

---

**GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS**

---

**DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES**

NO. R. 631

22 JUNE 2018

AGRICULTURAL PRODUCT STANDARDS ACT, 1990  
(ACT No. 119 OF 1990)**REGULATIONS RELATING TO THE GRADING, PACKING AND MARKING OF FRESH FRUITS  
INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA**

The Minister of Agriculture, Forestry and Fisheries has, under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990) --

- (a) made the regulations in the Schedule; and
- (b) determined that the said regulations shall come into operation 30 days after the date of publication.

**PART I  
GENERAL REQUIREMENTS****Definitions**

1. In these regulations, unless inconsistent with the context, any word or expression to which a meaning has been assigned in the Act, shall have that meaning, and --

**"Arthropod"** means any stage in the life cycle of an invertebrate member of the animal kingdom that is bilaterally symmetrical with a segmented body, with jointed limbs that are paired and a chitinous external skeleton;

**"bleeding"** means an indication of over maturity or excessive softness with the presence of juice leaking from the berries;

**"blemish"** means any external skin defect on the surface of the fresh fruit which detrimentally affects the appearance of the fresh fruit;

**"bruise"** means any indentation or discoloration directly under the skin;

**"consignment"** means --

- (a) a quantity of fresh fruits of the same cultivar, belonging to the same owner and delivered at the same time under cover of the same delivery note, consignment note or receipt note, or delivered by the same vehicle, or
- (b) in the case of a quantity of fresh fruits which is divided into different cultivars, classes, pallet loads, trademarks or types of packaging, every quantity of each of the different cultivars, classes, pallet loads, trademarks or types of packaging;

**"container"** means the immediate package in which fresh fruits are packed directly and the outer package in which pre-packed units are packed and bulk containers, excluding pre-packed units;

**"count"** means the number of fruits packed in a container;

**"decay"** means a state of decomposition, fungus development, internal insect infestation or internal insect damage, with signs of tissue collapse or insect excrement, which detrimentally affects the quality of the fresh fruit;

**"dry crack"** means any crack that exposes the flesh and which has dried out and is sealed off;

**"diameter"** means the largest diameter measured at right angles to the longitudinal axis of the fresh fruit;

"**foreign matter**" means any material or substance not normally present in, on or between the fresh fruit;

"**fresh fruits**" means Berries (blackberries; blueberries; cranberries; gooseberries; raspberries); Cactus pears; Cherries; Dragon fruit; Figs; Granadillas; Guavas; Jack fruit; Kiwi fruit; Mangoes; Papayas; Persimmons; Pomegranates; Quinces; Star fruit; Strawberries; Watermelons and Melons;

"**blackberries**" means the fruit of the cultivars which are grown from the species *Rubus spp.*;

"**blueberries**" means the fruit of the cultivars which are grown from the species *Vaccinium corymbosum L.*, *Vaccinium australe Small*, *Vaccinium angustifolium Ait.* and their hybrids;

"**cactus pear**" means the fruit of the cultivars which are grown from the species *Cactus opuntia*;

"**cherries**" means the fruit of the cultivars/varieties which are grown from the species *Prunus avium* or *Prunus cerasus*;

"**cranberries**" means the fruit of the cultivars which are grown from the species *Vaccinium macrocarpon*, *Vaccinium oxycoccos*;

"**figs**" means the fruit of the cultivars which are grown from the species *Ficus carica*;

"**gooseberries**" means the fruit of the cultivars which are grown from the species *Ribesuva-crispa L. (R. grossularia)*;

"**granadilla**" means the fruit of the cultivars which are grown from the species *Passiflora edulis*, or *Passiflora var. Flavicorpa* and their hybrids;

"**guava**" means the fruit of the cultivars which are grown from the species *P. quajava rosa*;

"**jack fruit**" means the fruit of the cultivars which are grown from the species *Artocarpus heterophyllus*;

"**kiwi fruit**" means the fruit of the cultivars which are grown from the species *Actinidia argute*; *Actinidia deliciosa* and *Actinidia chinensis*;

"**mango**" means the fruit of the cultivars which are grown from the species *Mangifera indica*;

"**melons**" means the fruit of the cultivars which is grown from the species *Cucumis melo*;

"**papayas**" means the fruit of the cultivars which are grown from the species *Carica papaya*;

