



THAI AGRICULTURAL STANDARD

TAS 23-2014

SWEET TAMARIND

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

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THAI AGRICULTURAL STANDARD

TAS 23-2014

SWEET TAMARIND

National Bureau of Agricultural Commodity and Food Standards

Ministry of Agriculture and Cooperatives

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Sweet tamarind is an agricultural produce that Thailand has the potential to grow and export. The establishment of sweet tamarind standard is essential for the development of its quality and consumer safety to gain the confidence and recognition from both domestic and international markets. Thus, the Agricultural Standards Committee deems it necessary to establish the Thai Agricultural Standard for Sweet Tamarind.

This standard is based on the following document:

ASEAN Stan 39:2014. ASEAN Standard for Sweet Tamarind. Public Affairs Office, ASEAN Secretariat, Indonesia. 7p.



**NOTIFICATION OF MINISTRY OF AGRICULTURE AND COOPERATIVES
ON THE ESTABLISHMENT OF THAI AGRICULTURAL STANDARD:
SWEET TAMARIND
UNDER THE AGRICULTURAL STANDARDS ACT B.E. 2551 (2008)**

Whereas the Agricultural Standards Committee deems it necessary to establish an agricultural standard for Sweet Tamarind as a voluntary standard in accordance with the Agricultural Standards Act B.E. 2551 (2008) to promote such agricultural commodity to meet its standard on quality and safety.

By virtue of Sections 5, 15 and 16 of the Agricultural Standards Act B.E. 2551(2008) and the decision of the Agricultural Standards Committee at the Third Session dated 27 August B.E. 2557 (2014), the Minister of Agriculture and Cooperatives hereby issues this Notification on the Establishment of Thai Agricultural Standard: Sweet Tamarind (TAS 23-2014) as a voluntary standard, details of which are attached herewith.

Notified on 17 October B.E. 2557 (2014)

(Mr. Petipong Pungbun Na Ayudhya)
Minister of Agriculture and Cooperatives

THAI AGRICULTURAL STANDARD

SWEET TAMARIND

1. SCOPE

1.1 This standard applies to commercial varieties of sweet tamarind grown from *Tamarindus indica* L. of the Caesalpiniaceae family to be supplied to the consumer after preparation and packaging.

1.2 This standard does not apply to sweet tamarind for industrial processing.

2. QUALITY

2.1 Minimum requirements

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

- (1) whole pod with peduncle intact, peduncle not longer than 0.5 cm;
- (2) characteristics of the variety;
- (3) clean and practically free of any visible foreign matter;
- (4) free of cracked pod;
- (5) practically free of pest affecting the general appearance;
- (6) practically free of damage caused by pest affecting pulp quality;
- (7) free of abnormal external moisture, excluding condensation following removal from cold storage;
- (8) free of any foreign smell and/or taste.

2.1.2 Sweet tamarind shall be at the appropriate harvesting period, provided that the tartaric acid content should not exceed 5% depending on variety, season and planting location. Sweet tamarind shall be carefully handled on postharvest, packing and transporting in order to arrive at the place of destination in a satisfactory condition.

2.2 Classification

The sweet tamarind is classified into 3 classes as follows:

2.2.1 Extra Class

Sweet tamarind in this class shall be of superior quality, free of defects in shape and colour, free of skin defects with the exception of very slight superficial defects provided that these do not affect the general appearance, the pulp quality, the keeping quality and presentation in the package.

2.2.2 Class I

Sweet tamarind in this class shall be of good quality. The following slight defects may be allowed:

- (1) slight defect in shape and colour;
- (2) slight skin defects due to scar, scab or damage caused by pests provided that the skin defect areas do not exceed 5% of the total pod surface area.

The defects shall not affect the general appearance, the pulp quality, the keeping quality and presentation in the package.

2.2.3 Class II

This class includes sweet tamarind which does not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1. The following defects may be allowed:

- (1) defects in shape and colour;
- (2) skin defects due to scar, scab or damage caused by pests provided that the skin defect areas do not exceed 10% of the total pod surface area.

The defects shall not affect the general appearance, the pulp quality, the keeping quality and presentation in the package.

