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**BELIZE NATIONAL STANDARD  
SPECIFICATION FOR POTATO**

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Committee Representation

The preparation of this standard for the Standards Advisory Council established under the Standards Act of 1992, was carried out under the supervision of the Bureau's Technical Committee for Food and Food Related Products, which at the time comprised the following members:

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**0 FOREWORD**

- 0.1 This standard is intended to assist traders and consumers of (English/Irish/Table) Potatoes (*Solanum tuberosum*) in the quality assessment for making purchasing and sales decisions.
- 0.2 This standard was developed because of the importance of (English/Irish/Table) Potatoes in the trade of fresh produce.
- 0.3 This standard was adapted from the Grenada Specification for Agricultural Produce English Potato – (*Solanum tuberosum*), Grenada Bureau of Standards.

**1 SCOPE**

- 1.1 This standard applies to all potatoes to be supplied fresh to the consumer market.
- 1.2 It sets out specifications and describes minimum requirements for the grade, storage and labelling of potatoes.

**2 DEFINITION OF TERMS**

For the purpose of this standard, the following terms shall apply:

- 2.1 **Clean** means that the individual and or lot of potatoes are reasonably free from dirt and do not exceed agrochemical residues beyond the approved acceptable level and any other foreign material and odours.
- 2.2 **Damage** means any defect listed in Table 1 or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which cannot be removed without a loss of more than 5% of the total weight of the potato.
- 2.3 **Fairly Well Shaped** means that the individual potato is not ridged, lumpy, dumb shaped, materially affected by second growth or otherwise misshapen.
- 2.4 **Genetically Modified (GM)** means the deliberate alteration of genes in a laboratory other than by means of true natural breeding.
- 2.5 **Loose Sprouts** means unattached sprouts or sprouts that become detached during the handling of the product.
- 2.6 **Mature** means that the potatoes have reached a state of development that will ensure that they arrive on the market in an acceptable condition, subject to requirements in terms of flavour and texture. At this stage the skins of the potatoes are generally firmly set.

- 2.7 ***Moderately Firm*** means that the potato shall not be seriously shrivelled or flabby.
- 2.8 ***Properly Labelled*** means each package meets the requirements of the importer and importing country legislation; each package to be traded shall have legibly and indelibly marked on at least two sides with the following:
- (a) Name and address of exporter/producer/packer/distributor;
  - (b) Name and address of consignee;
  - (c) Name of variety of produce;
  - (d) Country of origin;
  - (e) Grade of produce;
  - (f) Net weight of package in International System of units (SI) followed by Imperial Units in brackets;
  - (g) Date of packaging;
  - (h) Post harvest treatments;
  - (i) If the planting material was genetically modified, each package must be labelled in accordance with the legal requirements of the Government of Belize;
  - (j) A best before date if applicable;
  - (k) Specific storage requirements if applicable.
- 2.9 ***Serious Damage*** means any defect listed in Table 1, or an equally objectionable variation of any of these defects, any other defect, or any combination of defects, which cannot be removed without a loss of more than 10% of the total weight of the potato.
- 2.10 ***Seriously Misshapen*** means that the potato shall not be seriously deformed and causing more than 10% waste when determining the non-peelable area directly due to shape.
- 2.11 ***Similar Varietal Characteristics*** means that the potatoes in any lot shall have the same general shape, colour, and character of skin and colour of flesh.
- 2.12 ***Soft Rot or Wet Breakdown*** means any soft, mushy or leaky condition of the tissue of the potato.

- 2.13 *Skinned Areas* means that the potato has areas where the skin is missing or feathered.
- 2.14 *Usable Piece* means the portion of the potato remaining after trimming or as it occurs in the sample.

### 3 QUALITY REQUIREMENTS

#### 3.1 Minimum Requirements

3.1.1 Potatoes shall be free from:

- (a) black heart;
- (b) late blight tuber rot;
- (c) southern bacterial wilt;
- (d) bacterial ring rot;
- (e) soft rot and wet breakdown;
- (f) insect bites, worms and larvae;
- (g) freezing injury;
- (h) musty or mouldy smell;
- (i) large cuts;
- (j) growth cracks;
- (k) skinned areas;
- (l) green colouring to the skin; and
- (m) large eyes.

3.1.2 Potatoes shall be:

- (a) clean;
- (b) mature;
- (c) moderately firm;
- (d) not seriously misshapen;
- (e) shallow eyes;
- (f) fairly well shaped; and
- (g) of similar varietal characteristics.

