

NOTE BY THE SECRETARIAT:

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UNECE STANDARD FFV-49
concerning the marketing and commercial
quality control of

PINEAPPLES

I. DEFINITION OF PRODUCE

This standard applies to pineapples of varieties (cultivars) grown from *Ananas comosus* (L.) Merr., to be supplied fresh to the consumer. Pineapples for ornamental use or industrial processing are excluded.

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements of pineapples at the export control stage, after preparation and packaging.

A. Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the pineapples must be:

- intact, complete with the crown, which may be reduced¹ and/or trimmed²;
- fresh in appearance, including the crown, which should be free of wilted, dry, loose or damaged leaves;
- sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- free of internal browning;
- practically free of pests;
- practically free of damage caused by pests;
- free of pronounced blemishes, in particular unhealed cuts, bruising, scorching, holes, cracks (healed or not);
- free of damage caused by chilling or by high temperature;
- free of abnormal external moisture;
- free of any foreign smell and/or taste.

1 "Reducing" of the crown refers to the mechanical destruction of the apical growing point in the heart of the crown during the growth period at about two months from harvest by means of a gouge or similar instrument. Done correctly, this leaves no visible scar at harvest and requires no special subsequent treatment.

2 "Trimming" is defined as the removal after harvest of dead, wilted or damaged leaves, either by hand or with a sharp blade. Only when explicitly so specified by a particular market outlet should the crowns be removed in their entirety.

When a peduncle (stem) is present, it shall be no longer than 2.0 cm long³ and the cut must be transversal, straight and clean.

The development and condition of the pineapples must be such as to enable them:

- to withstand transport and handling, and
- to arrive in satisfactory condition at the place of destination.

B. Maturity requirements

The fruit must be physiologically ripe, i.e. without evidence of unripeness (opaque, flavourless, exceedingly porous⁴ flesh) or over-ripeness (exceedingly translucent or fermented flesh).

A transverse section of the fruit must not reveal flesh that is excessively fibrous⁴ or lacking in aroma.

The “eyes” should be well-filled, according to the characteristics of the variety.

The pineapples must have been carefully picked and have reached an appropriate degree of maturity and ripeness in accordance with criteria proper to the variety and/or commercial type and to the area in which they are grown.

The total soluble solids content of the fruit flesh should be at least 12⁰ Brix. For the determination of Brix degrees, a sample of the juice representative of all the fruit shall be taken.

C. Classification

Pineapples are classified in three classes defined below:

(i) “Extra” Class

Pineapples in this class must be of superior quality. They must be characteristic of the variety and/or commercial type.

They must be fresh in appearance and firm, with well-developed eyes.

They must be free from defects, with the exception of very slight superficial defects, provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

The crown must be simple and straight with no side-shoots and should not exceed 150 per cent of the length of the fruit.

3 Pineapples exported with the stem intact in response to a special market demand are excluded from this requirement.

4 Varieties such as “Queen Victoria” may have more porous flesh.

(ii) Class I

Pineapples in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

They must be fresh in appearance and firm, with well-developed eyes.

The following slight defects may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defects in shape;
- slight defects in colouring, including sun-scorch;
- slight skin defects (i.e. scratches, scars, scrapes and blemishes) not exceeding 4 per cent of the total surface area.

The defects must not, in any case, affect the pulp of the fruit.

The crown may be simple or double and straight or slightly curved, with no side-shoots and should not exceed 150 per cent of the length of the fruit. The maximum inclination of the crown should not exceed 30° from the longitudinal axis of the fruit.

(iii) Class II

This class includes pineapples that do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified above.

The following defects may be allowed, provided the pineapples retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape;
- defects in colouring, including sun-scorch;
- skin defects (i.e. scratches, scars, scrapes, bruises and blemishes) not exceeding 8 per cent of the total surface area.

The defects must not, in any case, affect the pulp of the fruit.

The crown may be simple or double and straight or curved, with no side-shoots.

(iv) Classification by exterior colouring

Colour criteria of the fruit are as follows:

- C0: totally green exterior,
- C1: beginning to turn yellow/orange on ¼ of the fruit surface,
- C2: yellow/orange on ½ of the fruit surface,
- C3: yellow/orange on ⅔ of the fruit surface,
- C4: totally yellow/orange fruit.

III. PROVISIONS CONCERNING SIZING

Size is determined by weight.

The minimum weight per individual fruit is 700 grams⁵.

Pineapples within a package may vary in weight by not more than 10 per cent above or below the average individual fruit weight for the package.

IV. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements for the class indicated.

A. Quality tolerances

(i) “Extra” Class

5 per cent by number or weight of pineapples not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

(ii) Class I

10 per cent by number or weight of pineapples not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

(iii) Class II

10 per cent by number or weight of pineapples satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

B. Size tolerances

For all classes, not more than 10 per cent by number or weight of pineapples not satisfying the requirements as regards sizing but meeting the size immediately above and/or below that indicated on the package.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only pineapples of the same origin, variety or commercial type, quality and size.

⁵ Except “Queen Victoria” variety, which may be 250 grams minimum weight.

In addition, for the “Extra” Class, uniformity in colouring and maturity is required.

The visible part of the contents of the package must be representative of the entire contents.

B. Packaging

Pineapples must be packed in such a way as to protect the produce properly.

The material used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

Stickers individually affixed on the produce shall be such that, when removed, neither leave visible traces of glue, nor lead to skin defects.

Packages must be free of all foreign matter.

C. Presentation

The pineapples may be presented:

- laid down horizontally in the package,
- stood up vertically in the package with the crowns uppermost.

VI. PROVISIONS CONCERNING MARKING

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside.

A. Identification

Packer)	Name and address or
and/or)	officially issued or
Dispatcher)	accepted code mark. ⁶

B. Nature of produce

- Pineapples if the contents are not visible from the outside.
- Name of variety and/or commercial type (optional).
- If the crown is absent, this must be clearly indicated.

⁶ The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark.

C. Origin of produce

- Country of origin and, optionally, district where grown, or national, regional or local place name.

D. Commercial specifications

- Class;
- Number of fruit;
- Weight range or recognised size code⁷ (optional);
- Coloration code (optional);
- Tare weight (optional);
- Net weight (optional)
- The indication “To be stored at 8⁰ C” (optional)

E. Official control mark (optional)

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⁷ *The following is an example of a “ recognized size code” that is in current commercial use.*

A5: - fruit of 2,101 – 2,400 grams

A6: - fruit of 1,801 – 2,100 grams

A8: - fruit of 1,502 – 1,800 grams

B9: - fruit of 1,301 – 1,500 grams

B10: - fruit of 1,101 – 1,300 grams

C12: - fruit of 901 – 1,100 grams

D14: - fruit of 701 - 900 grams