3. SIZING

Sweet tamarind size is determined by number of segments per pod as shown in Table 1:

Table 1 Size of Sweet tamarind^{1/}

Size Code	Number of segments per pod
1	≥ 7
2	4 - 6
3	1 - 3

Note: The classification of quality and size code according to this standard may be combined to stipulate trade classification. Trading partners may name the trade classification differently depending on their requirements or seasonal limitations.

4. TOLERANCES

The following tolerances in respect of quality and size shall be allowed in each package for sweet tamarind not satisfying the requirements of the class indicated:

^{1/} Based on data obtained from producers, traders, and exporters and the Study on the Indices of Important Characteristics and Guidance on Good Practices for the Production of fresh pepper, sweet tamarind, sour tamarind and sapodilla B.E. 2551 (2008) of National Bureau of Agricultural Commodity and Food Standards in collaboration with Naresuan University.

4.1 Quality tolerances

4.1.1 Extra Class

Five percent by number or weight of sweet tamarind not satisfying the requirements of Extra Class (Section 2.2.1), but meeting those of Class I (Section 2.2.2) or, exceptionally, coming within the tolerances of Class I (Section 4.1.2) is allowed.

4.1.2 Class I

Ten percent by number or weight of sweet tamarind not satisfying the requirements of Class I (Section 2.2.2), but meeting those of Class II (Section 2.2.3) or, exceptionally, coming within the tolerances of Class II (Section 4.1.3) is allowed.

4.1.3 Class II

Ten percent by number or weight of sweet tamarind satisfying neither the requirements of Class II (Section 2.2.3) nor the minimum requirements (Section 2.1), with the exception of produce affected by cracking, rotting or any other deteriorating pod rendering it unfit for consumption.

4.2 Size tolerances

For all size codes, 10% by number or weight of sweet tamarind corresponding to the size code immediately above or below is allowed.

5. PACKAGING

5.1 Package

The package shall be of good quality, hygienic and free of any foreign material and smell. It shall be able to protect sweet tamarind from damage affecting the sweet tamarind quality. The materials used inside the package shall be clean and of good quality. The use of such materials, particularly of paper or stamps bearing trade specifications is allowed, provided that the printing or labelling has been done with non-toxic ink or glue.

5.2 Uniformity

The contents of each package shall be uniform and contain only sweet tamarind of the same variety, quality and size. The visible part of the content of the package shall represent the entire contents.

6. MARKING AND LABELLING

6.1 consumer packages

The information shall appear on the package, wrapping material, fastening material, tag or on the produce in a manner that is legible, clear, and indelible without false or deception as follows:

- (1) Name of the produce

To be labelled as “sweet tamarind” and/or “sweet tamarind variety”.

- (2) Net weight
- (3) Class
- (4) Size code and/or size
- (5) Information of producer and/or importer and/or distributor

Indicate the name and address of producer or re-packer or distributor. Alternatively, name and address of head office of producer or re-packer may be given. If the produce is imported, importer’s name and address shall be indicated.

- (6) Origin of produce

Indicate country of origin, except for domestic market.

- (7) Language

Label of produce for domestic market shall be in Thai, however, foreign language may also be added. Label of produce for export can be in foreign language.

6.2 Non-retail containers

The information shall be shown on the accompanied documents of the shipment, on the label, or on the container in a manner that is legible, indelible without false or deception as follows:

- (1) Name of the produce

To be labelled as “sweet tamarind” and/or “sweet tamarind variety”.

- (2) Net weight
- (3) Class
- (4) Size code and/or size
- (5) Information of producer and/or importer and/or distributor

Indicate the name and address of producer or re-packer or distributor. Alternatively, name and address of head office of producer or re-packer may be given. If the produce is imported, importer’s name and address shall be indicated.

- (6) Origin of produce

Indicate country of origin, except is for domestic market.

- (7) Language

Label of produce for domestic market shall be in Thai, however, foreign language may also be added. Label of produce for export can be in foreign language.

6.3 Certification mark

The use of certification mark under the Agricultural Standards Act B.E.2551 (2008) and its amendments shall be complied with the Ministerial Regulation of B.E.2553 (2010) on Provisions Concerning Characteristics of Mark, Application and Display, and the related Notifications of National Bureau of Agricultural Commodity and Food Standards.

7. CONTAMINANTS

Type and maximum level of contaminants in sweet tamarind shall be in compliance with the relevant laws and regulations.