#### 3.2 Grade Requirements

##### 3.2.1 Grade 1

In addition to meeting the minimum requirements potatoes falling in that grade shall meet the following requirements:

- (a) Individual potatoes shall be not less than 2 inches in diameter or 4 ounces in weight;
- (b) A 10% variation from the desired shapes is permitted; and

- (c) Free from damage by any cause.

### **3.2.2 Grade 2**

In addition to meeting the minimum requirements, potatoes falling in that grade shall meet the following requirements:

- (a) Individual potatoes shall be not less than 1½ inches in diameter, or usable pieces shall be not less than 4 ounces in weight;
- (b) The usable piece of the potato should be no less than 70% of the whole;
- (c) A 20% variation from the desired shape is permitted; and
- (d) Free from serious damage by any cause.

The development and condition of the potato must be such as to enable them, to withstand transport and handling and to arrive in a satisfactory condition at the place of destination.

## **4 STORAGE REQUIREMENTS**

Special storage requirements for potatoes are necessary to control and retard natural biological processes of the crop that may lead to decay of the same. Quality of the potato is maintained by controlling the storage temperatures and relative humidity.

### **4.1 Minimum Storage Requirements**

- 4.1.1 Potatoes shall be stored at a temperature of 40°F (4°C) to 55°F (13°C)
- 4.1.2 The storage room shall be properly ventilated.
- 4.1.3 Potatoes shall be stored in a dark room free from natural or artificial light to avoid greening.
- 4.1.4 Storage package shall be placed on good quality wooden pallets of 48"x 40" (122cm x 102cm).
- 4.1.5 The pallets shall be placed at least 12 inches (31 cm) away from the wall and stacked in rows at least 12 inches (31 cm) from each other.
- 4.1.6 The roof and upper wall of the storage room shall be insulated and weather proof.
- 4.1.7 The floor of the storage room shall be damp proof to prevent moisture ingress.

Table 1: Classification of Defects

Defects	Maximum allowed for Grade 1	Maximum allowed for Grade 2
Air Cracks	5% waste	10% waste
Bruises	5% waste	10% waste
Cuts	Smooth, not more than 10% of surface	Smooth not more than $\frac{1}{3}$ of the surface
Enlarged lenticels, discoloured or sunken	5% waste	10% waste
Greening, light	5% waste	10% waste
Sprouts	5% waste	10% waste
Nematodes	5% waste	10% waste
Rodent, bird damage	5% waste	10% waste
Scab Surface	25% of surface or 5% waste	50% of surface or 10% waste

## 5 MARKING OR LABELLING

### 5.1 *Containers Destined for the Final Consumer*

In addition to the requirements of the **BZS 1: Part 3: 1998 – Belize National Standard Specification for the Labelling of Prepackaged Foods**, the following specific provisions apply:

#### 5.1.1 **Nature of the Produce**

If the produce is not visible, each package shall be labelled as to the name of the produce and optionally, that of the variety.

If the planting material was genetically modified, each package must be labelled in accordance with the legal requirements of the Government of Belize.



**5.2 Non-retail containers**

For products transported in bulk these particulars must appear on the package or on a document accompanying the goods.

**5.2.1 Identification**

Exporter, packer and/or dispatcher.

**5.2.2 Nature of the Produce**

Name of produce if the contents are not visible from the outside, name of variety or commercial type (if applicable).

**5.2.3 Origin of Produce**

Country of origin and optionally, district where grown or national, regional or local place's name.

**5.2.4 Commercial Identification**

- (a) Class
- (b) Net weight
- (c) Size (reference letter optional)

**6 CONTAMINANTS**

**6.1 *Heavy Metals***

6.1.1 Potatoes shall be free from heavy metals in amounts, which may represent a hazard to human health. Potatoes covered by this standard shall comply with those Maximum Residue Limits (MRL) for heavy metals established by the Codex Alimentarius Commission.

**6.2 *Pesticide Residues***

6.2.1 Potatoes shall comply with those Maximum Residue Limits (MRL) established by the Codex Committee on Pesticide Residues for this commodity.

**7 HYGIENE**

7.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the **Belize Agricultural Health Authority (Food Safety) Regulations 2001 – General Principles of Food Hygiene.**

- 7.2 It is recommended that the growing and harvesting of potatoes adhere to Good Agricultural Practices (GAPs) and all subsequent processing adhere to Good Manufacturing Practices (GMPs).
- 7.3 When tested by appropriate methods of sampling and examination, the product shall:
- (a) Be free from microorganisms in amounts, which may represent a hazard to human health.
  - (b) Be free from parasites, which may represent a hazard to human health.
  - (c) Be free of any substance originating from microorganisms in amounts, which may represent a hazard to human health.