



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Processed
Products
Branch**

United States Standards for Grades of Frozen Succotash

Effective date March 6, 1959

This is the first issue, as amended, of the United States Standards for Grads of Frozen Succotash published in the **FEDERAL REGISTER** of March 6, 1959, (24 FR 1677) to become effective March 6, 1959. This issue supersedes the first issue which has been in effect since May 22, 1957.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of processed fruits and vegetables, these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The standards also serve as a basis for the inspection and grading of commodities by the Federal inspection service, the only activity authorized to approve the designation of U.S. grades as referenced in the standards, as provided under the Agricultural Marketing Act of 1946. This service, available as on-line (in-plant) or lot inspection and grading of all processed fruit and vegetable products, is offered to interested parties, upon application, on a fee-for-service basis. The verification of some specific recommendations, requirements, or tolerances contained in the standards can be accomplished only by the use of on-line inspection procedures. In all instances, a grade can be assigned based on final product factors or characteristics.

In addition to the U.S. grade standards, grading manuals or instructions for inspection of several processed fruits and vegetables are available upon request for a nominal fee. These manuals or instructions contain detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the Department after careful consideration of all data and views submitted, and the Department welcomes suggestions which might aid in improving the standards in future revisions. Comments may be submitted to, and copies of standards and grading manuals obtained from:

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United States Standards for Grades of Frozen Succotash

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Authority: Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

§52.2011 Product description.

Frozen succotash means the frozen product prepared from fresh, clean, sound, succulent kernels of sweet corn and the immature seed of varieties of lima beans, vegetable soybeans, or fresh immature pods of green beans or wax beans. The ingredients are mixed and properly drained and then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product. When soybeans or green beans or wax beans are used, the product is designated as **frozen soybean succotash** or **frozen green bean or wax bean succotash**, as the case may be.

§52.2012 Kind, type, and style of ingredients.

- (a) Corn, sweet, whole kernel:**
 - (1) White.**
 - (2) Golden (yellow).**
- (b) Lima beans:**
 - (1) Thin-seeded.**
 - (2) Thick-seeded.**
 - (3) Thick-seeded baby potato.**
- (c) Soybeans, vegetable.**
- (d) Green beans or wax beans, Cut or Short Cut style.**

§52.2013 Proportion of ingredients.

It is recommended that frozen succotash consist of a mixture of the vegetable ingredients in the following proportions:

	Proportions by weight (percent)	
	Not more than-	Not less than-
Corn, white or golden	75	50
Lima beans, fresh	50	25
Soybeans, vegetable	50	25
Green or wax beans	50	25

§52.2014 Grades of frozen succotash.

- (a) **U.S. Grade A or U.S. Fancy** is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a good flavor and odor; is tender; possesses a good color; is practically free from defects; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: **Provided**, That the frozen succotash may be reasonably tender and possess a reasonably good color if the total score is not less than 90 points.
- (b) **U.S. Grade B or U.S. Extra Standard** is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a good flavor and odor; is reasonably tender; possesses a reasonably good color; is reasonably free from defects; and that scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.
- (c) **U.S. Grade C or U.S. Standard** is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a fairly good flavor and odor; is fairly tender; possesses a fairly good color; is fairly free from defects; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.
- (d) **Substandard** is the quality of frozen succotash that fails to meet the requirements of U.S. Grade C or U.S. Standard.

§52.2015 Ascertaining the grade.

- (a) The grade of frozen succotash is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and tenderness.
- (b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Absence of defects	30
Tenderness	<u>40</u>
Total Score	100

- (c) The scores for the factors of color, absence of defects, and tenderness (with respect to each individual vegetable prior to cooking) are determined immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units. A representative sample is cooked to determine the tenderness of the vegetable ingredients collectively and to ascertain the flavor and odor of the product.
- (d) **Good flavor and odor** means that the product, after cooking, has a good, characteristic, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.
- (e) **Fairly good flavor and odor** means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§52.2016 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, **27 to 30 points** means 27, 28, 29 or 30 points).

§52.2017 Color.

