

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 08:2004
ICS 65.020.20

Fresh Fruit - 'Saba' and 'Cardaba' Bananas - Specification



BUREAU OF PRODUCT STANDARDS

Foreword

This Philippine National Standard for Fresh Fruit ‘Saba’ and ‘Cardaba’ bananas, PNS/BAFPS 08:2003 was formulated in view of the increasing importance of the commodity in the local economy and potential in international trade. These type of bananas are classified as cooking bananas and should have a separate and more elaborate standard than that of PNS 81:1987, which are for table banana varieties. It is imperative that further elaboration based on the physical characteristics, classification, tolerances, sampling, marking or labeling, and safety requirements of ‘Saba’ and ‘Cardaba’ bananas be reflected in a separate standard.

The formulation of this standard was initially undertaken in June 2001 under the Bureau of Agriculture and Fisheries Product Standards (BAFPS)’ Technical Assistance on Safety and Quality Standards Covering Products of High Value Commercial Crops. In 2003, BAFPS conducted series of technical reviews and public consultations in the major ‘Saba’ and ‘Cardaba’ producing regions of the country to generate inputs and comments on the texts of the standard prior to its approval.

Fresh Fruit - 'Saba' and 'Cardaba' Bananas - Specification

1 Scope

This standard establishes a system of grading and classifying 'Saba' and 'Cardaba' type bananas grown from *Musa balbisiana* of the Musaceae family produced in the Philippines.

2 Reference

The titles of the standards 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 shall apply:

3.1 General definitions**3.1.1****banana**

edible fruit of tropical plant belonging to the genus *Musa* of the family Musaceae. 'Saba' and 'Cardaba' bananas are cooking type of banana widely grown in the Philippines

3.1.2**bunch**

the group of hands arranged alternately around a common fruit stalk

3.1.3**clean**

the fruit is generally free from dirt, latex stains and other foreign materials

3.1.4**clean, reasonably**

fruit exhibits unavoidable dirt, latex stains and other foreign materials incidental to proper harvesting

3.1.5**cluster**

a separate section of a hand consisting of two or more fingers

3.1.6**crown**

the crescentic cushion where several finger stalks meet to form a hand

3.1.7

diameter

the dimension measured from side to side at the center of the middle finger of the second basal hand of the stem or bunch

3.1.8

finger

the individual banana fruit

3.1.9

hand

a complete group of fingers attached to the crown

3.1.10

length

the dimension of the fruit measured at its dorsal side from the base of the fruit pulp to its tip (middle finger in the hand)

3.1.11

mature

a stage of development that will ensure acceptance of the quality of the hand upon ripening. Mature 'Saba' and 'Cardaba' exhibit slight yellowing on the middle portion of the flesh

3.1.12

ripe

the stage of development when the banana fruit is in its most desirable condition for eating

3.1.13

well-formed

regular, fairly compact and reasonably uniform size of the fingers of the hand of the banana

3.1.14

well-formed, fairly

less regular, less compact and less reasonably uniform size of the fingers of the hand of the banana

3.1.15

well-trimmed

enough amount of the crown with smooth cut surface is retained to keep fingers intact; flower remnants are removed

3.2 Defects

3.2.1 Pre-harvest

3.2.1.1

false finger

undeveloped fruit

3.2.1.2

premature ripening

fruits which have been harvested mature, ripen rapidly during transportation or distribution

3.2.1.3

wind scar

abrasion on the peel caused by strong wind at any stage of development

3.2.2 pest and diseases

3.2.2.1

bird damage

injury on the peel caused by birds

3.2.2.2

corky peel

is caused by Thrips florum Schmutz, appear as black specks, the peel becomes rough and which at times crack resulting into blemishes called corky scab

3.2.2.3

freckle

is a disease caused by a fungus, *Phyllostictina musarum* (Cooke) Petr. It is called black spot because of the numerous black spots formed by the pycnidia of the fungus

3.2.2.4

mealy bugs

is caused by *Dysmicoccus neobrevipes* Beardleys, have soft body with white powdery wax and the young nymphs are pinkish in color

3.2.2.5

rust

is caused by an obligate fungus, *Uromyces musae*, which has reddish brown discoloration and the severely damaged fruits split open

3.2.2.6

scab

materially detracts from the shape or texture, forming a circle more than 16 mm in diameter