"**persimmons**" means the fruit of the cultivars which are grown from the species *Diospyros kaki*;

"**pomegranate**" means the fruit of the cultivars which are grown from the species *Punica granatum*;

"**quinces**" means the fruit of the cultivars which are grown from the species *Cydonia oblonga*;

"**raspberries**" means the fruit of the cultivars which are grown from the species *Rubus idaeus L.*, *Rubus occidentalis L.*;

"**star fruit**" means the fruit of the cultivars which are grown from the species *Averrhoa carambola*;

"**strawberry**" means the fruit of the cultivars which are grown from the species *Fragaria ananassa*;

"**watermelons**" means the fruit of the cultivars which is grown from the species *Citrullus lanatus*.

"**injury**" means any wound which has pierced the skin of the fresh fruit and exposes the flesh, with the exception of such wounds which have become completely callused;

**"inspector"** means an officer under the control of the Executive Officer, or an Assignee or a qualified employee of an Assignee;

**"internal breakdown"** means a state of physiological deterioration affecting the internal quality of the fruit detrimentally;

**"malformation"** means that the fruit have a shape which is not typical of the cultivar concerned;

**"other unspecified fruit"** means any other fruit type not mentioned under fresh fruits;

**"overmature"** means the physiological stage of the fruit, where it has passed the optimal eating quality;

**"pre-packed unit"** means any single packing unit for presentation as such to the consumer consisting of fresh fruit and the packaging into which the fresh fruit were put before being offered for sale;

**"sunburn"** means a condition on the surface of the skin of a fruit giving it a yellow, brown or black colour and which is caused by excessive exposure to the sun;

**"the Act"** means the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990); and

**"well-formed"** means that the fresh fruit has a shape which is typical of the cultivar concerned.

#### ***Restrictions over the sale of fresh fruit***

2. (1) No person shall sell fresh fruits in the Republic of South Africa --
  - (a) unless the fresh fruits are sold according to the classes referred to in regulation 3;
  - (b) unless the fresh fruits comply with the requirements regarding quality referred to in regulation 4;
  - (c) unless such fresh fruits are packed in a container and in the manner prescribed in regulations 5, 6, 7, 8 and 9;
  - (d) unless the fruits are presented in accordance to the provisions concerning presentation as set out in regulation 10; and
  - (e) unless such fresh fruits are marked with the particulars and in the manner prescribed in regulation 11.
- (2) Imported fresh fruits may be exempted from the provisions of sub-regulation 2 (1), provided that the fresh fruits --
  - (a) comply with either the Codex Alimentarius, UNECE (United Nations Economic Commission for Europe) or OECD (Organisation for Economic Co-operation and Development) standards; and
  - (b) are according to bilateral agreement accompanied by certificate issued by a relevant government authority responsible for quality control of fresh fruits in which it is certified that the quality of fresh fruits as verified through inspection conforms to the relevant standard.
- (3) The Executive Officer may grant written exemption, entirely or partially, to any person on such conditions as he deems necessary, from the provisions of sub-regulation 2 (1).

## QUALITY STANDARDS

### *Classes of fresh fruits*

3. There are three classes of fresh fruit, namely "Class 1", "Class 2" and "Lowest Class".

### *Standards for classes of fresh fruits*

4. (1) "Class 1" and "Class 2" --

(a) shall respectively comply with the quality standards for classes as set out in Tables 1; and

(b) may deviate from the specifications prescribed in paragraph (a), to the extent set out in Table 2.

(2) "Lowest Class" fresh fruits shall comprise of fresh fruits that does not comply with the specific standards and requirements for "Class 1" and "Class 2" mentioned in sub-regulation 4 (1), but which are still edible, intact, normal in appearance and free from any foreign or off-flavours and odours which indicate the presence of decay.

(3) All classes shall comply with the specifications as set out in Part II of the regulations.

## PACKING REQUIREMENTS

### *Requirements for containers*

5. (1) Fresh fruits shall be packed in containers that are:

(a) suitable, clean, undamaged;

(b) not to impart a foreign taste or odour to the fresh fruit;

(c) free from any visible signs of fungus growth;

(d) free from Arthropod infestation; and

(e) strong and rigid enough to ensure that the original shape shall be retained and shall not bulge out, dent in, break or tear during normal storage, handling or transport.

