

01-001 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

DIVISION OF PLANT INDUSTRY

Chapter 253: OFFICIAL SEED POTATO GRADE FOR MAINE CERTIFIED SEED POTATOES

Summary: This is the official description of the Maine Seed Potato Grade.

I. Inspections

All shipments of Maine Certified Seed Potatoes are required to be inspected by an authorized Maine Seed Potato Inspector at time of packing and must meet the requirements of the prescribed grade in order to be issued official tag or bulk shipping permits.

II. Maine Seed Potato Grade

The "Maine Seed Potato Grade" shall consist of unwashed potatoes identified as certified seed of one variety by the State of Maine which meet the following requirements as to quality and size:

- A. Fairly well shaped
- B. Free from:
 - 1. Freezing injury
 - 2. Blackheart
 - 3. Late blight tuber rot
 - 4. Nematode or tuber moth injury
 - 5. Bacterial ring rot
 - 6. Soft rot or wet breakdown
- C. Free from serious damage caused by:
 - 1. Hollow heart
 - 2. Vascular ring discoloration
- D. Free from damage by other causes (see Table I & II).

III. Size

- A. Minimum diameter, unless otherwise specified, shall be not less than 1 1/2 inches.
- B. Maximum size, unless otherwise specified, shall not exceed 3 1/4 inches in diameter or 12 oz. in weight.

IV. Tolerances

In order to allow for variations incident to proper grading and handling in the foregoing grade, the following tolerances, by weight, are provided:

A. For defects

- 1. 10 percent for potatoes in any lot which are seriously damaged by hollow heart.
- 2. 5 percent for potatoes in any lot which are seriously damaged by vascular ring discoloration.
- 3. 10 percent for potatoes which fail to meet the remaining requirements of the grade including, therein, not more than 5 percent for external defects and not more than 5 percent for internal defects: Provided, that, included in these tolerances not more than the following percentages shall be allowed for the defects listed:

| | Percent |
|--|----------------|
| a. Bacterial Ring Rot | 0.00 |
| b. Serious damage caused by dry or moist type Fusarium Tuber Rot | 2.00 |
| c. Late Blight Tuber Rot | 1.00 |
| d. Nematode or Tuber Moth Injury | 0.00 |
| e. Varietal Mixture | 0.25 |
| f. Frozen Soft Rot or Wet Breakdown | 0.50 |

Provided, that en route or at destination an additional 0.50 percent or a total of 1 percent shall be allowed for potatoes which are frozen or affected by soft rot or wet breakdown.

B. For off-size

- 1. **For undersize** - Three percent for potatoes in any lot which fail to meet the required or specified minimum diameter except that 5 percent shall be allowed when the specified minimum diameter is 2 1/4 inches or more or 5 oz. or more minimum weight.
- 2. **For oversize** - Ten percent for potatoes in any lot which fail to meet the required or specified maximum size.

V. Application of Tolerances

Individual samples shall have not more than double the tolerances specified, except that at least one defective or offsize potato may be permitted in any sample: Provided, that en route or act destination one-tenth of the samples may contain three times the tolerances permitted for potatoes which are frozen or affected by soft rot or wet breakdown; and provided further, that the averages for the entire lot are within the tolerances specified for the grade.

VI. Samples for Grade and Size Determination

Individual samples shall consist of at least 20 pounds. The number of such individual samples drawn for grade and size determination will vary with the size of the lot.

VII. Definitions**A. Fairly well shaped**

"Fairly well shaped" means that the potato is not materially pointed, dumbbell-shaped or otherwise materially deformed.

B. Nematode or Tuber Moth Injury

"Nematode or tuber Moth Injury" means the presence of or any evidence of Nematode or Tuber Moth.

C. Damage

"Damage" means any defect or any combination of defects specified in Tables I and II of this Chapter which materially detracts from the internal or external appearance of the potato, or any external or internal defect which cannot be removed without a loss of more than 5 percent of the total weight of the potato.

D. Serious Damage

"Serious damage" means any defect or any combination of defects specified in Table I and II of this Chapter which seriously detracts from the internal or external appearance of the potato, or any external or internal defect which cannot be removed without a loss of more than 10 percent of the total weight of the potato.

E. Freezing Injury

"Freezing injury" means that the potato is frozen or shows evidence of having been frozen.

F. **Zero Tolerance**

"Zero tolerance (0.00) means none found during the normal inspecting procedures. Certification of a lot is not a guarantee that the lot inspected is free of a zero tolerance disease or injury.

G. **Shriveling**

Damage by shriveling means that the individual potato is more than moderately shriveled, spongy or flabby.

H. **Soft Rot or Wet Breakdown**

"Soft rot or wet breakdown' means any soft, mushy, or leaky condition of the tissue.

I. **External Defects**

"External defects" are defects which can be detected externally. However, cutting may be required to determine the extent of the injury. See Table I.

J. **Internal Defects**

"Internal Defects" are defects which cannot be detected without cutting the potato. See Table II.

K. **Permanent Defects**

"Permanent defects" are defects which are not subject to change during storage or shipment.

L. "Condition defects" are defects which may develop or change during storage or shipment.

Table 1. External Defects

| Defect | When Materially detracting from the appearance of potato | When removal causes a loss of more than 5 percent of the total weight of the potato |
|---|---|--|
| Air Carck | X..... | |
| Bruises | X..... | X |
| Cuts or trimming | X..... | |
| Enlarged Lenticels | X..... | |
| Folded ends | X..... | |
| External Discoloration | X..... | |
| Surface cracking | X..... | X |
| Plea Beetle Injury | X..... | X |
| Dry rots | | X |
| Rhizoctonia | X..... | |
| Scab, pitted | X..... | X |
| Scab, russet | X..... | |
| Scab, surface | When more than 5 percent of surface affected. | |
| Second growth | X..... | |
| Growth cracks | X..... | |
| Wireworm or grass damage | When any hole in a potato 2 1/2 inches in diameter or 6 ounces in weight is more than 3/4-inch long, or when the aggregate length of all holes is more than 1 1/4 inches, or correspondingly shorter or longer holes in smaller or larger potatoes. | |
| Dirt | Dirt or other foreign matter is considered as causing damage when the individual potato is more than slightly dirty or slightly stained, or when more than a moderate amount of loose dirt or other foreign matter is present in the sample. | |
| Insects or worms | When present inside the potato. | |
| Shriveling..... | When more than moderately shriveled, spongy or flabby. | |
| Sprouts | When more than 10 percent of the potatoes in any lot have any sprout more than 1 inch in length. | |
| Pressure bruises and sunken areas-with underlying flesh discolored. |When removal causes a loss of more than 10% of the total weight. | |

Table II. Internal Defects

| Defect | Damage |
|--|---|
| Ingrown sprouts | When removal causes a loss of more than 5 percent of the total weight of the potato. |
| Internal discoloration occurring interior to the vascular ring | When more than the equivalent of three scattered light brown spots 1/8 inch in diameter in a potato 2 1/2 inches in diameter or 6 ounces in weight, or correspondingly lesser or greater number of spots in smaller or larger potatoes. |
| Defect | Serious Damage |
| Internal discoloration confined to the vascular ring | When removal causes a loss of more than 10 percent of the total weight of the potato. |

STATUTORY AUTHORITY: Title 7, ' § 2101-2105

EFFECTIVE DATE:

November 1, 1976 (Filed 10-16-78)

AMENDED:

May 1, 1991

EFFECTIVE DATE (ELECTRONIC CONVERSION):

May 4, 1996

CONVERTED TO MS WORD:

May 15, 2008

CORRECTIONS:

February, 2014 – agency names, formatting