

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 78:2009
ICS 65.020.20

**Fresh vegetables – Sweet pepper –
Grading and classification**



BUREAU OF PRODUCT STANDARDS

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Foreword

The development of the Philippine National Standard for Fresh vegetables – Sweet pepper – Grading and classification, PNS/BAFPS 78:2009 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 78:2009 cancels and replaces Standardization of Philippine Sweet Pepper, Standards Administrative Order 29:1969 developed by the Philippine Trade Standards under the Department of Commerce and Industry.

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 No. 169, series of 2007 to generate and update the data and formulate the PNS for Sweet Pepper. 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 Sweet pepper aims to provide common understanding on the scope, definition, minimum requirements, nutritive values, classification, sampling, packaging, and marking and labeling.

1 Scope

This standard establishes a system of grading and classifying commercial varieties of sweet pepper, *Capsicum annuum* L. produced in the Philippines to be supplied fresh to the consumers.

2 References

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

3 Definitions

3.1

clean

is practically free from stains, dirt or other foreign materials

3.2

fairly well-shaped

slightly indented or curved but not crooked, constricted or deformed or otherwise characteristics of the variety

3.3

firm

crisp, not soft, shriveled, limp or pliable

3.4

pest damage

external and internal damages due to pests

3.5

mature

slight change in color, still firm and attain maximum size of the variety

3.6

mechanical damage

cuts, bruises, scars and other injuries caused by improper handling

3.7

sunburn

discoloration due to excessive sun exposure

3.8

well-shaped

manifest the characteristics of the variety

3.9

well-trimmed

the peduncle is firmly attached to the fruit and the length is 2 cm

4 Minimum requirements

In all classes subject to the special provisions for each class and tolerances allowed, sweet pepper must meet the following requirements:

- fresh, firm, clean and free from any damage caused by pests!
- free from decay;
- mature but not overripe, well-shaped, well-trimmed and free from mechanical damage;
- no discoloration due to sunburn;
- free of any foreign/undesirable smell and/or taste;
- with peduncles attached; and
- free from added moisture.

The development and condition of the sweet pepper must enable it to: (a) withstand transport and handling and (b) arrive in satisfactory condition at the place of destination.

5 Classification

Sweet pepper are classified into three classes as described below:

5.1 Extra Class – Sweet pepper in this class must be of superior quality and have similar characteristics of the variety and/or commercial type. It must be free of defects, with the exception of very slight superficial defects provided these do not affect the general appearance of the produce, the quality and presentation in the package.

5.2 Class I – Sweet pepper must be of good quality and have similar characteristics of the variety and/or commercial type. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality and presentation in the package: (a) slight defects in shape and color, (b) slight skin healed defect due to mechanical damage, and (c) peduncle may be slightly damaged or cut with the calyx intact.

5.3 Class II – This class includes Sweet pepper which does not qualify for inclusion in the higher classes but satisfies the minimum requirements specified in Clause 4. The following defects may be allowed, provided sweet peppers retain their essential characteristics as regard to quality and presentation in the package: (a) defects in shape; (b) defects in color; (c) healed skin defects due to mechanical causes, and (d) peduncle may be damaged or cut.

6 Size classification

6.1 Size is determined by the weight of sweet pepper, as shown in Table 1.

Table 1 – Size classification of sweet pepper by weight

Size classification	Weight of sweet pepper (g)
Extra large	> 350
Large	251 - 350
Medium	151 - 250
Small	50 - 150
Extra small	< 50

6.2 The size is also determined by measuring the shoulder diameter (width) of the sweet pepper. In the case of flat sweet pepper (tomato pepper) the term 'width' means the maximum equatorial diameter.

Table 2 – Size of sweet pepper by shoulder diameter (width, mm)

Size classification	Diameter of sweet pepper (mm)
Jumbo	> 100
Extra large	86 - 100
Medium large	81 - 85
Medium	76 - 80
Small	60 - 75
Extra small	< 60

7 Tolerances

7.1 Quality tolerances

7.1.1 Extra class – Five percent by weight of sweet pepper not satisfying the requirements for the class, but conforming to those of class I or, exceptionally, coming within the tolerances of that class.

7.1.2 Class I – Ten percent by weight of sweet pepper not satisfying the requirements for the class, but conforming to those of class II or, exceptionally, coming within the tolerances of that class.

7.1.3 Class II – Ten percent by weight of sweet pepper not satisfying the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any deterioration rendering it unfit for consumption.

7.2 Size tolerance

For all classes, ten percent by weight of sweet pepper not conforming to the sizes identified within a margin of ± 5 mm including no more than 5 % of sweet peppers.

8 Sampling

Sampling to be used for ascertaining the conformance shall be in accordance with PNS/ISO 874.

9 Packaging

Sweet pepper shall be packed in suitable containers that will protect the produce properly. The materials used inside the package must be new, clean and of good quality such as to avoid from any external or internal damage to the sweet pepper. 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.

10 Marking and labeling

Each container shall have a label or legible characters grouped on the same side stamped in indelible ink to provide the following information:

10.1 Name of produce, variety or commercial type;

10.2 Date of harvest;

10.3 Class and size;

10.4 Net weight (g);

10.5 Name of producer, trader and exporter;

10.6 Origin of produce; and

10.7 Product of the Philippines.

11 Contaminants

11.1 Heavy metals

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

11.2 Pesticide residues

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

12 Hygiene

12.1 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.

12.2 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

Table 3 – The nutritive value of green and red sweet pepper

Nutritive content	Value
Water (%)	93
Food energy (K cal)	20
Protein (g)	1.0
Fat (g)	0
Saturated fatty acid (g)	0
Mono-unsaturated fatty acid (g)	0
Poly-unsaturated fatty acid (g)	0.2
Cholesterol (mg)	0
Carbohydrates (g)	4
Calcium (mg)	4
Phosphorus (mg)	16
Iron (mg)	0.9
Potassium (mg)	144
Sodium (mg)	2
Vitamin A (IU)	
Green	390
Red	4220
Vitamin A (RE)	
Green	39
Red	422
Thiamin (mg)	
Green	0.06
Red	0.06
Riboflavin (mg)	
Green	0.04
Red	0.04
Niacin (mg)	
Green	0.04
Red	0.04
Ascorbic acid (mg)	
Green	95
Red	141

Source: USDA. Nutritive Value of Foods. 1990

References

PNS/BAFPS 78:2009

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.

Code of Hygienic Practice for Fresh Fruits and Vegetables. CAC/RCP 53 – 2003.

Commission Regulation (EC) No. 1455/1999 as amended by Regulation (EC) No. 2706/2000

Common Marketing Standards For Sweet Peppers. 2000.

General Principles of Food Hygiene. CAC/RCP 1 – 1969, Rev. 4 – 2003.

<http://www.asdco.com.sa/Enazzaden.html>

<http://www.rogersadvantage.com/products/pepper.asp>

Principles for the Establishment and Application of Microbiological Criteria for Foods CAC/GL 21-1997.

Standards Administrative Order. 28:1968.

United States Standards for Grades of Sweet Peppers. November 17, 2005 , 9 pp.

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