(2) Containers (excluding cartons) that are re-used shall be of a suitable material that can be cleaned and disinfected prior to re-use.

### *Packing requirements*

6. (1) Fresh fruits in the same container shall be uniform with regard to class, quality, colour, ripeness, shape, size, appearance and cultivar.

(2) Each container shall be packed to capacity.

(3) If fresh fruits are packed in pre-packed units, such units shall be packed in a suitable manner in an outer container: Provided that the pre-packed units are clean, dry, undamaged and suitable.

### *Packing material*

7. If packing material is used inside the container such packing material shall be new, clean, dry, odourless, and not transmit to the fresh fruits any harmful substance or any substance that may be injurious to fresh fruit.

**Stacking of containers on pallets**

8. If containers containing fresh fruits are palletised –
- (1) the pallet shall be clean, undamaged and suitable;
  - (2) the containers shall be stacked firmly and square with each other and with the pallet; and
  - (3) only containers of the same dimensions shall be stacked in the same layer on the pallet.

**Strapping of pallet loads**

9. (1) A pallet load of containers shall be strapped in a suitable manner.
- (2) If containers without lids are being used, a suitable covering may be placed on top of the pallet load of containers before the pallet load is strapped.

**Provisions concerning presentation**

10. The contents of each container must be uniform with regard to colour, ripeness, shape, size appearance and cultivar. The visible part of the contents of the container must be representative of the entire contents.

**MARKING REQUIREMENTS**

11. (1) Each container including pre-packed units containing fresh fruits shall be marked clearly, neatly, indelibly, legibly, on any visible short or long side of the lid or container, where lids are not used, by printing, stamping or by means of specially designed labels with the following particulars: Provided that all particulars shall be grouped on the same side:
- (a) the expression "Fresh fruit" (as the case may be), or other common names: Provided that if the contents are visible from the outside, this expression does not have to be indicated on the container;
  - (b) the appropriate cultivar/variety name (optional), in the case of mixed cultivars/varieties, container shall be marked "mixed cultivars/varieties";
  - (c) the expression "Class 1; Cat 1; Category 1; Class I ;Cat I"; "Class 2" Cat 2; Category 2; Class II; Cat II; Category II or "Lowest Class" as the case may be;
  - (d) the name and physical or postal address of the producer, packer or owner of the contents of the container;
  - (e) the applicable size, count or mass (optional);
  - (f) the country of origin: Provided that no abbreviations or the expression "South Africa" on its own shall be used (e.g. "Product of South Africa", "Produced in South Africa", or any other similar expression; and
  - (g) the applicable date of packing/ date code (optional).
- (2) Subject to the provisions of sub-regulation 11(1), each outer container containing pre-packed units shall be marked with an indication of the total number of pre-packed units per outer container: Provided that if the total number of pre-packed units is visible from the outside, it does not have to be indicated on the outer container.

***Prohibition of false or misleading description for products***

12. No person shall use any name, word, expression, reference, particulars or indication in any manner, either by itself or in conjunction with any other written, printed, illustrated or visual material, in connection with the sale of a product in a manner that conveys or creates or is likely to convey or create a false or misleading impression as to the nature, substance, quality or other properties, or the class or grade, origin, identity or manner or place of production, of that product.

***Display***

13. If fresh fruits are displayed loose or in containers, the class of such quantity of fresh fruit shall be in clear legible letters on a notice board prominently placed at such quantity of fresh fruit.

**SAMPLING PROCEDURES*****Obtaining a sample of the consignment***

14. An inspector shall draw containers at random for inspection purposes and shall be satisfied that the containers so drawn are representative of the consignment concerned.

***Obtaining an inspection sample***

15. An inspection sample shall be drawn from each container obtained in accordance with regulation 14 and shall consist of the entire contents of the container. In the case of containers containing more than 20 fresh fruits, a sample shall consist of at least 20 randomly chosen fruit.

***Deviating sample***

16. If an inspector should notice during the process of drawing the random sample or during the inspection, that some of the containers derived from any part of the pallet load, truck load or consignment contain fresh fruits which are noticeably inferior to or differ from the contents of containers which represent the remainder of the pallet load, truck load or consignment, the inspection result shall be based only on the containers derived from the deviating portion of the pallet load, truck load or consignment and further samples required for inspection shall be drawn from this deviating portion.

