

# PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 80:2009  
ICS 65.020.20

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**Fresh vegetables – Yardlong beans or ‘Sitao’ –  
Grading and classification**



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## **Foreword**

The development of the Philippine National Standard for Fresh vegetables – Yardlong beans or ‘Sitao’ – Grading and classification, PNS/BAFPS 80:2009 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 its harmonization with ASEAN standards and Codex requirements in Heavy Metals, Pesticide Residues and Hygiene.

PNS/BAFPS 80:2009 was based on the Quality and Grade Specifications for ‘Sitao’, developed in 1981 by the Food Terminal, Inc.

A Technical Committee (TC) and Sub-Committee (SC) were organized by 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 Yardlong Beans or ‘Sitao’. BAFPS, in collaboration with the TC conducted technical reviews and public consultations in the three major islands of the country prior to the finalization of the standard.

PNS/BAFPS 80:2009 aims to provide common understanding on the scope, definitions, minimum requirements, classification, size classification, tolerances, sampling, packaging, and marking and labeling of yardlong beans or ‘sitao’.

## **1 Scope**

This standard establishes a system of grading and classifying yardlong beans or ‘Sitao’, *Vigna sesquipedalis* Fruhw. produced in the Philippines to be supplied fresh to the consumers.

## **2 References**

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

## **3 Definitions**

### **3.1**

#### **clean**

Pods are free from stains, dirt and other foreign materials

### **3.2**

#### **discoloration**

The surface area does not conform to the characteristics of the variety

### **3.3**

#### **firm**

Pods are crisp, not soft, not wilted, not shriveled or flabby

### **3.4**

#### **mature**

Seeds are not very evident (the stage of maturity is between young and tender and overmature) still crisp

### **3.5**

#### **mechanical damage**

Bruises, cuts and other damages caused by mishandling or improper harvesting

### **3.6**

#### **overmature**

Pods show some evidence of drying, shriveling, fiber development, or there is a change in color from green to light green to yellowish or purple to dark purple. The seeds are evident from the outside of the pods

### **3.7**

#### **pest damage**

External and internal damage caused by insects, pathogens and rodents

**3.8**

**physiological damage**

damage caused by environmental factors such as temperature, water, etc.

**3.9**

**well-colored**

color of the pods shall not vary with the typical color of the variety

**3.10**

**well-formed**

Pods shall have the typical shape of the variety, not twisted or constricted

**4 Minimum requirements**

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

- fresh, clean and firm;
- free from damages caused by pests and diseases, mechanical or other means;
- free from deformities;
- free of foreign/undesirable smell; and
- well-shaped, young and tender.

The development and condition of yardlong beans or 'sitao' must enable it to: (a) withstand transport and handling and (b) arrive in satisfactory condition at the place of destination.

**5 Classification**

Yardlong beans or 'Sitao' are classified into three classes, as follows:

**5.1 Extra class** – Yardlong beans must be of superior quality and have similar varietal characteristics. It must be clean, fresh, firm, young and tender, well-colored, well-filled, and well-formed. It must be free from damages caused by pests and diseases, mechanical or other means. Very slight superficial defects are allowed, provided these defects do not affect the quality and presentation in the package.

**5.2 Class I** – Yardlong beans in this class must be of good quality and have similar characteristics of the variety. It must be clean, fresh, firm, well-colored, fairly well-filled, fairly well-formed, and young and tender. It must be free from damages caused by pests and diseases, mechanical or other means. Slight superficial defects are allowed, provided these defects do not affect the quality and presentation in the package.

**5.3 Class II** – This class includes yardlong beans which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Clause 4.

## **6 Tolerances**

### **6.1 Quality tolerances**

**6.1.1 Extra class** – Ten percent by weight of yardlong beans not satisfying the requirements of the class but meeting those of Class I or, exceptionally, coming within the tolerance of that class.

**6.1.2 Class I** – Ten percent by weight of yardlong beans not satisfying the requirements of the class, but meeting those of class II or, exceptionally coming within the tolerance of that class.

**6.1.3 Class II** – Ten percent by weight of yardlong beans 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 Sampling**

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

## **8 Packaging**

Yardlong beans must be packed in suitable containers that will protect the beans from any external or internal damage. The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling and transport of yardlong beans.

## **9 Marking and labeling**

Each container shall be legibly labeled with the following information:

- 9.1** Name of produce, variety and/or commercial type;
- 9.2** Date of harvest;
- 9.3** Class;
- 9.4** Net weight, (kg)/pack;
- 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**

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

### **10.2 Pesticide residues**

Yardlong beans shall comply with those 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 provision 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.2 –1985), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

**11.2** The produce shall comply with microbiological criteria established in accordance with the Principles for the Establishment of Microbiological Criteria for Foods (CAC/GL 21- 1997).

## References

**PNS/BAFPS 80:2009**

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.

Agriculture Code. Production, Processing, and Sale of Horticultural Products: Grading, Packing, and Inspecting Horticultural Products. Chapter 91. General Grades and Packs of Fruits and Vegetables. p.11 – 12, <http://tlo2.tlc.state.tx.us>.

General Principles of Food Hygiene. CAC/RCP 1-1969, Rev.2–1985.

Quality and Grade Specifications for Sitao. 1981. Food Terminal, Inc.

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

Seed Catalogue. National Seed Industry Council. Bureau of Plant Industry. pp. 172 – 174.

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