels**" means whole and split kernels which are soiled to such an extent that their appearance is affected;

"**soiled pods**" means pods with soil clinging to the shells thereof: Provided that pods of which the shells are discoloured by soil, shall not be regarded as soiled pods;

"**split kernels**" means the separated halves or parts of separated halves of kernels which do not pass through the 7,20 mm round-hole screen;

"**sticks**" in relation to a consignment of groundnuts in pod form, means foreign matter in that consignment which consists of parts of the groundnut plant;

"**sun-dried kernels**" means kernels of which the testa is easily removed when rubbed lightly between the hands;

"Unsound kernels" means mould-infested kernels, and kernels which are decayed, or damaged by heat or insects, or show internally or when the testa thereof is removed, any colour which is not typical of sound kernels or are sprouted: Provided that sprouted kernels shall be regarded as unsound only if the embryo has broken the testa;

"5,15 mm slotted screen" means a screen having 20,0 mm by 5,15 mm slotted perforations;

"6,0 mm slotted screen" means a screen having 20,0 mm by 6,0 mm slotted perforations;

"6,75 mm slotted screen" means a screen having 20,0 mm by 6,75 mm slotted perforations;

"7,50 mm slotted screen" means a screen having 20,0 mm by 7,50 mm slotted perforations;

"7,20 mm round-holed screen" means a screen with round perforations 7,20 mm in diameter; and

"7,70 mm round-holed screen" means a screen with round perforations 7,70 mm in diameter.

Scope of voluntary system

2. This system shall serve as a voluntary system for the grading, packing and marking of unprocessed groundnuts delivered for sale in the Republic of South Africa.

QUALITY STANDARDS

Classes

3. There are 5 classes of groundnuts, namely –

- (a) Class A;
- (b) Class B;
- (c) Class C;
- (d) Class D; and
- (e) Class E.

Specifications for classes

4. A consignment of groundnuts is classified as –

- (a) Class A, if it contains at least 97% of the Red Spanish type of groundnuts (for example Harts);
- (b) Class B, if it contains at least 97% of the Spanish type of groundnuts (for example Natal Common, Selection 5, Sellie, Agaat, Jasper, Robbie, Akwa, Kwarts and Anel);
- (c) Class C, if it contains groundnuts that cannot be classified in accordance with these standards and requirements as Class A, Class B, Class D or Class E groundnuts;
- (d) Class D, if it contains at least 97% of the runner-type of groundnuts (for example Norden); and
- (e) Class E, if it contains at least 97% of the Virginia runner-type of groundnuts (for example Selmani).

Grades for groundnuts

Farmer stock grading

5. The grades for the various classes of groundnuts -
- (a) in pod form is:
 - Choice grade (OK)
 - Standard Grade (OS)
 - Sundry Grade (OD)
 - Crushing Grade (OP)
 - Grade other (F-Pods)
 - (b) in kernel form are:
 - Choice Grade (K)
 - Standard Grade (S)
 - Sundry Grade (D)
 - Crushing Grade (P)
 - Grade other (F-kernels)

Standards for grades

General

6. (1) All grades, except Grade other groundnuts should -
- (a) be free from a musty, sour and/or any other undesirable odour;
 - (b) be free from insects;
 - (c) be free from a substance which renders it unfit for human or animal consumption or processing into or utilisation thereof as food or feed;
 - (d) contain no chemical residues that exceed the prescribed maximum residue limit;
 - (e) be free from seeds from *Ricinus communis* and not contain more noxious seeds, other than *Ricinus communis*, than permitted in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);
 - (f) have a moisture content of not more than 7%;
 - (g) comply with the requirements for plant injurious organisms of phytosanitary importance as determined by the Director of the Directorate of Plant Health and Quality;
 - (h) comply with the minimum and maximum requirements as set out in Table 1; and
 - (i) groundnuts which does not comply with the requirements for choice, standard, sundry and crushing grade will be graded as grade other.
- (2) The processor should ensure that groundnuts aflatoxin level accepted at delivery must be able to be reduced after sorting to meet the Department of Health's required levels.

PACKING REQUIREMENTS

Containers

7. (1) Groundnuts of different classes (with the exception of Class C) and grades may not be packed in the same container.
- (2) A consignment of groundnuts in kernel form shall for the purposes of the application of this voluntary system be packed in containers that are suitable, intact, clean, dry, odourless and strong enough.

