

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 92:2010
ICS 67.080.01

Fresh vegetables – Celery – Classification and grading



BUREAU OF PRODUCT STANDARDS

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Foreword

The development of the Philippine National Standard for Celery, PNS/BAFPS 92:2010 was undertaken by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) in order to reflect the recent technology developments in the industry and the need for harmonization with Codex requirements in Heavy Metals, Pesticide Residues and Hygiene.

PNS/BAFPS 92:2010 was based on the recent studies conducted by the research institutions and also studies conducted by other countries.

A Technical Committee (TC) and Sub-Committee (SC) were organized by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) through Special Orders No. 411, series of 2001 and 169, series of 2007 to generate the data and formulate the PNS for Celery. The draft standard was presented for technical reviews and public consultations in the three major islands of the country prior to finalization of the standard.

The PNS for Celery aims to provide common understanding on the scope, definition, minimum requirements, nutritive values, classification, sampling, packaging, and marking and labeling.

Fresh vegetables – Celery – Classification and grading

1 Scope

This standard applies to celery of varieties grown from *Apium graveolens* L. var. dulce Mill. to be supplied fresh to the consumers.

2 Reference

The titles of the standard publications and other references of this standard are listed on the inside back cover.

3 Definitions

For the purpose of this standard, the following definitions apply.

3.1**butt**

point of attachment of all branches and include the roots

3.2**petiole**

edible stem-like portion of the stalk. It includes the midrib, the node and leaves

3.3**foliage or leaves**

portion of the branch over the first node

3.4**midrib**

portion between the point of attachment to the root and the first node

3.5**node**

first point of attachment of the leaves or the top to the midrib

3.6**properly packed**

when celery is packed in any suitable container, they are not so packed as to be slacked, over-pressed or otherwise in a condition likely to result in damage during handling or while in transit

3.7**slack**

the package is not full and a free movement of the product is possible or evident

3.8

fresh

normally succulent, turgid stalk, brittle, firm and crisp

3.9

flabby or wilted

soft, weak, pliable and lacks turgidity due to loss of water

3.10

growth cracks

vertical cracks occurring at the point of attachment of the branch to the butt of the stalks

3.11

decay

deterioration involving decomposition due to fungi or bacteria

3.12

discoloration

a deviation from the normal color of the variety caused by various pathogens and unfavorable weather condition

3.13

pithiness

central part of such branch is hollow, most tissues are white, spongy and dry

4 Minimum requirements

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

- intact;
- clean, practically free of any visible foreign matter;
- fresh in appearance;
- practically free from pests;
- practically free from damage caused by pests;
- free of damage caused by frost;
- free of cavities, suckers and flower stems;
- free of excessive external moisture, i.e. adequately "dried", if washed; and
- free of any foreign smell and/or taste.

The main root must be well cleaned and not to exceed 50 mm in length.

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

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

5 Classification

Celery is classified into two classes, as defined below:

5.1 Class I – Celery in this class must be of good quality and have similar varietal characteristics. They must be regular in shape and free from traces of disease on either leaves or leafstalks. The leaf stalk must not be broken, stringy, crushed or split. In the case of blanched celery, half length of the leaves must be white to yellowish-white or greenish-white in color. Very slight (2 %) superficial defects may be allowed, provided these do not affect the general appearance of the produce, the keeping quality and presentation in the package.

5.2 Class II – This class includes celery which does not qualify for inclusion in Class I but satisfy the minimum requirements in Clause 4. In the case of the blanched celery, one-third length of the leaves must be white to yellowish-white or greenish-white in color. The following defects may be allowed, provided the celery retains their essential characteristics as regards the quality, the keeping quality and presentation in the package:

- slight traces of rust
- slight deformation
- slight bruises
- not more than two leafstalks are broken, crushed or split.

6 Size classification

Size of celery is determined by its weight.

| Size classification | Weight/plant (g) |
|--|------------------|
| Large | > 800 |
| Medium | 501 – 800 |
| Small | 150 - 500 |
| The minimum weight of celery is 150 g. | |

The difference in size in the same package must not exceed 200, 150 and 100 g respectively, compulsory for Class I only.

7 Tolerances

7.1 Quality tolerance

7.1.1 Class I – Ten percent (10 %) by weight of celery satisfying the requirements of the class, but meeting those of Class II.

7.1.2 Class II – Ten percent (10 %) by weight of celery 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.

7.2 Size tolerance

For all classes, ten percent (10 %) by weight of celery not satisfying the requirements as regards to size.

8 Packaging

Celery must be packed in suitable containers that will protect the produce properly. The materials used inside the package must be new, clean and of quality such as to avoid 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. Packages must be free of all foreign matter.

