



THAI AGRICULTURAL STANDARD

TAS 4-2003

PINEAPPLES

**National Bureau of Agricultural Commodity and Food Standards
Ministry of Agriculture and Cooperatives**

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National Bureau of Agricultural Commodity and Food Standards

Ministry of Agriculture and Cooperatives

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(3)

The pineapple fruit is an agricultural commodity that Thailand has been producing and potentially exporting. In order to have the fruit better accepted nationally and internationally in term of food safety and export promotion. The Ministry of Agriculture and Cooperatives of Thailand encourages the establishment of a standard for pineapple.

The provisions of this standard are based upon the information of the following document.

FAO/WHO. 1993. Codex Alimentarius Volume 5B. Fresh Fruit and Vegetables, CODEX STANDARD FOR PINEAPPLES (CODEX STAN 182 - 1993). Joint FAO/WHO Food Standard Programme, FAO, Rome. 8 p.

Remark:

The standard title has been revised from “Thai Agricultural Commodity and Food Standard (TACFS X-XXXX)” to “Thai Agricultural Standard (TAS X-XXXX)” in accordance with the application of the Agricultural Standards Act B.E. 2551 (2008).



**NOTIFICATION OF THE NATIONAL COMMITTEE ON
AGRICULTURAL COMMODITY AND FOOD STANDARDS
SUBJECT: THAI AGRICULTURAL COMMODITY AND FOOD STANDARD:
PINEAPPLE
B.E. 2546 (2003)**

It is appropriate to establish the national standard for pineapple for the benefit of quality improvement, trade facilitation and consumer protection. Therefore, the National Committee on Agricultural Commodity and Food Standards notifies the establishment of Thai Agricultural Commodity and Food Standard entitled Pineapple to be used as a voluntary standard as attached herewith.

Notified on 6 November B.E. 2546 (2003)

Mr. Sora-at Glinpratun

Minister of Agriculture and Cooperatives

Chairperson of the National Committee on Agricultural Commodity and Food Standards

THAI AGRICULTURAL STANDARD

PINEAPPLES

1 DEFINITION OF PRODUCE

This standard applies to commercial varieties of pineapples grown from *Ananas comosus* (L.) Merr. Of the *Bromeliaceae* family, to be supplied fresh to the consumer.

2 DEFINITIONS

For the purpose of this standard:

2.1 *Spoiled* means rotten or overripe pineapple. The yellowish flesh is translucent with fermented odor, moldy stem end, necrotic sunburnt flesh, cuts and animals' bites.

2.2 *Sunburn* means conspicuous skin scars due to solar heat, flesh under the skin is pale with cavity.

2.3 *Bruises* means the fruit is damaged caused by pressure or impact that tissues have been disintegrated.

2.4 *Hardened flesh* means less juicy pulp becoming very firm with white or brown to dark brown in color.

3 PROVISIONS CONCERNING QUALITY

3.1 MINIMUM REQUIREMENTS

3.1.1 In all classes, subject to the special provisions for each class and the tolerances allowed, the pineapple must be as follows:

3.1.1.1 Whole, with or without the crown and the fruit stem;

3.1.1.2 Fresh in appearance, including the crown, when present, which should be free of dead or dried leaves;

3.1.1.3 Free of bruises, sunburn, hardened flesh, and rotting or deterioration such as to make it unfit for consumption;

3.1.1.4 Clean, practically free of any visible foreign matter;

3.1.1.5 Practically free of pests affecting the general appearance of the produce;

3.1.1.6 Practically free of damage caused by pests;

3.1.1.7 Free of pronounced blemishes;

3.1.1.8 Free of damage caused by low and/or high temperature;

3.1.1.9 Free of abnormal external moisture, excluding condensation following removal from cold storage;

3.1.1.10 Free of any foreign smell and/or taste.

3.1.2 The pineapples must have reached an appropriate degree of development and ripeness in accordance with criteria proper to the variety and/or commercial type and to the area in which they are grown. The fruit flesh is yellow in color except the white flesh variety.

The total soluble solids content in the fruit flesh should be a minimum of 12 degrees Brix.

The produce must arrive in satisfactory condition at the place of destination.

3.2 CLASSIFICATION

Pineapples are classified in three classes defined below:

3.2.1 "Extra" Class

Pineapples in this class must be of superior quality. They must be characteristic in shape, color, smell, and taste of the variety. They must be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the internal quality, the keeping quality and presentation in the package. The crown, if present, shall be simple and straight with no sprouts, and shall be between 50 to 150 percent of the length of the fruit.

3.2.2 Class I

Pineapples in this class must be of good quality. They must be characteristic of the variety and/or commercial type. The slight defects in shape, colour and skin such as scratches may be allowed.

The total skin defects per fruit must not exceed 4 per cent of the total surface area, provided these do not affect the general appearance of the produce, the internal quality, the keeping quality and presentation in the package.