Prohibited particulars

8. No wording, illustration or other means of expression which constitutes a misrepresentation or which directly or by implication, creates a misleading impression of the contents, shall appear on a container which contains groundnuts.

SAMPLING

General

9. For the purpose of this voluntary system, a random sample of groundnuts should be taken according to the following manner so that the sample obtained is representative of the consignment concerned by:
- (a) In the case of groundnuts in pod form –
 - (i) delivered in bulk quantities, sampling the particular consignment at random with a shovel or air sucked in at least six different places in the container as set out in clauses 11 and 12;
 - (ii) delivered in containers, sampling by hand at least 5% of the containers as set out in clause 10.
 - (b) In the case of groundnuts in kernel form –
 - (i) sampling by hand at least 5% of the containers chosen at random in the consignment as set out in clause 10; or
 - (ii) sampling with a grain probe at least 20% of the containers chosen at random in clause 13.

Sampling by hand (kernels) and rake (pods)

10. A consignment of groundnuts is sampled by hand rake as follows:
- (a) Open the container selected from the particular consignment.
 - (b) Insert a hand rake into each such container close the hand in a fist and then withdraw it gradually (rake out in the case of pods).
 - (c) Place the material enclosed by the hand rake, into a suitable container.
 - (d) Repeat the procedure described in paragraph (b) above alternately at different depths in each container and place the material so obtained into the container mentioned in paragraph (c).
 - (e) take approximately equal quantities of material from each bag selected from the particular consignment.

- (f) mix the material thus obtained thoroughly and divide it by means of a sample divider so that the sample of the particular consignment consists of a sample of at least 10 kg -
 - (i) in the case of groundnuts in pod form consists of a sample of at least 10 kg each;
 - (ii) in the case of groundnuts in kernel form, consists of a sample of at least 2,5 kg each.

Sampling with a shovel

11. A consignment in bulk quantities in pod form of groundnuts is sampled with a shovel as follows:
- (a) Insert the shovel with a slight shaking movement into the groundnuts at each position selected in the particular bulk container, and then lift the shovel gradually while keeping it horizontal.
 - (b) Place the material in the shovel into a suitable container.
 - (c) Repeat the procedure described in paragraph (a) alternately at different depths at each position selected in the relevant bulk container and then place the material thus obtained in the container as mentioned in paragraph (b).
 - (d) Take approximately equal quantities of material at each position selected.
 - (e) Mix the material thus obtained thoroughly and divide it by means of a sample divider so that the sample of the particular consignment consists of at least 10 kg material each.

Sampling with air suction apparatus

12. A consignment of groundnuts in pod form should be sampled with an air suction apparatus as follows:
- (a) Insert the air suction apparatus as deep as possible to the bottom of the bulk container.
 - (b) Place a suitable collecting tray under the air suction apparatus.
 - (c) Repeat the procedure described in (a), alternatively at different depths in that particular container and place the material so obtained in the collecting tray mentioned in (b).
 - (d) Take approximately equal quantities of material at each position selected.
 - (e) Mix the material thus obtained thoroughly and divide it by means of a sample divider so that the sample of the particular consignment consists of at least 10 kg material each.

Sampling with a grain probe

13. (1) A consignment of groundnuts in kernel form is sampled with a grain probe as follows -
- (a) Insert the tapering point of such a probe upwards at an angle of approximately 30 degrees with the horizontal line, into each bag selected from the particular consignment and with the opening thereof facing downwards until the point of the probe is approximately in the middle of the bag.

- (b) Turn the probe on its longitudinal axis through approximately 180° so that the opening faces upwards.
 - (c) Withdraw the probe with a slight shaking movement and at diminishing speed from the particular bag so that a relatively even and progressive flow of kernels is maintained through the opening nearest to the side of the bag.
 - (d) Empty the material in the probe into a suitable clean container.
 - (e) Repeat the procedure described in paragraphs (a), (b) and (c) alternately at the top, middle and bottom of each bag and place the material thus obtained in the container.
 - (f) Take out approximately equal quantities of material from each container selected from the particular consignment.
 - (g) Mix the material thus obtained thoroughly and divide it by means of a sample divider so that the sample from the particular consignment consists of two parts of at least 2,0 kg each.
- (2) A grain probe mentioned in subclause (1) shall -
- (a) be long enough so that the point thereof will reach the middle of the container that is sampled; and
 - (b) consists of a cylindrical tube with a tapering point and an opening near the point;

Deviating sample

14. If an inspector should notice during the process of drawing the random samples or during the inspection that any of the quantities of groundnuts taken from any container are obviously inferior to or differ significantly:

- (a) the respective containers must be separated from one another and all containers in the particular consignment must all be sampled; and
- (b) each group of container of a particular class or grade in the consignment is considered a separate consignment for purposes of this voluntary system.

