

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 19:2005
ICS 65.020.20

**Vegetables – Head Lettuce (*Lactuca sativa* var, *capitata* L.) –
Grading and classification**

Foreword

The formulation of this Philippine National Standard for Head Lettuce, **PNS/BAFPS 19:2005** was initially drafted by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) with reference to Philippine Trade Standard Specification for Head Lettuce (1968); Food Terminal Inc. Quality and Grade Specifications for Head Lettuce (1981); US Standards for Grades of Head Lettuce (1997) and CBT Product Grades, Packaging, Storage and Seasonality (1994).

It was reviewed by the BAFPS' Technical Committee and was publicly consulted to three main islands of the Philippines together with Cabbage, Broccoli and Cauliflower. Comments from the stakeholders were considered prior to its approval.

The Technical committee created by BAFPS for this purpose was composed of experts from DA-AMAS, DA-NAFC, PHTRC-UPLB, IPB-UPLB and the Vegetables Growers Associations.

**Vegetables – Head Lettuce (*Lactuca sativa* var, *capitata* L.) –
Grading and classification**

1 Scope

This standard applies to fresh Head Lettuce, *Lactuca sativa* var, *capitata* L.

2 References

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Definitions**3.1 Product definition****3.1.1****cap or cover leaf**

the outermost leaf of the head which fairly closely enfolds the compact portion of the head, some portion of which extends to the top of the crown. The tip of the cap leaf may be separated from the head, provided that the separation does not extend more than 3 cm in height from the compact portion of the head

3.1.2**crown**

the upper half of the head

3.1.3**head lettuce**

this is head-forming lettuce either crispheads (iceberg) or butterheads. The crispheads have firm hearts produced by the close overlapping of coarse-veined crisp leaves with prominent midribs. The butterheads have relatively soft textured leaves with a greasy appearance

3.1.4**wrapper leaves**

all leaves outside of the cap leaf

3.2 Essential composition and quality factors**3.2.1 Quality factors****3.2.1.1****clean**

head is free from dirt, filth and other foreign matter including live and dead insects

3.2.1.2

closely trimmed

the base is trimmed closely to the point of attachment of the outer leaves and does not have more than two (2) wrapper leaves and one cap

3.2.1.3

fairly well-trimmed

the base is trimmed off closely to the point of attachment of the outer leaves, does not have more than four (4) wrapper leaves

3.2.1.4

fresh

the head as a whole has normal succulent leaves and the wrapper leaves are not more than slightly wilted

3.2.1.5

green

one-half or more of the exterior surface of the head, exclusive of the wrapper leaves, has at least a light green color

3.2.1.6

reasonably trimmed

the base is trimmed closely to the point of attachment of the outer leaves and does not have more than six (6) wrapper leaves

3.2.1.7

similar varietal characteristics

the heads in any container have the same characteristic leaf growth

3.2.1.8

solidity

head is fairly firm, not compact, nor soft or spongy but with good head formation and edible content; yields to slight or moderate pressure

3.2.2 Defects

Examples of head lettuce with and without defect are shown in Annex A.

3.2.2.1

broken midrib

separation on the central vein of a leaf

3.2.2.2

burst

the head is split or broken open

3.2.2.3

damage

any injury or defect, which materially affects the appearance, or the eating and shipping quality of fresh lettuce

3.2.2.4

decay

softening of tissue due to rot-causing microorganisms, characterized by a watery tissue breakdown and may be accompanied by a foul odor in the advanced stage

3.2.2.5

discoloration

yellowing or browning or the presence of other colors that seriously detracts from the appearance of head and wrapper leaves

3.2.2.6

doubles

growth of two heads on the same stem

3.2.2.7

downy mildew infection

white spots that materially detracts from the appearance of the head leaf and wrapper leaves

3.2.2.8

insects or worm damage

injury caused by insects or worms on the head or wrapper leaves

3.2.2.9

overgrown

the head is compact and affected by russet spotting, pink rib or other discoloration associated with aging; taste may be bitter

3.2.3.10

seedstems

upon internal examination of the head, seed stalk is showing or its formation has plainly begun; causes unusual compactness and bursting of the head

3.2.3.11

tipburn

any brown spot which exceeds 3 cm in diameter

4 Classification

4.1 Head lettuce shall be classified according to its type or varietal characteristics and size. (Refer to Table 1 - Size classification of fresh head lettuce).

