

འབྲུག་རྒྱལ་ཚལ་ལྷན་ཁག་གི་འཛུགས་ཚད། དབྱེ་རིམ་དང་སྡེ་རིམ།

DRAFT BHUTAN STANDARD

Strawberry – Classification and Grading



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BHUTAN STANDARDS BUREAU

The National Standards Body of Bhutan

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འབྲུག་རྒྱལ་ཚལ་ཕྱི་གནས་ཚད། དབྱེ་རིམ་དང་ལྗེ་རིམ།

DRAFT BHUTAN STANDARD

Strawberry – Classification and Grading

DRAFT BHUTAN STANDARD FOR THE PURPOSE OF WIDE CIRCULATION

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FOREWORD

This Bhutan Standard for Strawberry-Classification and Grading was adopted by Bhutan Standards Bureau after the draft finalized by the Food and Agriculture Technical Committee TC 02 and approved by the Bhutan Standards Bureau Board (BSB Board) on Date Month Year.

This standard is subjected to systematic review after five years to keep pace with the market trends, industrial and technological developments. Any suggestions and further information may be directed to the concerned Technical Committee.

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Introduction

Strawberry (*Fragaria ananassa*) is a fruit belonging to the Rosaceae family. In Bhutan, strawberry can be grown up to an altitude of 2700m above mean sea level. Edible part of the strawberry is the red, fleshy part called the receptacle. Released varieties of strawberry in Bhutan are Yusi Sagong 1, Pangtshalu Ngarm and Pangtshalu Maap. In the present time, due to increasing demand for fresh fruits and jam, cultivation of strawberries at commercial scale is gaining momentum in Bhutan. Moreover, the wild strawberry is widely harvested for commercial purposes.

The use of standard remains voluntary and when referenced by regulatory authorities for implementation, the standards become mandatory.

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DRAFT BHUTAN STANDARD

Strawberry – Classification and Grading

1 Scope

This Bhutan Standard specifies requirements for strawberries of commercial varieties (cultivars) grown from the genus *Fragaria* L. to be supplied fresh to the consumer.

Strawberry for industrial processing is excluded.

2 Normative References

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies including amendments.

CAC/RCP 44-1995, *Code of Practice for the Packaging and Transport of Fresh Fruits and Vegetables*.

CODEX STAN 1-1985, Rev. 1-199, *Codex General Standard for the Labelling of Prepackaged Foods*.

CODEX STAN 193-1995, *Codex General Standard for Contaminants and Toxins in Food and Feed*.

BTS 139: 2020 SARS 0014: 2018, *Food hygiene- General principles – Code of practice*.

3 Terms and Definitions

For the purpose of this standard, the following terms and definitions shall apply:

3.1 Calyx

Refers to green leaf like structure at the base of fruit.

3.2 Classification

Involves grouping item into categories or classes based on shared quality.

3.3 Grading

Assessing and assigning a numerical or descriptive rating to produce.

3.4 Sound

Produce not affected by rotting or deterioration making it unfit for consumption.

3.5 Practically free from soil

Absence of soil particles when the produce is visually examined.

3.6 Visual Aid

Use of technology to examine the produce.

4 Minimum Requirements

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

4.1 Intact, with calyx.

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4.2 With the calyx (except in the case of wood strawberries); the calyx and the stalk (if present) shall be fresh and green.

4.3 Firm.

4.4 Fresh in appearance, but not washed.

4.5 Sound.

4.1.6 Clean, practically free of any visible foreign matter.

4.1.7 Practically free of pests.

4.1.8 Practically free of damage caused by pests affecting the general appearance of the produce.

4.1.9 Free of mechanical and/or physiological damage such as low or high temperature.

4.1.10 Free of abnormal external moisture, excluding condensation following removal from cold storage.

4.1.11 Free of any foreign odour and/or taste.

4.1.12 The development and condition of the strawberry shall be such as to enable it to withstand transportation and handling.

4.1.13 When strawberry reach their destination, they shall be in a satisfactory condition.

4.2 Maturity Requirements

4.2.1 Strawberry shall have reached an appropriate degree of development in accordance with criteria proper to the variety and to the area in which they are grown.

5 Classification

Strawberry is classified into three classes defined below:

5.1 Extra Class

5.1.1 Strawberry in this class shall be of superior quality.

5.1.2 They shall be characteristics of the variety.

5.1.3 They shall be free from soil.

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

5.2 Class I

5.2.1 Strawberry in this class shall be of good quality.

5.2.2 They shall be characteristics of the variety.

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

a) slight defects in shape.

b) presence of a small white patch, not exceeding 10% of the total surface area of the fruit.

c) slight superficial pressure marks.

5.2.4 They shall be practically free from soil.

5.3 Class II

This class includes strawberries that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified in *clause 4.1*.

5.3.1 The following defects may be allowed, provided the strawberries retain their essential characteristics with regards to quality, keeping quality and presentation:

- a) defects in shape.
- b) white patch, not exceeding 20% of the total surface area of the fruit.
- c) slight dry bruising not likely to spread.

5.3.2 There may be slight traces of soil.

6 Grading

Size is determined by the maximum diameter of the equatorial section.

6.1 The minimum size shall be:

6.1.1 25 mm in Extra Class.

6.1.2 18 mm in Classes I and II.

6.2 There is no minimum size for wood strawberries.

7 Tolerances

7.1 General

Tolerances in respect of quality 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.

7.2 Quality Tolerances

7.2.1 Extra Class

A total tolerance of 5 percent, by number or weight, of strawberries not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 percent in total may consist of produce satisfying the requirements of Class II quality.

7.2.2 Class I

A total tolerance of 10 percent, by number or weight, of strawberries not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 2 percent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

7.2.3 Class II

A total tolerance of 10 percent, by number or weight, of strawberries satisfying neither the requirements of the class nor the minimum requirements are allowed. Within this tolerance not more than 2 percent in total may consist of produce affected by decay.

7.3 Size Tolerances

For all classes, a total tolerance of 10 percent, by number or weight, of strawberries not satisfying the requirements as regards the minimum size is allowed.

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8 Provisions Concerning Presentation

8.1 Uniformity

The contents of each package shall be uniform and contain only strawberries of the same origin, variety and quality.

8.2 Packaging

8.2.1 Strawberry shall be packed in such a way as to protect the produce.

8.2.2 The materials used inside the package shall be new, clean and of good quality such as to avoid causing any external or internal damage to the produce.

8.2.3 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.

8.2.4 The packages shall meet the quality, strength, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the strawberry.

8.2.5 Packages or lot for produce presented in bulk shall be free of all foreign matter and odour.

8.2.6 Strawberry shall be packed in each container in compliance with the Codex Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CXC44).

8.3 Labelling

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

8.3.1.1 The name of the product and/or variety.

8.3.1.2 The trademark or brand name, if any.

8.3.1.3 The name and address of the producer or packer/distributor.

8.3.1.4 The code or lot number.

8.3.1.5 The net mass or gross mass.

8.3.1.6 The class of product.

8.3.1.7 The producing country.

8.3.1.8 Date of packaging.

8.3.1.9 Any other marking required by the purchaser.

8.3.1.10 A reference to this document, i.e. BTS (optional).

9 Sampling

Sampling methods to be used for ascertaining conformance to the requirements of this specification shall be in accordance with internationally accepted methods or national methods recognized internationally.

10 Requirements for Contaminants

10.1 The produce shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).

10.2 The produce shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

10.3 The produce 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).

11 Hygiene

The manufacturer shall comply in accordance with BTS 139: 2020 SARS 0014: 2018, *Food hygiene- General principles – Code of practice.*

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