

§4-4-32

STANDARDS FOR HAWAII-GROWN BURDOCK \*

This UNOFFICIAL COPY of standards for burdock, rewritten for easy interpretation, is based on Chapter 4-41, Hawaii Administrative Rules, Standards for Fresh Fruits and Vegetables. The general provisions of this Chapter, summaries of standards for other fruits and vegetables, and official copies of the complete chapter are available in each county.

HAWAII NO. 1 (GRADE A)	HAWAII NO. 2 (GRADE B)	HAWAII UTILITY
<u>Basic Requirements</u>	<u>Basic Requirements</u>	<u>Basic Requirements</u>
Similar varietal characteristics (1)	(same as Hawaii No. 1)	Similar varietal characteristics (1)
Firm (2)		Firm (2)
Well trimmed (3)		Well trimmed (3)
Fairly well formed (4)		Not badly misshapen (5)
Smooth (6)		Fairly smooth (7)
Tender (8)		Not tough or woody
<p><u>Cleanness:</u> In addition to the above requirements, burdock designated as HAWAII GRADE A or HAWAII GRADE B shall be clean (9); those designated as HAWAII NO. 1 or HAWAII NO. 2 shall be free from damage caused by dirt (see Table 1); and those designated as HAWAII UTILITY shall be free from serious damage caused by dirt (See Table 1).</p>		
<u>Free From</u>	<u>Free From</u>	<u>Free From</u>
Soft rot	(same as Hawaii No. 1)	Soft rot
<u>Free From Damage (10)</u>	<u>Free From Damage (10)</u>	<u>Free From Serious Damage (11)</u>
<u>Caused By</u>	<u>Caused By</u>	<u>Caused By</u>
Cuts	(same as Hawaii No. 1)	Cuts
Bruises		Bruises
Growth cracks		Growth cracks
Internal discoloration		Internal discoloration
Pithiness		Pithiness
Secondary rootlets		Secondary rootlets
Disease		Disease
Nematodes		Nematodes
Insects		Insects
Mechanical or other means		Mechanical or other means

\*Numbers in parentheses following grade terms indicate where such terms are defined under "Definitions."

Size Requirement

Not more than 1 inch in diameter (12), and not less than 5/8 inch in diameter over 9 inches of the length of the individual root, and not less than 18 inches in length (13).

Size Requirement

Not less than 3/8 inch in diameter (12) and not less than 15 inches in length (13).

Size Requirement

1 inch or larger in diameter (12) and 15 inches or longer in length (13).

Tolerances (weight basis)

Defects: Total 10%; provided not more than 5% serious damage, including 1% soft rot.  
Off-size: Total 10%.

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Off-size: Total 10%.

OFF-GRADE. "Off-grade" is not a grade within the meaning of these standards, but is a descriptive term applicable to burdock which have market value, and designates a quality lower than the lowest applicable Hawaii, other states or the United States grade for burdock.

APPLICATION OF TOLERANCES. Averages for the entire lot, based on examination of representative samples, shall be within the tolerances specified, but the contents of individual containers in any lot may vary from the specified tolerances subject to the following limitations:

When the tolerance specified is more than 5 percent, individual packages in any lot may contain not more than 1-1/2 times the tolerance, provided that at least one specimen which fails to meet the requirements shall be permitted in any container.

When the tolerance specified is 5 percent or less, individual packages in any lot may contain not more than double the tolerance, provided that at least one specimen which fails to meet the requirements shall be permitted in any container.

APPLICABLE GRADE TERMS. Burdock shall be classified in accordance with the grading system designated below:

Wholesale Quantities - HAWAII NO. 1, HAWAII NO. 2 or HAWAII UTILITY, whichever is applicable.

Consumer Packages and Bulk Displays - HAWAII GRADE A, HAWAII GRADE B or HAWAII UTILITY, whichever is applicable.

MINIMUM EXPORT GRADE. Burdock for export shall at least meet the requirements of Hawaii Utility burdock.

DEFINITIONS.

(1) "Similar varietal characteristics" means the burdock roots in any lot are of the same general shape and character of growth.

- (2) "Firm" means the burdock root is not soft, flabby or shriveled.
- (3) "Well trimmed" means the top is trimmed back to not more than 1 inch in length and no part of the upper portion of the root has been cut off.
- (4) "Fairly well formed" means the root is fairly straight and not forked, constricted, bent sharply or otherwise irregular in shape. Secondary roots may be cut off if the appearance of the whole root is not materially affected, provided the presence of the secondary roots has not caused the root to be crooked or noticeably smaller in size below the point where the secondary root was cut off. Roots are not considered fairly well formed when the two axes of those portions of the root located at the two ends of a curve or bend form an angle that is less than 165°.
- (5) "Badly misshapen" means the root is so crooked or otherwise misshapen as to seriously affect the appearance of the root or to cause a loss of more than 10 percent of the total weight of the burdock root, including the peel covering the defective area, in the ordinary preparation for use; or the root is forked at a point within 12 inches of the crown; or the root is materially smaller below the point where one branch of a fork has been cut off.
- (6) "Smooth" means the burdock root is free from ridges, pebbling and other distinctly uneven surfaces.
- (7) "Fairly smooth" means the root is not so ridged, pebbled or rough as to seriously affect the appearance of the individual root or to cause a loss of more than 10 percent of the total weight of the root, including the peel covering the defective area, in the ordinary preparation for use.
- (8) "Tender" means the root tissues are free from woodiness and tough fibers.
- (9) "Clean" means practically free from dirt or any foreign material; or not more than materially stained.
- (10) "Damage" means any specific defect described in Table 1, Classification of Defects; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which materially detracts from the appearance, or the edible or shipping quality of the burdock roots.
- (11) "Serious damage" means any specific defect described in Table 1, Classification of Defects; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which seriously detracts from the appearance, or the edible or shipping quality of the burdock roots.
- (12) "Diameter" means the greatest dimension of the root taken at right angles to the longitudinal axis, exclusive of secondary roots and of that portion of the root within 1 inch of the crown.
- (13) "Length" means the total length of the root as measured from the crown to the tip of the root.

Table 1. Classification of Defects

FACTOR	DAMAGE	SERIOUS DAMAGE
Dirt	General appearance of the lot more than slightly dirty or stained; individual roots badly caked with dirt or badly stained; or other foreign matter present which materially affects the appearance of the roots.	General appearance of the lot seriously affected by presence of roots badly caked with dirt; or other foreign matter present which seriously affects the appearance of the roots.
Growth cracks	Materially affecting appearance.	Seriously affecting appearance.
Pithiness	Center of root 4 inches below the crown is more than slightly pithy or any air space present is more 1/32 inch in cross section. (Pithiness is characterized by an open texture with air spaces, in the central portion of the root.)	