**OFFENCE AND PENALTIES**

17. Any person who contravenes or fails to comply with a provision of these regulations shall be guilty of an offence and upon conviction be liable to a fine or imprisonment or both in accordance with section 11 of the Act.

**TABLE 1: GENERAL QUALITY STANDARDS**

<b>Quality defect</b>	<b>Class 1</b>	<b>Class 2</b>	<b>Lowest Class</b>
1. General appearance	Fresh, attractive and intact	Fresh and firm	-
2. Colour	Good and typical of the cultivar concerned	Good and typical of the cultivar concerned	-
3. Shape	Well-formed and typical of the cultivar concerned	Slight deviation in shape on condition that the characteristics of the cultivar are still retained	-
4. Blemishes	Shall not exceed 15% of the total surface area of the fruit	Shall not exceed 30% of the total surface area of the fruit	-
5. Shrivelling	Visibly free of external signs of shrivelling	Visibly free of external signs of shrivelling	-
6. Maturity	Shall be fully developed but not overripe, with a firm flesh	Shall be fully developed but not overripe, with a firm flesh	-
7. Sunburn	Visibly free of external signs of sunburn	Visibly free of external signs of sunburn	-
8. Bruise	Shall not exceed 10% of the total surface area of the fruit	Shall not exceed 20% of the total surface area of the fruit	-
9. Hail marks	Shall not exceed 2 mm in depth and 5% of the total surface area of the fruit	Shall not exceed 2 mm in depth and 10% of the total surface area of the fruit	-
10. Foreign matter	May deviate to the extent as set out in Table 2	May deviate to the extent as set out in Table 2	-
11. Stems	May be absent: Provided that the skin is not damaged	May be absent: Provided that the skin is not damaged	-
12. Injuries	May deviate to the extent as set out in Table 2	May deviate to the extent as set out in Table 2	-
13. Any other internal or external quality defects not mentioned above	May deviate to the extent as set out in Table 2	May deviate to the extent as set out in Table 2	-

- No applicable quality standards.

**TABLE 2: MAXIMUM PERMISSIBLE DEVIATIONS BY NUMBER**

<b>Quality defect</b>	<b>Class 1</b>	<b>Class 2</b>	<b>Lowest Class</b>
1. Decay	5%	10%	20%
2. Injuries	10%	15%	-
3. Bruises, and bleeding	10%	15%	-
4. Maturity (overripe or unripe)	10%	20%	-
5. Blemishes, cochénille stains and damage, sunburn, hail marks, wilting and cold damage	15%	20%	-
6. Foreign matter	15%	20%	-
7. Malformation	15%	20%	-
8. Long stems	15%	20%	-
9. Shrivelling	15%	20%	-
10. Deviations from packing and marking requirements	20%	30%	-
11. Deviations in items 2, 3, 5, 6, 7 and 9 of this table collectively: Provided that such deviations are individually within the specified limits	20%	30%	-
12. Any other internal or external quality defects not mentioned above	10%	15%	-

- No applicable quality standards.

**PART II  
SPECIFIC REGULATIONS FOR FRESH FRUIT**

**NOTE: IN CASE WHERE NO QUALITY PARAMETERS ARE SPECIFIED, PART I WILL BE APPLICABLE**

**(a) CACTUS PEAR**

**METHOD OF INSPECTION**

***Determination of ripeness***

18. Ripeness of cactus pears shall be determined as follows:

- (1) Take as working sample ten cactus pears at random from the inspection sample obtained in accordance with regulation 15;
- (2) Bisect each fruit on the longitudinal axis;
- (3) Pips must be well developed with jelly and not soft and flaccid; and
- (4) Determine the number of cactus pears which exceed or do not exceed the optimum ripeness stage and calculate it as a percentage of the total number of cactus pears obtained in the inspection sample according to regulation 15.