8. PESTICIDE RESIDUES

Type and maximum residue limit in pesticide residues in sweet tamarind shall be in compliance with the related laws and regulations and the requirements under the Thai Agricultural Standards on Pesticide Residues: Maximum Residue Limits (TAS 9002) and Pesticide Residues: Extraneous Maximum Residue Limits (TAS 9003).

9. HYGIENE

Sweet tamarind shall be produced under good hygienic practices in accordance with related standard on Good Agricultural Practices (GAP) or other equivalent standards.

10. METHODS OF ANALYSIS AND SAMPLING

10.1 Analytical methods are shown in Table 2:

Criteria	Analytical methods	Principles
1. Quality : minimum requirements (Section 2.1.1)	Visual inspection	-
2. Acid content as tartaric acid (Section 2.1.2)	AOAC 942.15 or equivalent method	Titrimetry
3. Defects in shape and colour (Section 2.2)	Visual inspection	-
4. Skin defects (Section 2.2)	Visual inspection	-
5. Sizing (Section 3)	Count the number of segments per pod	-

10.2 Sampling method

Sampling method shall be in accordance with the related laws, and provisions of the Agricultural Standard related to method of sampling.

Appendix A

PHOTOS OF SWEET TAMARIND



(a) Sithong

Curved, round, obvious notches between segments, and golden brown pulp



(b) Prakaithong

Slightly curved, round, large, and brown pulp



(c) Sichomphu

Straight, round, obvious notches between segments, and yellowish brown pulp.



(d) Khanti

Slightly curved, flat, and reddish brown pulp.

Figure A.1 Examples of commercial sweet tamarind varieties (Section 1.1)

Source: Department of Agricultural Extension



(e) Inthaphalam

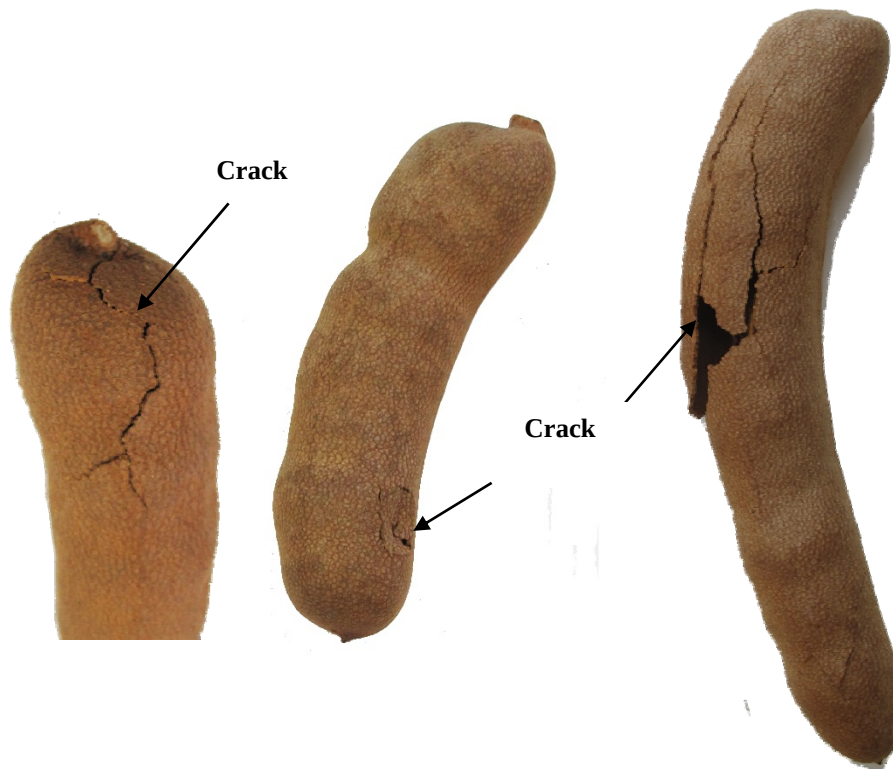
Slightly curved, round, obvious notches between segments, and dark brown pulp