3.2.2.7

scale insect

the injury is more than a few adjacent to the “button” at the stem end, or more than 6 mm scattered on the other portions of the fruit. The damage is forming a circle more than 16 mm in diameter

3.2.2.8

sooty mold

that colonizes the honeydew secreted by the mealy bugs that cause damage to the fruit

3.2.2.8

“bugtok” or “tibagnof”

is caused by bacterium *Pseudomonas solonacearum*. The infected fruits are discolored and hard even when ripe

3.2.3 Handling

3.2.3.1

transport damage (compression, impact, abrasion)

3.2.3.2

latex stain

3.2.3.3

cuts

3.2.3.4

punctures

3.2.4 General Defects

3.2.4.1

blemish

any defect on the peel other than mechanical injury

3.2.4.2

bruises

any mechanical injury on the peel of the fruit that makes it unsightly

3.2.4.3

decay

any disorder characterized by biological decomposition

3.2.4.4

latex burn

latex stains characterized by brownish black streaks on the peel which may be sunken

3.2.4.5

broken neck

fingers not firmly attached to the crown

3.2.4.6

overripe

the stage when the fruit is excessively soft, discolored and has passed its maximum eating desirability

4 Types

4.1 ‘Saba’/Dippig (Ilocano) – It is a cooking banana with medium to large fruits. The fingers are short, stout and angular in cross section with thick skin that turns yellow when ripe. The pulp is creamy white, fine textured with a well-developed core. Although the flesh becomes sweet upon ripening, the fruits are always cooked before consumption. The fingers are about 12-13.5 cm long but the large bunch weighs 26-28 kg with 10-12 hands.

4.2 ‘Cardaba’/Cadison – More popular than ‘Saba’ in the Visayas and Mindanao region. It is very similar to ‘Saba’ but more vigorous and with larger fruits. Generally, the fingers are longer than the ‘Saba’. The bunch weighs 30-40 kg with 15-18 hands.

5 Minimum requirements

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

5.1 The fruit must be reasonably clean, free from diseases, insects, molds and other contaminants.

5.2 The use of chemical process for ripening is allowed provided it conforms with PNS/SAO 74.

5.3 Pesticide residues shall meet the requirements of the Codex Alimentarius Commission Vol. 2.

6 Size classification

Size is determined according to the diameter and length of the fruit. ‘Saba’ banana is classified according to the following size groups as shown in Table 1.

Table 1 - Size of bananas

Size	Length (cm)	Diameter (cm)
Extra Large	>14	> 4.5
Large	12 - 14	4.5
Medium	10 - 12	4.0
Small	Not < 8	3.5

7 Classification

Each size shall be classified according to its general appearance, quality and conditions as follows:

7.1 Extra class – Bananas in this class must be of superior quality. Hands of one variety are mature, clean, well formed, well-trimmed and free from decay, split fingers, loose fingers, bruises, blemishes and discoloration caused by diseases, insects, latex burn, mechanical or other means.

7.2 Class I – Bananas in this class must be of good quality. Hands of one variety are mature, clean, well formed, well trimmed and free from decay, split fingers, bruises, blemishes and discoloration caused by diseases, insects, latex burn, mechanical or other means.

7.3 Class II – Bananas in this class which do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified in Section 5. Hands of one variety are mature, reasonably clean, fairly well formed, well-trimmed and relatively free from decay, split fingers, loose fingers, bruises, blemishes and discoloration caused by scars, diseases, insects and mechanical or other means.

8 Tolerances

8.1 Extra class – Not more than 5% by number or weight for off-size and no more than 5% by number or weight for other defects are allowed in any lot, including not more than 1% by number or weight for hands affected by decay, provided they conform with the requirements of the next lower class.

8.2 Class I – Not more than 10% by number or weight for off-size and not more than 10% by number or weight for other defects are allowed in any lot, including not more than 1% by number or weight for hands affected by decay, provided they conform with the requirements of the next lower grade.

8.3 Class II – Not more than 20% by number or weight for off-size not more than 15% by number or weight for other defects are allowed in any lot, including not more than 2% by number or weight for hands affected by decay.

9 Packaging

Bananas shall be packed in cartoons or similar protective container to ensure protection from hazards of transportation and handling.