9 Marking and labeling

Each container shall have a label using an indelible ink to provide the following information:

- 9.1** Name of produce, variety or commercial type;
- 9.2** Class and size;
- 9.3** Net weight (kg);
- 9.4** Date of harvest;
- 9.5** Name and address of producer, trader and exporter;
- 9.6** Origin of Produce; and
- 9.7** Product of the Philippines.

10 Contaminants

10.1 Heavy metals

Celery shall comply with the maximum limits for heavy metals established by the Codex Alimentarius Commission and/or authority for this commodity.

10.2 Pesticide residues

Celery shall comply with the maximum residue limits established by the Codex Alimentarius Commission and/or authority for this commodity.

11 Hygiene

11.1 It is recommended that the produce covered by the provisions of this standard be prepared and handled in accordance with appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1 – 1969, Rev. 4 – 2003), Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

11.2 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).

Annex A

Varieties of Celery

| Varieties of Celery | Description |
|----------------------------|---|
| Bishop | A tender-crisp type, with longer petiole than traditional tall, Utah types, some tolerance to fusarium yellows, harvest 90 to 100 days after transplanting |
| Deacon | Tight, wide petioles, few suckers, adapted for East coast areas, main season, tolerance to fusarium yellows, harvest 90 to 100 days after transplanting |
| *Fla 683 | Medium tall plants (shorter than 52 to 70 type), tight, few suckers, main season, tolerance to cracking and boron deficiency, susceptible to bolting, harvest 100 to 120 days after transplanting |
| Florimart | Slow bolting, resistance to early and bacterial blight, harvest 110 days after transplanting |
| Golden SelfBlanching | Relatively tall plants, self blanching, early season, local market, harvest 80 to 90 days after planting |
| Golden Spartan | Tall, self blanching, slow bolting, early season, harvest 80 to 90 days after transplanting |
| June-Belle | Some tolerance to late blight and western celery mosaic, some resistance to early blight and CMV, harvest 80 to 90 days after transplanting |
| Starlet (664-B) | Tall plants, slow bolting, resistance to fusarium yellows race 1 and 2, harvest 120 days after transplanting |
| Summet | Slow bolting, heavy yielding, early season, harvest 110 days after transplanting |
| Tall Utah 52-70HK | Medium tall plants, tight, uniform stalks, few suckers, main season, resistance to fusarium yellows, harvest 90 to 100 days after transplanting |
| *Tall Utah 52-70R | Tall, heavy yielding, main season, resistant to boron deficiency and western celery mosaic, harvest 100 to 120 days after transplanting |
| *Tall Utah 52-75R Improved | Medium tall, tight, few suckers, good for muck and mineral soils, slow bolting, main season, tolerance to western celery mosaic, resistant to brown check and ad axial crack stem, harvest 90 to 100 days after transplanting |
| Tall Utah 52-75 | Main season, tolerant to boron and magnesium deficiency, harvest 100 to 110 days after transplanting |
| Vicar | Tolerance to fusarium yellows race 2, harvest 120 days after transplanting |
| Ventura | Medium tall, medium tight, few suckers, early season, some tolerance to fusarium yellows, harvest 100 to 110 days after transplanting |



Figure 1 – Tall utah



Figure 2 – Green king



Figure 3 – Celery seed bed in Lucban, Quezon



Figure 4 – Celery plots in Atok, Benguet



Figure 5 – Celery harvest

Annex B

Physiological, physical and pathological disorders



Figure 6 – Bacterial soft rot

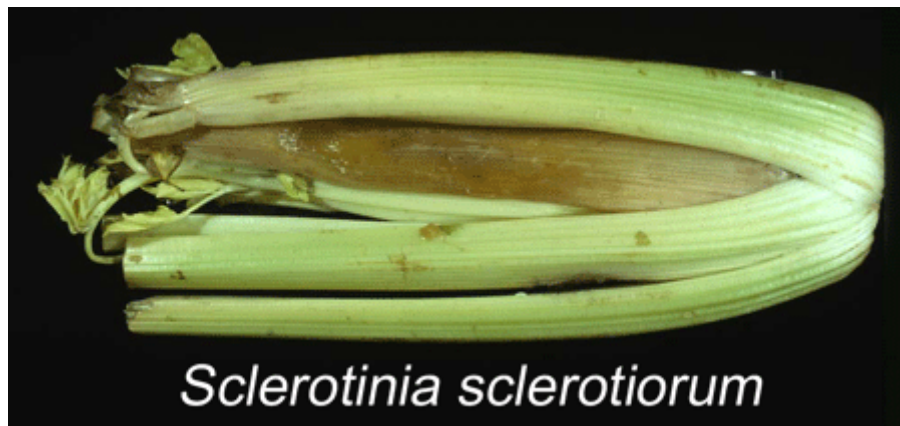


Figure 7 – Pink rot

References

PNS/BAFPS 92:2010

The following referenced 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 (including any amendments) applies.

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