**TABLE 1: QUALITY STANDARDS**

Quality defect	Class 1	Class 2
1. Cochenille stains	Stains of which the total surface area does not exceed 100 mm <sup>2</sup> is allowable: Provided that the stains do not detrimentally affect the appearance of the fruit	Stains of which the total surface area does not exceed 225 mm <sup>2</sup> is allowable: Provided that the stains do not detrimentally affect the appearance of the fruit
2. Cochenille damage	May not exceed a surface area larger than 30 mm <sup>2</sup>	May not exceed a surface area larger than 50 mm <sup>2</sup>

**(b) FIGS**

**METHODS OF INSPECTION**

***Determination of internal breakdown and other internal quality defects***

19. Internal breakdown and other internal quality defects of figs shall be determined as follows:

- (1) Take as working sample the ten figs which are, in the opinion of the inspector, the most likely to have been affected by internal breakdown and other internal quality defects, from the inspection sample obtained;
- (2) Cut each of the ten figs longitudinally; and
- (3) Calculate the number of figs thus found to be affected by internal breakdown and other internal quality defects, as a percentage of the total number of figs in the inspection sample.

**TABLE 2: QUALITY STANDARDS**

Quality defect	Class 1	Class 2
Long stems	Not longer than 5mm from joint	Not longer than 5mm from joint

**TABLE 3: MAXIMUM PERMISSIBLE DEVIATIONS BY NUMBER**

Quality defect	Class 1	Class 2
Long stems	10%	20%

**(c) GRANADILLAS****METHODS OF INSPECTION*****Determination of ripeness***

20. (1) For the determination of ripeness and maturity of granadillas, a calibrated refractometer shall be used to determine the total soluble solids (TSS) as follows:

- (a) Take as working sample ten granadillas at random from the inspection sample obtained in accordance with regulation 15;
  - (b) Place an equal number of drops (1 to 2) of juice onto the prism plate of the refractometer;
  - (c) Note the reading on the prism scale to one decimal place;
  - (d) Repeat the steps in paragraphs (a) and (b), after the prism plate was cleaned with distilled water and wiped dry;
  - (e) Determine the average of the two readings; and
  - (f) The minimum total soluble solids (TSS) content of granadillas shall be 12%.
- (2) The fruit must be naturally ripe and firm with:
- (a) A maximum of 10% green external colour; and
  - (b) Soft orange coloured flesh and crunchy dark coloured seeds.

**(d) KIWI FRUITS****METHODS OF INSPECTION*****Determination of internal breakdown and other internal quality defects***

21. Internal breakdown and other internal quality defects of kiwi fruits shall be determined as follows:

(1) Take as working sample the ten kiwi fruits which are, in the opinion of the inspector, the most likely to have been affected by internal breakdown and other internal quality defects, from the inspection sample obtained;

- (2) Cut each of the ten kiwi fruits; and

(3) Calculate the number of kiwi fruits thus found to be affected by internal breakdown and other internal quality defects, as a percentage of the total number of kiwi fruits in the inspection sample.

**Determination of ripeness**

22. (1) For the determination of ripeness of kiwi fruits, the following apparatus shall be used:
- (a) Take as working sample ten kiwi fruits at random from the inspection sample obtained in accordance with regulation 15;
  - (b) A calibrated refractometer; and
  - (c) A handheld penetrometer or a penetrometer mounted on a drill stand with a plunger of 8 millimetre in diameter.
- (2) If the calibrated refractometer is used to determine the total soluble solids (TSS), the following procedure shall be followed:
- (a) Place an equal number of drops (2 or more) of juice onto the prism plate of the refractometer;
  - (b) Note the reading on the prism scale to one decimal place;
  - (c) Repeat the steps in paragraph (a) and (b), after the prism plate was cleaned with distilled water and wiped dry;
  - (d) Determine the average of the two readings; and
  - (e). The kiwi fruits shall be considered to be ripe if they conform to the ripeness standard as set out in Table 4.
- (3) If a handheld penetrometer or a penetrometer mounted on a drill stand is used, the following procedure shall be followed:
- (a) Remove a thin layer of skin in the centre on both cheeks of each kiwi fruits fruit;
  - (b) Hold the kiwi fruits fruit firm with one hand: Provided that if a handheld penetrometer is used, your hand should rest on a rigid surface;
  - (c) Zero the penetrometer and place the plunger head of 8 millimetre in diameter on the spot where the skin was removed;
  - (d) Aim at the centre of the fruit and apply steady downward pressure on the penetrometer until the plunger has penetrated the flesh of the Kiwi fruits fruit up to the depth of the plunger;
  - (e) Remove the plunger and note the reading on the penetrometer, to one decimal;
  - (f) Repeat the process on the opposite side of the same kiwi fruits after zeroing the penetrometer;
  - (g) Calculate the average of the two pressure readings for each kiwi fruits; and
  - (h) Determine the average percentage of all the inspection samples.