Representative sample

15. A sample taken according to clauses 9, 10, 11, 12, 13 and 14 is considered to be representative of the consignment from which it is taken.

Obtaining a working sample

16. (1) A working sample shall be obtained by dividing the random sample with a multiple-slot divider.
- (2) The division of a sample with a multiple-slot divider shall be done by -
- (a) placing the sample in an empty collecting tray;
 - (b) placing an empty collecting tray underneath each of the two sets of the multiple-slot divider's chutes;

- (c) pouring the sample contained in the collecting tray referred to in paragraph (a) through the multiple-slot divider; and
- (d) repeatedly pouring that part of the sample that is collected at one selected set of chutes, through the multiple-slot divider after the collecting tray in which it was collected has been exchanged for an empty collecting tray, until a working sample of the required size is obtained.

INSPECTION METHODS: GENERAL

Determining of musty, sour or other objectionable odour, harmful substance and noxious seed

17. A consignment or a sample of a particular consignment of groundnuts is sensorial or chemically analysed in order to determine whether:

- (a) it has a musty, sour or any other objectionable odour;
- (b) it contains groundnuts in or on which a substance occurs which makes it unfit for human and animal consumption or for processing into or application as food or feed;
- (c) it contains castor seeds or other poisonous seeds; and
- (d) it contains any insects.

Determination of the percentage kernels of another class

18. The class of a consignment of groundnuts in pod form is determined as follows:

- (a) Prepare a working sample by measuring out at least 200 g from the sample of the consignment after all sticks, foreign matter and shelled kernels have been removed.
- (b) Remove all pods belonging to another class from the working sample and determine the mass of the remaining quantity.
- (c) Express the mass thus determined as a percentage of the working sample.
- (d) Such a percentage represents the percentage groundnuts of the particular class in the consignment.

19. The class of a consignment groundnuts in kernel form is determined as follows:

- (a) Prepare a working sample by measuring out at least 200 g from the consignment from which all foreign matter, damaged kernels and kernels without testa have been removed.
- (b) Remove all kernels of another class from the working sample and determine the mass of the remaining groundnuts.
- (c) Express the mass thus determined as a percentage of the working sample.
- (d) Such a percentage represents the percentage groundnuts of a particular class in the consignment.

Determination of percentage sticks, foreign matter and shelled kernels

20. (1) The percentage sticks, foreign matter and shelled kernels in a consignment of groundnuts in pod form is determined as follows:

- (a) Prepare a working sample by measuring at least 10 kg from the sample of the consignment.

- (b) Remove all sticks, foreign matter and shelled kernels separately from the working sample and determine the respective mass of each.
- (c) Express the respective masses of the sticks, foreign matter and shelled kernels thus determined separately as a percentage of the working sample. If soil clings to the pods, measure 200 g pods and wiped off the soil by hand and the percentage thereof determined and added to the percentage sticks and foreign matter to indicate the total percentage of sticks and foreign matter.
- (d) Such percentages represent respectively the percentage sticks, foreign matter and shelled kernels in the consignment.

Determination of the percentage pods and foreign matter in kernel form

21. The percentage pods and foreign matter in a consignment groundnuts in kernel form is determined as follows:

- (a) Prepare a working sample by measuring out at least 2,0 kg from the sample of the consignment.
- (b) Remove all pods and foreign matter separately from the working sample and determine the respective masses of each.
- (c) Calculate the sum of the masses of pods and foreign matter determined according to paragraph (b) and express the mass thus calculated as a percentage of the working sample.
- (d) Such percentage represents the joint percentage of pods groundnuts and foreign matter in the particular consignment.
- (e) Express the mass of the foreign matter determined according to paragraph (b) as a percentage of the working sample.
- (f) Such percentage represents the percentage foreign matter in the particular consignment.