10 Marking or Labeling

Each container shall be properly labeled in big letters with the following:

- 10.1** Name of the fruit and variety
- 10.2** Grade and size
- 10.3** Net weight in kilograms
- 10.4** Name of exporter and/or packer
- 10.5** The statement “Product of the Philippines”
- 10.6** Region of production (optional)
- 10.7** Official inspection mark (optional)
- 10.8** Handling and storage requirement (optional)

11 Sampling

Bananas shall be sampled in accordance with PNS/ISO 874.

12 Contaminants

12.1 Heavy metals

Bananas shall comply with those maximum residue levels for heavy metals established by the Codex Alimentarius Commission for this commodity.

12.2 Pesticide residues

Bananas shall comply with those maximum residue levels established by the Codex Alimentarius Commission for this commodity.

13 Hygiene

13.1 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. 2 –1985), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

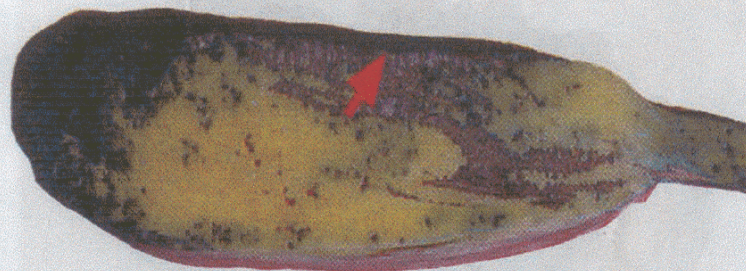
13.2 The produce shall comply with microbial criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21 – 1997).

14 Compliance with specification

When found to comply with the requirements specified in this Philippine Standard Specification, the lot, the batch, or the consignment from which the samples have been drawn, shall be deemed to comply with this Philippine Standard Specification.



Premature ripening



Windscar



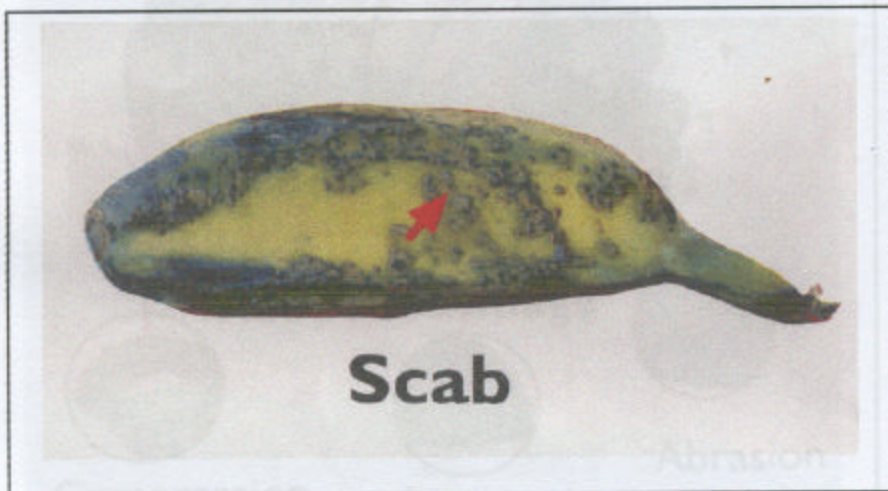
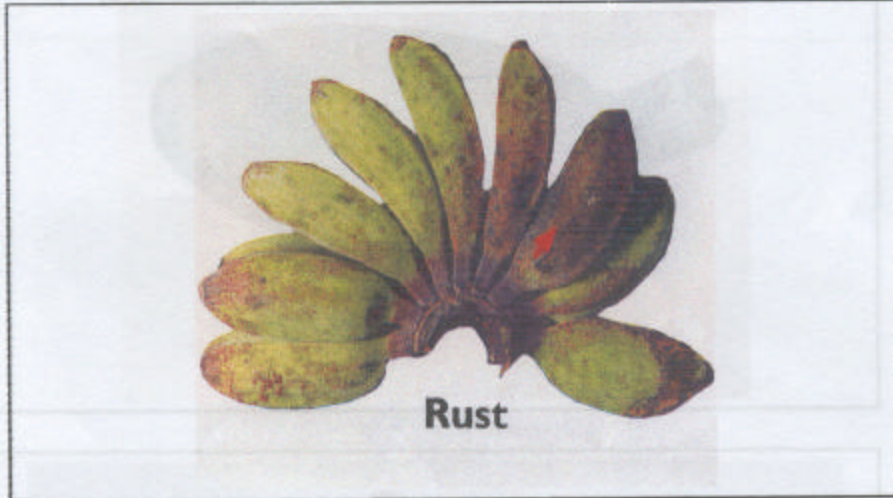
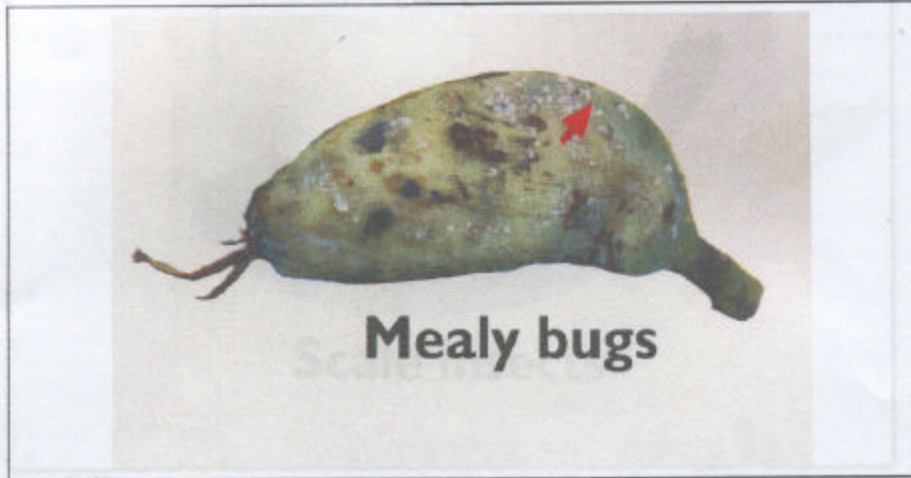
Bird damage