4.1.1 Type of head lettuce

4.1.1.1 Crisphead

4.1.1.2 Butterhead

Table 1 – Size and type classification of fresh head lettuce

Size (g)	Type of head lettuce	
	Crisphead	Butterhead
Small	200-300	200-300
Medium	301-450	301-450
Large	451-600	451-600
Extra Large	>600	>600

4.1.2 Head lettuce shall be classified according to their size:

- 4.1.2.1** Small
- 4.1.2.2** Medium
- 4.1.2.3** Large
- 4.1.2.4** Extra Large

5 Grading

5.1 Grade 1 – Consists of heads of lettuce which meet the following requirements:

5.1.1 Basic requirements;

- 5.1.1.1** Similar varietal characteristics
- 5.1.1.2** Fresh
- 5.1.1.3** Green
- 5.1.1.4** Fairly firm, not soft, not compact
- 5.1.1.5** Not burst

5.1.2 Free from;

- 5.1.2.1** Decay
- 5.1.2.2** Russet spotting
- 5.1.2.3** Doubles
- 5.1.2.4** Discoloration

5.1.3 Free from injury caused by;

- 5.1.3.1** Downy mildew
- 5.1.3.2** Insects and worms

5.1.4 Not damaged by any other cause; and

5.1.5 Each head shall be fairly well trimmed unless specified as closely trimmed.

5.2 Grade 2 – Consists of heads of lettuce which meet the following requirements:

5.2.1 Basic Requirements;

5.2.1.1 Similar varietal characteristics

5.2.1.2 Fresh

5.2.1.3 Green

5.2.1.4 Not soft, not compact

5.2.1.5 Not burst

5.2.2 Free from;

5.2.2.1 Decay

5.2.2.2 Doubles

5.2.3. Not damaged by any other cause; and

5.2.4 Each head shall be fairly well trimmed unless specified as closely trimmed.

5.3 Grade 3 – Consists of heads of lettuce which meet the following requirements:

5.3.1 Basic Requirements;

5.3.1.1 Similar varietal characteristics

5.3.1.2 Not burst

5.3.2 Free from decay;

5.3.3 Not seriously damaged by any other cause; and

5.3.4 Unless specified each head shall be reasonably trimmed.

6 Tolerance

6.1 Grade 1 – Ten percent for head lettuce which fail to meet the requirements of this grade which include four percent for soft heads, four percent for defects causing serious damage and two percent for heads affected by decay on any portion of the head exclusive of the wrapper leaves.

6.2 Grade 2 – Twelve percent for head lettuce which fail to meet the requirements of this grade which include four percent for soft heads, two percent for decay and six percent for heads having permanent defects.

6.3 Grade 3 – Twelve percent for head lettuce which fail to meet the requirements of this grade which include four percent for heads which are affected by decay on any portion of the head exclusive of the wrapper leaves and eight percent for heads having permanent defects.

7 Sampling and methods of analysis

Sampling and method to be used for ascertaining conformance to the requirements of this specification shall be in accordance with PNS ISO 874.

8 Packing

Fresh head lettuce of the same variety shall be packed in plastic crates, lined wooden crates or cartons or similarly protective containers to protect them against mechanical damage and to facilitate handling and transport. The net weight of the commodity inside the package must be within the capacity of the container, but not to exceed 10 kg-12 kg.

9 Marking

Each container shall be properly labeled using legible characters grouped on the same side to provide the following:

- 9.1** Name of the product;
- 9.2** Type;
- 9.3** Name and address of grower (s)/supplier(s); and
- 9.4** Net weight in kilograms

10 Contaminants

Pesticide residues

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

11 Hygiene

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. 3 – 1997, Amd. (1999), and other relevant Codex texts such as Codes of Hygiene practice and Codes of Practice.

Annex A
Examples of head lettuce with and without defect



Without Defect



Untrimmed



Rust Spots



Double Head



No Head



Poor Head Formation



Compact Head



Loose Head



Decay

References

PNS/BAFPS 19:2005

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

CAC Vol. 2 (1993), Pesticide Residue in Foods

CAC/RCP 1 – 1969, Rev. 3 – 1997, Amd. (1999), Recommended International Code of Practice General Principles of Food Hygiene

Food Terminal Inc. Quality and Grade Specifications for Head Lettuce (1981)

Philippine Trade Standard Specification for Head Lettuce (1968)

PNS/ISO 874, Sampling and Methods of Analysis

US Standards for Grades of Head Lettuce (Revised 1997)

CBT Product Grades, Packaging, Storage and Seasonality (1994)

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