Determination of kernel content

22. The percentage kernel content of a consignment of groundnuts in pod form is determined as follows:

- (a) Prepare a working sample of at least 200 g groundnuts, free of sticks, foreign matter and shelled kernels, from the consignment.
- (b) Shell the pods in the working sample with the hand and determine the mass of the kernels thus obtained.
- (c) Express the mass thus determined as a percentage of mass of the working sample.
- (d) Such percentage represent the percentage kernel content of the consignment concerned.
- (f) Shell loss adjustment: A deduction of 1,5 percentage points should be deducted from the above-mentioned kernel content as determined in (e) above to provide for physical loss adjustment.

Determination of moisture content

23. The moisture content of a consignment of groundnuts may be determined according to any suitable method: Provided that the results thus obtained are in accordance with the results obtained by the IUPAC method number 1.121 for the determination of moisture and volatile matter content.

ANNEXURE 1**STEPS FOR THE GRADING OF GROUNDNUTS****Steps for grading of pods**

24. The grade of a consignment pods should be graded as follows in association with Table 1.
- (a) Measure out about 10 kg material and determine the percentage foreign matter and sticks by selecting them by hand or by screening. If soil clings to any pods, 200 g pure pods must be measured out and the soil removed by rubbing with a hand. The percentage soil thus determined is added to the percentage of foreign matter and sticks to determine the total percentage foreign matter and sticks.
 - (b) Smell for objectionable odour and look for live insects and chemical substances that are discernible on the pods.
 - (c) Mix thoroughly and divide the pods with a multiple slot divider.
 - (d) Determine the class as set out in clauses 18.
 - (e) Shell sufficient pods and determine the percentage moisture as set out in clause 23.
 - (f) Determine the percentage shelled kernels from the balance of the 10 kg material.
 - (g) Determine the kernel content on at least a working sample of 200 g pods which is free from sticks/foreign matter and shelled kernels each by shelling them by hand.
 - (h) Shell the balance of the 10 kg material by means of the shelling machine..
 - (i) All pods not shelled with the shelling machine must be shelled by hand to split kernels. One kernelled pods (nubbins) in the sample should be shelled and crushed with a hand or a crusher to crushing grade kernels. The split kernels and crushed kernels thus obtained are then added to the total kernel sample before dividing and grading.
 - (j) Mix thoroughly and divide the kernels with a multiple slot divider.
 - (k) Grading on kernels obtained in (i) should be done as set out in clause 26.
 - (l) Deductions
 - (a) Shell loss adjustment: A deduction of 1,5 percentage points should be deducted to account for physical loss adjustment.
 - (b) A standard deduction of 8% shall be applicable from Choice and Standard grade. Of this 8%, 6 percentage points should be added to Sundry grade and 2 percentage points added to the crushing grade. A further deduction of 8% shall be made to the original Sundry grade to Crushing grade.

Steps for grading groundnuts in kernel form

25. The grade of a consignment of groundnuts in kernel form should be graded according to Table 1
- (a) Obtain approximately 2 kg of material and determine the percentage foreign matter and pods by first determining the mass of foreign matter expressed as a percentage of the working sample and thereafter the mass of the pods expressed as a percentage of the working sample. Add 50% of the mass of the pods as a percentage to the crushing grade percentage when balancing of the receipt.
 - (b) Smell for objectionable odour and look for insects and chemical substances discernible on the kernels.
 - (c) Mix and divide the kernels thoroughly using a small multiple-slot divider.
 - (d) Determine the class as described in clauses 19.
 - (e) Determine the percentage moisture as described in clause 23.

