



ASEAN STANDARD FOR SWEET CORN (ASEAN Stan 28:2012)

1. DEFINITION OF PRODUCE

This standard applies to commercial varieties of sweet corn *Zea mays* var *rugosa* L. of the Poaceae family to be supplied fresh to the consumer. Sweet corn for industrial processing is excluded.

2. PROVISIONS CONCERNING QUALITY

2.1 MINIMUM REQUIREMENTS

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

- whole with or without husk (sheath); if with husk, then the husk should be fresh and partially removed or well-trimmed to show the quality of kernels;
- having fresh kernels that are fully formed around the cob (well-filled);
- well trimmed of silk and stalk not exceeding 2cm¹ from the basal part of the sheath;
- clean, practically free of any visible foreign matter;
- practically free of foreign smell and taste;
- characteristic of the variety;
- sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- practically free of pests and damage caused by them affecting the general appearance of the produce;
- practically free from mechanical and/or physiological damage;
- practically free of surface moisture excluding condensation;
- total soluble solids content should not be less than 9.0 °Brix
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2.1.1 The sweet corn should be harvested and have reached an appropriate degree of development (as shown in Annex 1) in accordance with the area in which they are grown.

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

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

¹ May vary according to consumer/market preference

2.2 CLASSIFICATION

Sweet corn is classified in three classes defined below:

2.2.1 "Extra" Class

Sweet corn in this class must be of superior quality. It must have regular arrangement of kernel (as shown in Annex 2). It must be practically free of 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

Sweet corn in this class must be of good quality. The following slight defects or abnormality may be allowed:

- slight abnormality in shape and colour;
- irregular arrangement of kernels;
- slight defects on the surface of the kernels due to rubbing, scratches or other mechanical damage. The total defect area must not exceed 5% per cob

The defect must not affect the quality of sweet corn kernels.

2.2.3 Class II

This class includes sweet corn which does not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. Sweet corn in this class must be of good quality.

The following slight defects or abnormality may be allowed:

- slight abnormality in shape and colour;
- irregular arrangement of kernels;
- slight defects on the surface of the kernels due to rubbing, scratches or other mechanical damage. The total defect area must not exceed 10% per cob

The defect must not affect the quality of sweet corn kernels.

3. PROVISIONS CONCERNING SIZING

Size is determined by length of the cob excluding stalk, in accordance with the following table:

Size Code	Length of cob (cm)
1	>25
2	>20-25
3	>15-20
4	10-15

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package (or in each lot for produce presented in bulk) 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 sweet corn is not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent by number or weight of sweet corn 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 sweet corn 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.

4.2 SIZE TOLERANCES

For all classes, 10% by number of sweet corn not satisfying the requirements as regards sizing, but falling within the size immediately above or below those indicated in Section 3.

5. PROVISIONS CONCERNING PRESENTATION

5.1 UNIFORMITY

The contents of each package (or lot for produce presented in bulk) must be uniform and contain only sweet corn of the same variety, origin, quality and size. The visible part of the contents of the package (or lot for produce presented in bulk) must be representative of the entire contents.

5.2 PACKAGING

Sweet corn must be properly packed and stacked in such a way as to protect the produce. The materials used inside the package must be clean and of good 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 labeling has been done with non-toxic ink or glue.

Sweet corn shall be packed in each container in compliance with the *Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995, Amd. 1-2004)*.

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the sweet corn. Packages (or lot for produce presented in bulk) must be practically free of foreign matter and smell.

6. MARKING OR LABELING

6.1 CONSUMER PACKAGES

In addition to the requirements of the Codex General Standard for the Labeling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991), the following specific provisions apply:

6.1.1 Nature of Produce

Each package shall be labeled as to the name of the produce and may be labeled as to the name of the variety and/or commercial type.

6.2 NON-RETAIL CONTAINERS

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment. For produce transported in bulk these particulars must appear on a document accompanying the goods.

6.2.1 Identification

Name and address of Exporter, Packer and/or Dispatcher. Identification code (optional).

6.2.2 Nature of Produce

Name of produce, variety and/or commercial type.

6.2.3 Origin of Produce

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

6.2.4 Commercial Identification

- Produce name;
- Variety name (optional);
- Class;
- Size;
- Number of units (optional);
- Net weight (optional).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 PESTICIDE RESIDUES

Sweet corn shall comply with those maximum residue limits established by the Codex Alimentarius Commission, ASEAN Harmonized MRLs for Pesticides, and/or by authority for this commodity.

7.2 OTHER CONTAMINANTS

Sweet corn shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission, and/or by authority for this commodity.

8. HYGIENE

8.1 It is recommended that the product covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

8.2 The product should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

9. METHODS OF ANALYSIS AND SAMPLING

Analytical and sampling methods to be used for ascertaining conformance to the requirements of this specification shall be in accordance with relevant text in Codex Methods of Analysis and Sampling.

References:

Department of Agriculture and Agrifood – Ministry of Industry and Primary Resources, Brunei Darussalaam. Proposed Draft Brunei Standard for Sweetcorn. 2011

Malaysian Standard. Fresh Sweet Corn- Specification (First Revision) MS 1229:2008. ICS:67.080.20. Department of Standards – Malaysia

Thai Agricultural Standard for Sweet Corn (TAS 1512-2011)

Philippine National Standard for Sweet Corn. 2012.

ASEAN Harmonized MRLs for Pesticides

DEFINITIONS

Mature

When the kernel is pierced or broken the inside substance shows a creamy white appearance. Kernel has fully formed, silk on the cob turned from green white to brownish black and started to dry. The husk colour is dark green and fresh.

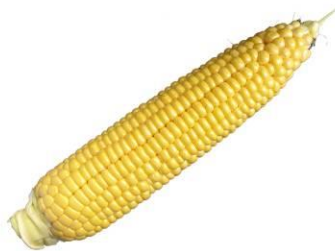


Figure 1. Mature
(Source: MS 1229:2008. ICS:67.080.20)

Immature

Kernel is in ovule stage, hairs on the cob are whitish brown and the skin is light green.



Figure 2. Immature
(Source: MS 1229:2008. ICS:67.080.20)

Over-mature

Kernel starts to shrink, dents obviously showed on the kernels. Hairs on the cob turned black and dry. The skin is greenish brown and dry.



Figure 3. Over-mature
(Source: MS 1229:2008. ICS:67.080.20)

Example of Arrangement of Kernels



Figure 4. Regular arrangements
(Source: MS 1229:2008. ICS:67.080.20)

Vernacular Names of Sweet corn

Country	Vernacular names
Brunei Darussalam	Jagong manis
Cambodia	Poat Phaem
Indonesia	Jagung manis
Lao PDR	Sali Van
Malaysia	Jagong manis
Myanmar	Pyauun Cho Sweet corn
Phillipines	Mais Sweet corn
Thailand	Khao Phod Waan
Vietnam	Ngo Ngot Bap Ngot