(f) Siphakdi

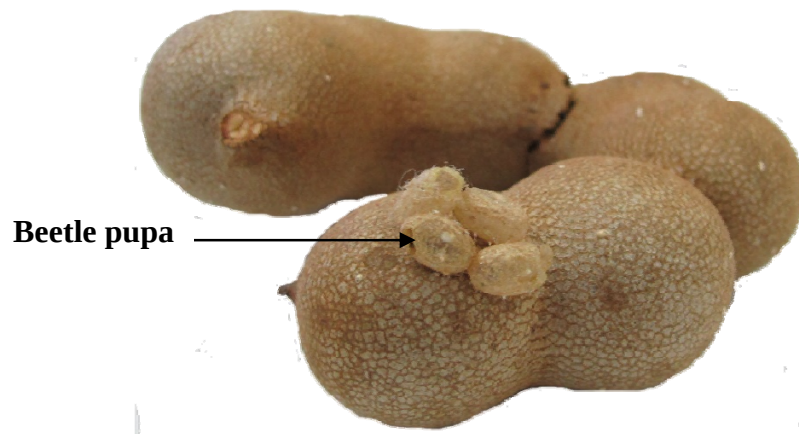
Slightly curved, large, and brown pulp

Figure A.1 Examples of commercial sweet tamarind varieties (Section 1.1) (Continued)
Source: Department of Agricultural Extension.

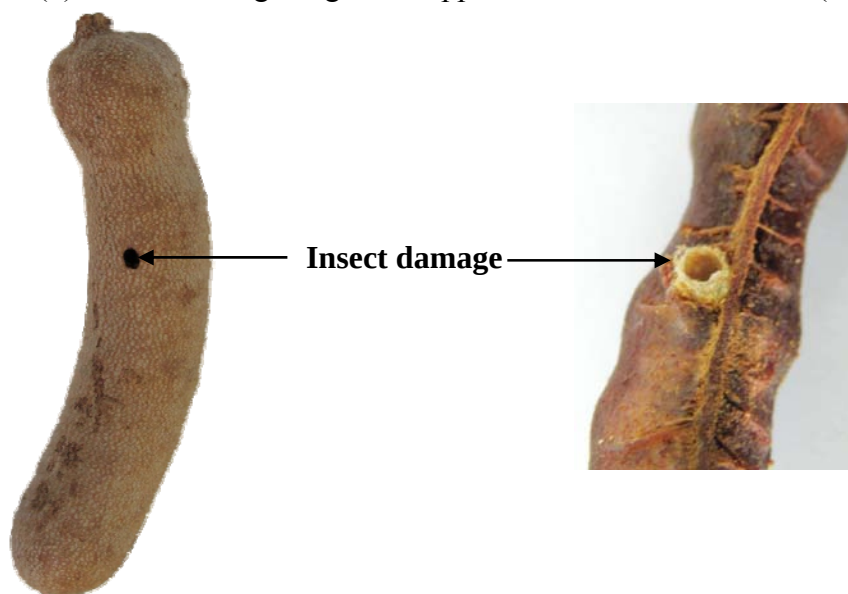


(a) Crack pod (Section 2.1.1 (4))

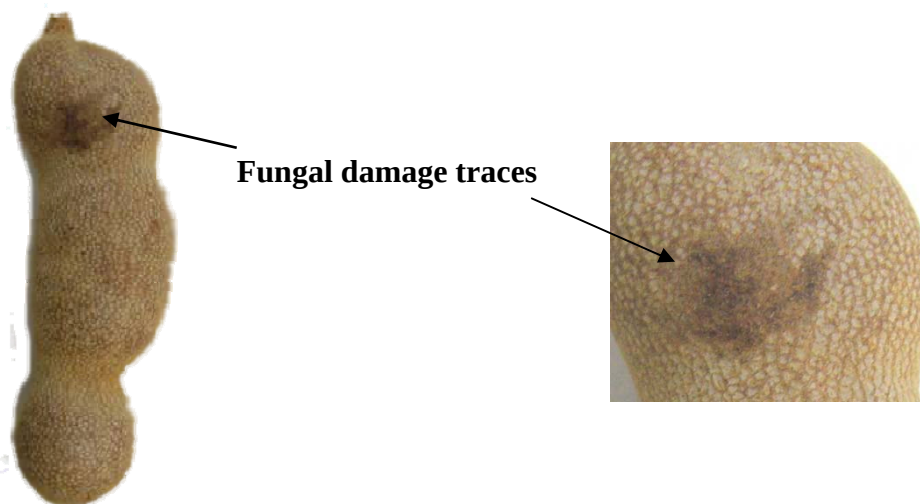
Figure A.2 Examples of sweet tamarind pods (not meet the minimum requirements)