**TABLE 4: RIPENESS STANDARDS**

Quality defect		Class 1 and Class 2
1.	Minimum TSS	10
2.	Minimum pressure	1kg
3.	Maximum pressure	12kg with 8 point

**(e) MANGOES****Definitions**

**"jelly seed"** means a stage where the colour of the flesh of the fruit near the pip, has changed from anopaque to a translucent yellow colour;

**"sap burn"** means stains or elongated streaks on the skin of the mango, brought about by the running or trickling down of the latex, so as to "burn" the surface of the fruit when the pedicel has been snapped or broken off;

**Testing for maturity**

23. (1) the mango must be held firmly with one hand.

(2) Cut the mango through the equatorial axis (through the seed) with a suitable knife or guillotine. (Note: In the case of the cultivar Isis, an equatorial cut must be made between the stem-end and the pip.)

(3) Then using the above-mentioned knife or guillotine, make a polar cut on the ripest side of any half of the fruit, perpendicularly through the flesh, 50 percent between the skin and pip.

(4) Determine if each of the mangoes comply with the prescribed minimum colour requirements for the cultivar concerned, as set out in Table 5, by using the Mango colour chart.

(5) Exclude fruit that show signs of spontaneous ripening (internal softening) and physiological disorders (jelly pip, pip germination and split pip) from each sample.

**TABLE 5: MATURITY REQUIREMENTS**

Cultivars	Colour requirements for Class 1 and Class 2
Sensation	0.1: on 33% of flesh between pip and skin on the ripest side of the fruit, shall be of a pale yellow colour as depicted in the Mango colour chart. Provided that 25% of the fruit in the inspection sample may display less than 33% internal flesh discoloration. Provided further that a pale yellow colour as depicted in the colour chart is visible around the pip.
Heidi	0.1: on 50% of flesh between pip and skin on the ripest side of the fruit, shall be of a slight yellow colour as depicted in the Mango colour chart.
Isis	0.1: on flesh at stem end the fruit flesh shall display a slight yellow colouring when a cut is made through the stem end of the fruit.
All other cultivars	0.3: on 50% of flesh between pip and skin on the ripest side of the fruit, shall be of a pale yellow colour as depicted in the Mango colour chart. Provided that no softening is present.

**TABLE 6: QUALITY STANDARDS**

Quality defect	Class 1	Class 2	Lowest Class
1. Sap burn	Light streaks may appear	Concentrated dark streaks may appear: Provided that it does not affect the general appearance of the fruit	-
2. Jelly seed	A surface area of 15 per cent jelly seed development of the flesh around the pip is permissible	A surface area of 20 per cent jelly seed development of the flesh around the pip is permissible	-

**TABLE 7: MAXIMUM PERMISSIBLE DEVIATIONS BY NUMBER**

Quality defect	Class 1	Class 2
1. Sap burn	10%	20%
2. Jelly seed	10%	20%

**(f) PERSIMMONS****METHODS OF INSPECTION*****Determination of internal breakdown and other internal quality defects***

24. Internal breakdown and other internal quality defects of persimmons shall be determined as follows:

(1) Take as working sample the ten persimmons which are, in the opinion of the inspector, the most likely to have been affected by internal breakdown and other internal quality defects, from the inspection sample obtained.

(2) Cut each of the ten persimmons.

(3) Calculate the number of persimmons thus found to be affected by internal breakdown and other internal quality defects, as a percentage of the total number of persimmons in the inspection sample.

***Determination of ripeness***

25. (1) For the determination of ripeness of persimmons, the following apparatus shall be used:

- (a) Take as working sample ten persimmons at random from the inspection sample obtained in accordance with regulation 15;
- (b) A calibrated refractometer.
- (c) A handheld penetrometer or a penetrometer mounted on a drill stand with a plunger of 11,2 millimetre in diameter.

(2) If the calibrated refractometer is used to determine the total soluble solids (TSS), the following procedure shall be followed:

- (a) Place an equal number of drops (2 or more) of juice onto the prism plate of the refractometer.
- (b) Note the reading on the prism scale to one decimal place.
- (c) Repeat the steps in paragraph (a) and (b), after the prism plate was cleaned with distilled water and wiped dry.
- (d) Determine the average of the two readings.
- (e) The persimmons shall be considered to be ripe if they conform to the ripeness standard as set out in Table 10.