Steps for grading and screening of kernels

26. Grading and Screening

- (a) Measure 200g of kernels which is free from foreign matter and pods and screen over the 6,75 mm slotted screen, the 6,00 mm slotted screen, the 7,20 mm round-hole screen and a pan.
- (b) Determine the mass of the kernels above the 6,75 mm slotted screen and express as a percentage;
- (c) Determine the mass of the unsound, blemished and soiled kernels above the 6,75 mm slotted screen and express as a percentage of kernels on the 6,75 mm slotted screen;
- (d) Determine the mass of the blemished and soiled kernels above the 6,75 mm slotted screen;
- (e) Determine the mass of the unsound kernels above the 6,75 mm slotted screen and express as a percentage of the kernels above the 6,75 mm slotted screen;
- (f) Determine the mass of damaged, broken, sun cured and shrivelled kernels above the 6,75 mm slotted screen;
- (g) Determine the total mass of defective kernels above the 6,75 mm slotted screen and expressed as a percentage of the kernels above the 6,75 mm slotted screen;
- (h) Determine the mass of edible kernels above the 6,75 mm slotted screen and expressed as a percentage;
- (i) Determine the mass of the kernels above the 6,00 mm slotted screen and express as a percentage;
- (j) Determine the mass of the unsound, blemished and soiled kernels on the 6,00 mm slotted screen;
- (k) Determine the mass of the unsound kernels on the 6,00 mm slotted screen;
- (l) Determine the mass of the damaged and shrivelled kernels on the 6,00 mm slotted screen;
- (m) Determine the total defective kernels on the 6,00 mm slotted screen;
- (n) Determine the mass sundry edible groundnuts on the 6,00 mm slotted screen and express it as a percentage;
- (o) Determine the mass of the kernels on the 7,20 mm round hole screen and express it as a percentage;
- (p) Determine the mass of the unsound and soiled kernels on the 7,20 mm round hole screen;
- (q) Determine the mass of the unsound kernels on the 7,20 mm round hole screen and express it as a percentage;
- (r) Determine the mass of the whole kernels on the 7,20 mm round hole screen and expressed as a percentage of the kernels above the 7,20 mm round hole screen;

- (s) Determine the mass of the total clean splits on the 7,20 mm round hole screen and express it as a percentage;
- (t) In the case of Choice/Standard grade;
Determine the mass of all the unsound kernels above the 6,00 slotted screen the 7,20 mm round-hole screen and express as a percentage of the working sample.
In the case of Sundry grade;
Determine the mass of all the unsound kernels above the 6,75 mm slotted screen, the 6,00 mm slotted screen, the 7,20 mm round-hole screen and express as a percentage of the working sample.
- (u) In the case of Choice/Standard grade;
Determine the mass of all the unsound, blemished and soiled kernels above the 6,00 slotted screen and the unsound, soiled kernels above the 7,20 mm round-hole screen and express as a percentage of the working sample.
In the case of Sundry grade;
Determine the mass of all the unsound kernels above the 6,75 mm slotted screen, the 6,00 mm slotted screen and unsound and soiled kernels on the 7,20 mm round-hole screen and express as a percentage of the working sample.
- (v) In the case of Choice/Standard grade;
Determine the mass of the total defects above the 6,00 mm slotted screen the 7,20 mm round-hole screen and express as a percentage of the working sample.
In the case of Sundry grade;
Determine the mass of the total defects above the 6,75 mm slotted screen and 6,00 mm slotted screen and unsound, soiled kernels on the 7,20 mm round-hole screen and express as a percentage of the working sample.
- (w) In the case of Choice/Standard grade;
Determine the mass of the total sundry kernels by:
Adding together the blemished, soiled, damaged and shrivelled kernels above the 6,75 mm slotted screen, total edible kernels above the 6,00 mm slotted screen, and the total clean splits above the 7,20 mm round-hole screen and expressing them as a percentage of the working sample.
In the case of Sundry grade;
Determine the mass of the total sundry kernels by:
Adding together the blemished, soiled, damaged and shrivelled kernels above the 6,75 mm slotted screen, the total edible kernels above the 6,00 mm slotted screen, the total clean splits above the 7,20 mm round-hole screen as well as the total Choice or Standard grade above the 6,75 mm slotted screen and expressing them as a percentage of the working sample.
- (x) Determine the mass of the kernels in the pan and express as a percentage;
- (y) Determine the the mass of the unsound kernels in the pan;
- (z) Determine the mass of the unsound kernels in the whole sample and express it as a percentage of the working sample; and
- (aa) Determine the total crushing groundnuts in the sample and express it as a percentage of the working sample.
- (bb) Balance the receipt.
- (cc) Allocate the grade comparing the result with the requirements of the different grades.