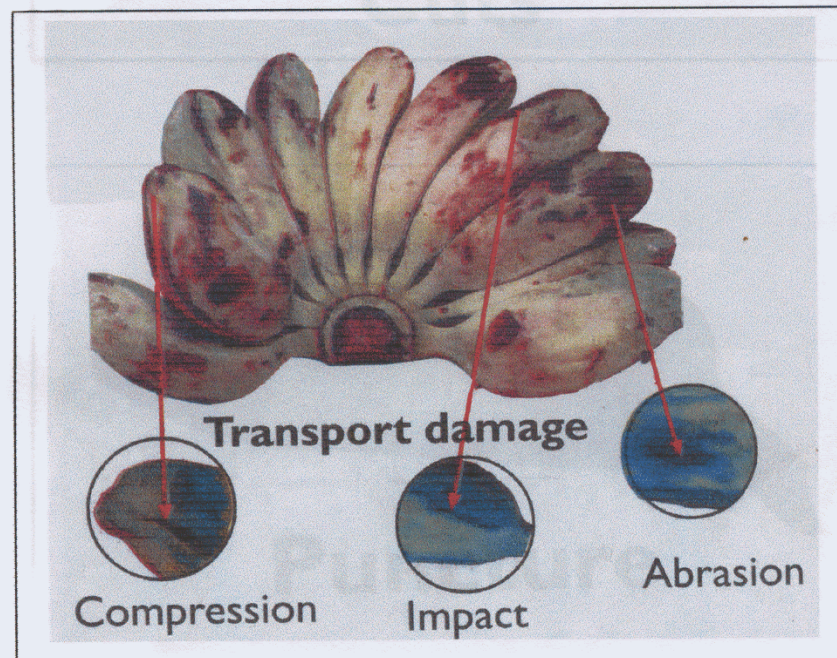
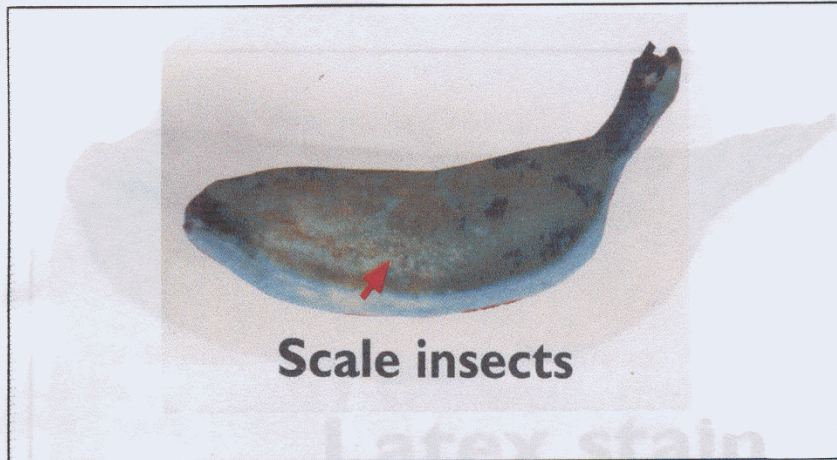