(3) If a handheld penetrometer or a penetrometer mounted on a drill stand is used, the following procedure shall be followed:

- (a) Remove a thin layer of skin in the centre on both cheeks of each persimmon fruit.
- (b) Hold the persimmon fruit firm with one hand: Provided that if a handheld penetrometer is used, your hand should rest on a rigid surface.
- (c) Zero the penetrometer and place the plunger head of 11,2 millimetre in diameter on the spot where the skin was removed.
- (d) Aim at the centre of the fruit and apply steady downward pressure on the penetrometer until the plunger has penetrated the flesh of the persimmon fruit up to the depth of the plunger.
- (e) Remove the plunger and note the reading on the penetrometer, to one decimal.
- (f) Repeat the process on the opposite side of the same persimmon after zeroing the penetrometer.
- (g) Calculate the average of the two pressure readings for each persimmon.
- (h) Determine the average percentage of all the inspection samples.

**TABLE 8: QUALITY STANDARDS**

Quality defect	Class 1	Class 2
1. Long stems	Not longer than 5 mm	Not longer than 7 mm

**TABLE 9: MAXIMUM PERMISSIBLE DEVIATIONS BY NUMBER**

Quality defect	Class 1	Class 2
1. Long stems	10%	20%
2. Calyx separation	10%	20%

**TABLE 10: RIPENESS STANDARDS**

Quality defect	Class 1 and Class 2
1. Minimum TSS	10
2. Minimum pressure	1 kg
3. Maximum pressure	16 kg with 11.2 point

**(g) POMEGRANATES****METHODS OF INSPECTION*****Determination of internal breakdown and other internal quality defects***

26. Internal breakdown and other internal quality defects of pomegranates shall be determined as follows:

(1) Take as working sample the ten pomegranates which are, in the opinion of the inspector, the most likely to have been affected by internal breakdown and other internal quality defects, from the inspection sample obtained in accordance with regulation 15;

(2) Cut each of the ten pomegranates; and

(3) Calculate the number of pomegranate thus found to be affected by internal breakdown and other internal quality defects, as a percentage of the total number of pomegranate in the inspection sample.

***Determination of ripeness***

27. A calibrated refractometer shall be used for the determination of total soluble solids (TSS) as follows:

(1) Take as working sample ten pomegranates at random from the inspection sample obtained in accordance with regulation 15;

(2) Place an equal number of drops (2 or more) of juice onto the prism plate of the refractometer;

(3) Note the reading on the prism scale to one decimal place;

(4) Repeat the steps in paragraph (a) and (b), after the prism plate was cleaned with distilled water and wiped dry;

(5) Determine the average of the two readings; and

(6) The pomegranates shall be considered to be ripe if they conform to the minimum TSS of 13%.

**(h) WATERMELONS AND MELONS*****Definition***

“Iying marks” means points where the fruit touched the ground while growing.

**Determination of ripeness**

28. A calibrated refractometer shall be used for the determination of total soluble solids (TSS) as follows:

- (1) Take as working sample ten watermelons and melons at random from the inspection sample obtained in accordance with regulation 15;
- (2) Bisect the fruit on the longitudinal axis;
- (3) Cut a slice out of half of the fruit;
- (4) Bisect the slice with a cross cut;
- (5) Squeeze two to three drops of juice resulting from the cut on the prism of the refractometer;
- (6) Adjust the refractometer reading according to the applicable temperature correction;
- (7) Determine the individual readings each of the fruit in the working sample;
- (8) The watermelons and melons shall be considered to be ripe if they conform to the minimum TSS.

**TABLE 11: QUALITY STANDARDS**

Quality defect	Melons	Watermelons
	Class 1 and Class 2	
1. Texture	Firm, without any signs of softening	Firm, without any signs of over-maturity (sponginess)
2. Lying marks	Lying marks and pale discoloration shall not exceed 25 % of surface area: Provided that purple, black or mouldy spots, insect damage, cracks or soft spots are not present	Lying marks and pale discoloration shall not exceed 25 % of surface area: Provided that purple, black or mouldy spots, insect damage, cracks or soft spots are not present
3. Maturity	8	10