



**THAI AGRICULTURAL STANDARD**

**TAS 5-2003**

**MANGOES**

**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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The mango 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 mangoes.

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

Office of Agricultural Commodity Standards and Inspection. B.E. 2544 (2001). Notification of the Ministry of Agriculture and Cooperatives on Thailand Standard for Mango Fruits. B.E. 2544 (2001). Notified on 29 March 2001 (B.E. 2545).

FAO/WHO 1993. Codex Alimentarius Volume 5 B. Fresh Fruit and Vegetables, CODEX STANDARD FOR MANGOES (CODEX STAN 184 - 1993). Joint FAO/WHO Food Standard Programme, FAO, Rome 6 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:  
MANGOES  
B.E. 2546 (2003)**

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It is appropriate to establish the national standard for mangoes 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 Mangoes 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

## MANGOES

### 1 DEFINITION OF PRODUCE

This standard applies to commercial varieties of mangoes grown from *Mangifera indica* L. of the *Anacardiaceae* family to be supplied fresh to the consumer.

### 2 PROVISIONS CONCERNING QUALITY

#### 2.1 MINIMUM REQUIREMENTS

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

2.1.1.1 Whole, when a peduncle is present for export quality, it shall not be longer than 1.0 cm.;

2.1.1.2 Quality and characteristics of the variety;

2.1.1.3 Fresh in appearance, regarding mature, green and ripe fruit;

2.1.1.4 Free from bruises, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;

2.1.1.5 Clean, practically free from any visible foreign matter;

2.1.1.6 Free from marked blemishes of those affecting the pulp of fruits;

2.1.1.7 Practically free from pests affection the general appearance of the produce;

2.1.1.8 Practically free from damage caused by pests;

2.1.1.9 Free from abnormal external moisture, excluding condensation following withdrawal from cold storage;

2.1.1.10 Free from damage caused by low and/or high temperature;

2.1.1.11 Free of any foreign smell and/or taste.

2.1.2 Properly mature mango is the fruit that is able to become ripe after harvest that the maturation process after harvest corresponds to the varieties characteristics, the consumer's acceptable quality, and to the arrival in satisfactory condition at the place of destination.

#### 2.2 CLASSIFICATION

Mangoes are classified in three classes defined below:

##### 2.2.1 "Extra" Class

Mangoes in this class must be of superior quality. They must be characteristic of the variety such as shape, colour, and taste. They must be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

### 2.2.2 Class I

Mangoes in this class must be of good quality. They must be characteristic of the variety such as shape, colour, and taste, the slight defects of shape, colour and skin caused by rubbing or sunburn and stains due to resin exudation, may be allowed. These defects do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

The total skin defects do not exceed 5, 4, 3, 2, cm<sup>2</sup> for the fruit size Code 1, 2, 3, and 4 respectively. Scattered suberized rusty lenticels and/or yellowing skin due to exposure to strong sunlight not exceeding 30 percent of the surface of each fruit and not showing any signs of necrosis are allowed.

### 2.2.3 Class II

This class includes mangoes which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. The slight defects of shape, colour and skin caused by rubbing, sunburn and stains due to these in exudation, may be allowed these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. The total skin defects do not exceed 7, 6, 5, and 4 cm<sup>2</sup> for the fruit size Code 1, 2, 3, and 4 respectively.

Scattered suberized rusty lenticels, and/or yellowing skin due to exposure to strong sunlight, not exceeding 40 percent of the surface of each fruit and not showing any signs of necrosis are allowed.

## 3 PROVISIONS CONCERNING SIZING

Size is determined by the weight of the fruit. Mangoes are sized according to the following size groups.

**Table 1 Provisions concerning sizing**

Size Code	Weight in Grams	Maximum Permissible difference between fruit in each package (grams)
1	>450	100
2	351-450	50
3	251-350	50
4	150-250	50

## 4 PROVISIONS CONCERNING TOLERANCES

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



## 4.1 QUALITY TOLERANCES

### 4.1.1 “Extra” Class

Five percent by number or weight of mangoes not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of the class.

### 4.1.2 Class I

Ten percent by number or weight of mangoes not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

### 4.1.3 Class II

Ten percent by number or weight of mangoes not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

## 4.2 SIZE TOLERANCES

For all classes, 10 percent by number or weight of fruit in each package are permitted to be outside (above or below) the group size range. The permissible size difference between fruits in each package must not exceed the requirement in Table 2 as follows:

**Table 2 Provisions of the size tolerances**

<b>Size Code</b>	<b>Normal Size Range (grams)</b>	<b>Weight of Fruit above or below the Normal Size Range (grams)</b>	<b>Max. Permissible Difference between fruit in each package (grams)</b>
1	> 450	350 > 450	150
2	351 - 450	301 - 500	75
3	251 - 350	150 - 400	75
4	150 - 250	125 - 300	75

## 5 PROVISIONS CONCERNING PESENTATION

### 5.1 UNIFORMITY

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

### 5.2 PACKAGING

Mangoes 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.

### 5.2.1 Description of containers

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

## **6 MARKING OR LABELLING**

### 6.1 CONTAINERS DESTINED FOR THE FINAL CONSUMER

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

#### 6.1.1 Nature of the Produce

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

#### 6.1.2 Net Weight in metric system

#### 6.1.3 Distribution information

Name and address of distributor, packer or registered trademark.

#### 6.1.4 Country of Origin

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

### 6.2 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:

#### 6.2.1 Identification

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

#### 6.2.2 Nature of Produce

Name of produce “Mangoes” and/or name of variety of Mangoes.

#### 6.2.3 Origin of Produce

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

#### 6.2.4 Commercial Identification

##### 6.2.4.1 Class;

##### 6.2.4.2 Size;

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

### 6.3 LANGUAGE

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

#### **6.4 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.

### **7 CONTAMINANTS**

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

### **8 PESTICIDE RESIDUES**

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

### **9 HYGIENE**

Harvest and handling of various steps including storage and transport of mangoes must be hygienically carried out in order to prevent contamination which will be harmful to consumers.

### **10 METHODS OF ANALYSIS AND SAMPLING**

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