The crown if present, shall be simple and straight or slightly curved with no sprouts, and shall be between 50 to 150 percent of the length of the fruit.

3.2.3 Class II

This class includes pineapples which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 3.1 above. The slight defects in shape, color, and skin defects such as scratches and bruises may be allowed. The total skin defects per fruit not exceed 8 percent of the total surface area, provided these do not affect the general appearance of the produce, the internal quality, the keeping quality and presentation in the package.

The crown, if present, shall be simple or double and straight or slightly curved, with no sprouts.

4 PROVISIONS CONCERNING SIZING

Size is determined by the average weight of the fruit with allowance of higher or lower than the weight of each fruit by 12 percent. The minimum size is 330 g. as shown in Table 1, except the small size variety of Queen Group such as Trad Seetong, Phuket, and Sawee are allowed to have a minimum average weight of 250 g.

Table 1 Provisions concerning sizing

Size Code	With crown		Without crown	
	Average Weight (gms)	Average Weight (gms)	± 12% of the average weight	± 12% of the average weight
1	2,750	2,280	2,006 – 2,554	2,420 - 3,080
2	2,300	1,910	1,681 – 2,139	2,024 – 2,576
3	1,900	1,580	1,390 – 1,770	1,672 – 2,128
4	1,600	1,330	1,170 – 1,490	1,408 – 1,792
5	1,400	1,160	1,021 – 1,299	1,232 – 1,568
6	1,200	1,000	880 – 1,120	1,056 – 1,344
7	1,000	830	730 – 930	880 – 1,120
8	800	660	581 – 739	704 – 896
9	600	500	440 – 560	528 – 672
10	400	330	290 - 370	352 - 448

5 PROVISIONS CONCERNING TOLERANCES

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

5.1 QUALITY TOLERANCES

5.1.1 “Extra” Class

Five percent 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 the class.

5.1.2 Class I

Ten percent 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.

5.1.3 Class II

Ten percent 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.

5.2 SIZE TOLERANCES

For all classes, ten percent by number or weight of pineapples corresponding to the size immediately above and/or below that indicated on the package.

6 PROVISIONS CONCERNING PRESENTATION**6.1 UNIFORMITY**

The contents of each package must be from the same location, be uniform of the variety, quality, size and colour. The visible part in contents of the package must be representative of the entire contents.

6.2 PACKAGING

Pineapple must be packed in such a way as to protect the produce properly. The materials used inside the packages 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 specification, is allowed provided the printing or labeling has been done with non-toxic ink or glue.

6.2.1 Description of containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling shipping and preserving of the pineapple. Packages must be free of all foreign material and smell.

7 MARKING OR LABELLING**7.1 CONTAINERS DESTINED FOR THE FINAL CONSUMER**

Each package shall bear the following particulars, legibly and indelibly marked, and without false information as follows:

7.1.1 Nature of the Produce

If the produce is not visible from the outside, each package shall be labeled with the name of the produce "Pineapple" and may be labeled with the name of the variety of Pineapple.

7.1.2 Net Weight in metric system**7.1.3 Distribution information**

Name and address of distributor, packer or registered trademark.

7.1.4 Country of Origin

If not specify, the consumer may be misled or deceived.

7.2 NON-RETAIL CONTAINERS

Each package must bear the following particulars, in the documents accompanying the shipment, in the label, or on package, with legible and indelibly marked:

7.2.1 Identification

Name and address of non-retailer, packer or identification code (optional.)

7.2.2 Nature of Produce

Name of produce "Pineapple" and/or name of variety of Pineapple.

7.2.3 Origin of Produce

Country of origin and/or district where grown, if not specify, the consumer may be misled or deceived.

7.2.4 Commercial Identification

7.2.4.1 Class;

7.2.4.2 Size;

7.2.4.3 Number of units per package or net weight in metric system.

7.3 LANGUAGE

Label of produce must be in Thai Language. Produce label for export can be in any languages.

7.4 OFFICIAL INSPECTION MARK OR CERTIFICATION MARK

Comply with the provisions and condition of the inspection or certification agency recognized by the Ministry of Agriculture and Cooperatives of Thailand.

8 CONTAMINANTS

Comply with the provisions of relevant regulations and the Thai Agricultural Standard on Contaminants.

9 PESTICIDE RESIDUES

Comply with the provisions of relevant regulations and the Thai Agricultural Standard on Pesticide Residues.

10 HYGIENE

Comply with the provisions of relevant regulations and the Thai Agricultural Standard on Hygiene. Harvest and handling of various steps including storage and transport of pineapple must be carried out hygienically in order to prevent contamination which will be harmful to consumers.

11 METHODS OF ANALYSIS AND SAMPLING

Comply with the provisions of relevant regulations and the Thai Agricultural Standard on Methods of Analysis and Sampling.