(b) Pests affecting the general appearance of sweet tamarind (Section 2.1.1 (5))

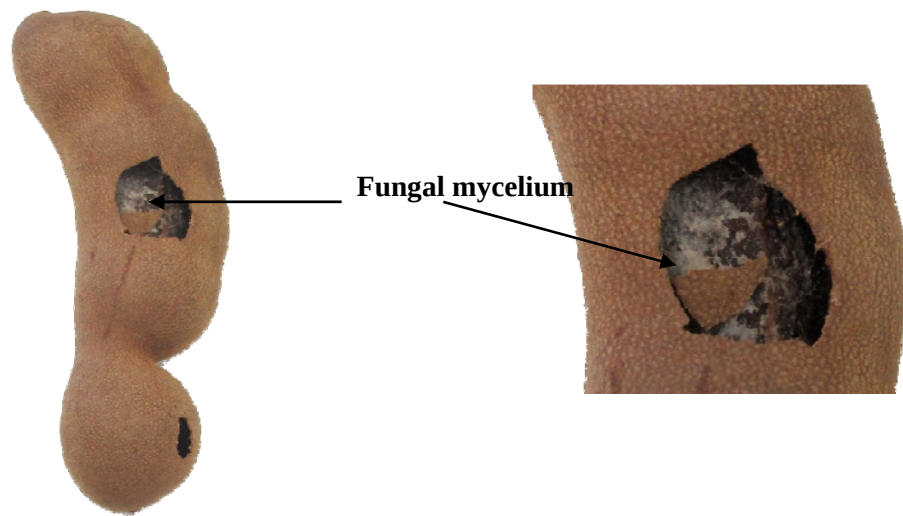


(c) Damage signs caused by pests (Section 2.1.1 (6))



(d) Damage signs caused by pests (Section 2.1.1 (6))

Figure A.2 Examples of sweet tamarind pods (not meet the minimum requirements)
(Continued)



(e) Damage caused by pests (Section 2.1.1 (6))

Figure A.2 Examples of sweet tamarind pods (not meet the minimum requirements)
(Continued)

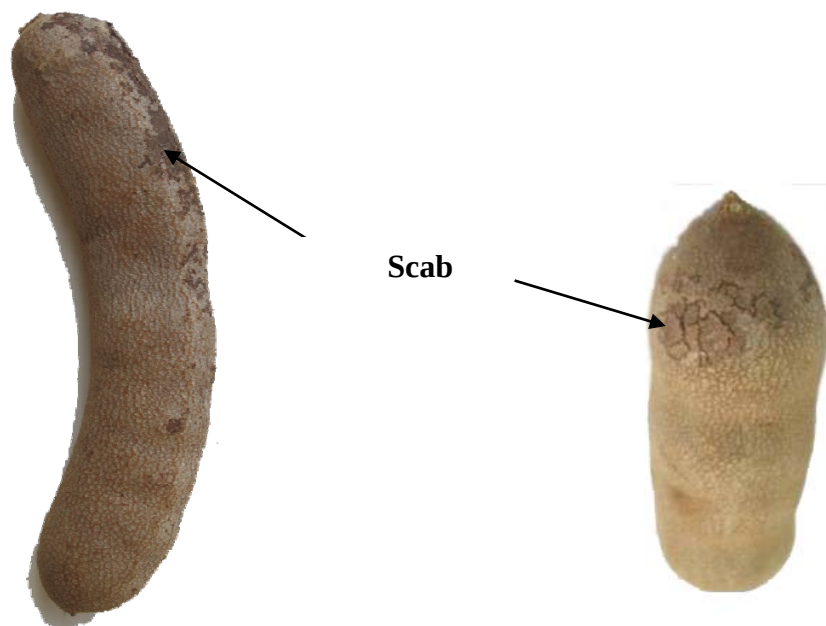


Figure A.3 Examples of skin defect (not affect the general appearance and its pulp quality of which are allowed according to Section 2.2.2 and 2.2.3)



Figure A.4 Examples of colour defect (not affect the sweet tamarind pulp quality) (Section 2.2.2 and 2.2.3)