		KERNELS/PODS // PITTE/PEULE		Gram	%	% PERMISSIBLE / TOELATING		
						MAX/MAKS	MIN.	
POD / PEUL	1	Kernel contents/Pitinhoud (MIN 1.5%)	P.I.					
		Shelled kernels/Uitgedopte pitte	U.P.			5		
		Sticks/Stokkies	S.T.			10		
		Foreign matter and sticks / Vreemde voorwerpe en stokkies	VVS			15		
KERNEL / PIT		Foreign matter/Vreemde voorwerpe	VV			3		
		Pods/Nubbins / Peule/Eenpitpeule	ON			6		
		Total Foreign matter / Total Vreemde voorwerpe	VV			9		
EDIBLE MARKET / EET- MARK	2	Kernels on/Pitte op: 6,75 mm #	A					
		Unsound, Blemished, Soiled (UBS) Ongesond, Gevlek, Vuilgesmeer (OGV)	B			K - 10 S - 20		
		Blemished, Soiled / Gevlek, Vuilgesmeer	C					
		Unsound at B/Ongesond in by B	D			K 5 / S 10		
		Damaged, Broken, Shrivelled and Sun dried / Beskadig, Gebreekte, Verkrimp en Songedroog	E					
		TOTAL DEFECTS/TOTALE DEFEKTE: B+E	F			K 20 S 35		
		TOTALCHOICE / STD EDIBLE MARKET / TOTALE KEUR / STD EETMARK: A-F	G*				Kernel / Pitte K-20 / S - 1 Pods / Peule - 1	
SUNDRY EDIBLE MARKET / DIVERSE EET- MARK	3	Kernels on / Pitte op: 6,00 mm #	H					
		Unsound, Blemished, Soiled (UBS) / Ongesond, Gevlek, Vuilgesmeer (OGV)	I					
		Unsound at/Ongesond in by: I	J					
		Damaged, Shrivelled/Beskadig, Verkrimp	K					
		TOTAL DEFECTS/TOTALE DEFEKTE: I+K	L					
		TOTAL EDIBLE KERNELS ON THE / TOTALE EETPITTE OP DIE: 6,00 # H-L	M					
	4	Kernels on the / Pitte op die: 7,20 mm ø	N					
		Unsound, Soiled / Ongesond, Vuilgesmeer	O					
		Unsound at / Ongesond in by: O	P					
		Whole kernels on / Heel pitte op: 7,20 mm ø	Q					
		TOTAL CLEAN SPLITS / TOTALE SKOON SPLITS: N-O-Q	R					
		5	Unsound Diverse Market / Ongesond Diverse Mark: (D+J+P)x100 - (A+H+N)	S*			15	
			UBS Diverse Market / OGV Diverse Mark: (B+I+O) x 100 - (A+H+N)	T*			30	
TOTAL DEFECTS SUNDRY MARKET / TOTALE DEFEKTE DIVERSE MARK: (F+L+O)x100 -(A+H+N)	U*				40			
TOTAL SUNDRY MARKET / TOTALE DIVERSE MARK: (G)+C+E+M+R	V					Kernels / Pitte - 40 Pods / Peule - 20		
PERS / CRUSHING	6	Kernels in pan / Pitte in pan	W*					
		Unsound in pan / Ongesond in pan	X					
		Unsound whole sample / Ongesond hele monster: D+J+P+X	Y			20		
		CRUSH TOTAL / PERS TOTAAL: D+L+O+Q+W	Z					
		TOTAL IN SAMPLE / TOTAAL IN MONSTER: G+V+Z of (V+Z)				100	100	

* (G)

In case it does not qualify as Choice/Standard/Indien nie as Keur/Standaardgraad kwalifiseer nie.

* (S)

In case it does not qualify as Choice/Standard use (D) + (A)/Indien nie as Keur/Standaardgraad kwalifiseer nie word (D) + (A) gebruik/

* (T)

In case it does not qualify as Choice/Standard use (B) + (A)/Indien nie as Keur/Standaardgraad kwalifiseer nie word (B) + (A) gebruik

* (U)

In case it does not qualify as Choice/Standard use (F) + (A)/Indien nie as Keur/Standaardgraad kwalifiseer nie word (F) + (A) gebruik

* (W)

In case (S), (T), (U) does not qualify as Diverse Grade due to kernels on the 6,00 mm roundhole sieve use (H) and (W)/Indien (S), (T), (U) nie as Diverse Graad kwalifiseer nie as gevolg van pitte op die 6,00 mm gleufsif word (H) en (W) gebruik