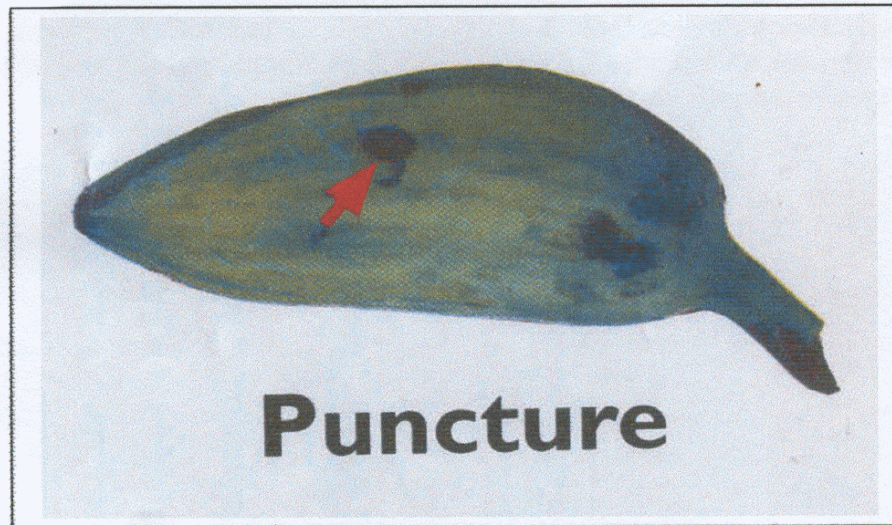
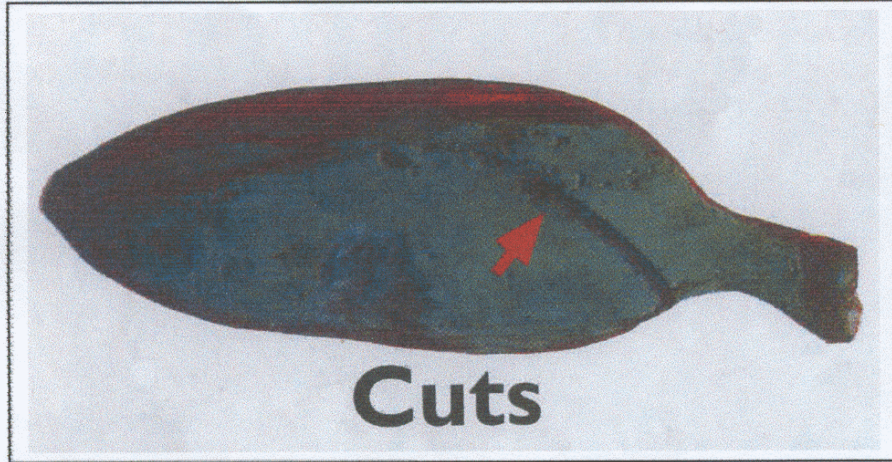
Corky peel



Freckles







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Espino, R. R, et. al. Banana: Training Manual. Department of Agriculture - Bureau of Agricultural Research and UPLB. 2001. 103 pp.

PNS /ISO 874:2001 (E) – Fresh fruits and vegetables- Sampling contains provisions which through reference in the text form part of this national standard.

Valmayor, R.V. B. Salajoi, S. H. Jamaluddin, S. Kusumo, R.R.C. Espino and Q. C. Pascua. Banana classification and commercial cultivars in Southeast Asia. Los Baños, Laguna. PCARRD, 1991. 20 pp. (Info Bulletin No.241/1991)

Valmayor, R.V., F. N. Rivera and R.M. Lomuljo. Philippine banana cultivar names and synonyms. College, Laguna. NPGRI. IPB, UPLB. 1981.16 pp. (IPB Bulletin No 3/1981)

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