- (a) **General.** The factor of color refers to the overall appearance of the product and to the general brightness of the vegetables.
 - (1) **Green** with respect to lima beans means that the color of not less than 50 percent of the surface area of the individual lima bean (with skins on) possesses as much or more green color than Plate 18, J-3, as illustrated in Maerz and Paul's Dictionary of Color.¹
 - (2) **White** with respect to lima beans means that more than 50 percent of the surface area of the individual lima bean (with skins on) possesses less green color than Plate 18, E-1, as illustrated in Maerz and Paul's Dictionary of Color.¹

¹First Edition.

- (b) **"A" classification.** Frozen succotash that possesses a good color may be given a score of 27 to 30 points. **Good color** means that the vegetables are bright and possess a color typical of young and tender vegetables that have been properly prepared and properly processed and that the frozen whole kernel (or whole grain) corn is practically free from **off-colored** kernels. In addition, the lima beans shall meet the following color requirements:
- (1) Not less than 93 percent, by count, of the lima beans are green and not more than 7 percent, by count, may be lighter in color: **Provided,** That not more than 1 percent, by count, of all the lima beans are white, or
 - (2) Not less than 97 percent, by count, of the lima beans are green and not more than 3 percent, by count, may be lighter in color or white beans.
- (c) **"B" classification.** If the frozen succotash possesses a reasonably good color, a score of 24 to 26 points may be given. **Reasonably good color** means that the vegetables are reasonably bright and possess a color typical of reasonably young and reasonably tender vegetables that have been properly prepared and properly processed and that the frozen whole kernel (or whole grain) corn is reasonably free from **off-colored** kernels. In addition, the lima beans shall meet the following color requirements:
- (1) Not less than 65 percent, by count, of the lima beans are green and not more than 35 percent, by count, may be lighter in color or white beans.
- (d) **"C" classification.** Frozen succotash that possesses a fairly good color may be given a score of 21 to 23 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good color** means that the vegetables possess a color that may be dull but not to the extent that the appearance is materially affected and the whole kernel (or whole grain) corn in the frozen succotash is fairly free from **off-variety** kernels. In addition, the lima beans shall meet the following color requirements:
- (1) Less than 65 percent, by count, of the lima beans are green and all of the lima beans may be white.

- (e) **"SStd" classification.** If the frozen succotash fails to meet the requirements of paragraph (d) of this section, a score of 0 to 20 points may be given. Frozen succotash that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.2018 Absence of defects.

- (a) **General.** The factor of absence of defects refers to the degree of freedom from extraneous vegetable matter, damaged units, seriously damaged units, and from any other defects.
- (1) **Extraneous vegetable matter** means pieces of pod, leaves, stems, pieces of cob, husk, and other similar vegetable matter, other than silk, that is normally removed in proper preparation of the vegetables for processing.
- (2) **Damaged** means damaged by discoloration, pathological injury, insect injury, or damaged by other means to the extent that the appearance or eating quality is materially affected.
- (3) **Seriously damaged** means damaged by discoloration, pathological injury, insect injury, or damaged by other means to the extent that the appearance or eating quality is seriously affected and includes but is not limited to **shriveled** lima beans that are materially wrinkled and are not of normal plumpness and **sprouted** lima beans that show an external shoot protruding beyond the cotyledon or skin.
- (4) **Other defects** means any defect not specifically mentioned that affects the appearance or eating quality of the product and includes but is not limited to the following:
- (i) **Lima beans.** Broken beans, loose cotyledons, loose skins, and any portion thereof.
- (ii) **Corn.** Crushed kernels, ragged kernels, loose skins, and dark and objectionable silk more than 1/2 inch in length.
- (iii) **Soybeans.** Broken soybeans, loose cotyledons, loose skins, or any portion thereof.
- (iv) **Green or wax beans.** Ragged cut units, split units, and small pieces of pod.

- (b) **"A" classification.** Frozen succotash that is practically free from defects may be given a score of 27 to 30 points. **Practically free from defects** means that the aforesaid defects, individually or collectively, do not more than slightly affect the appearance or eating quality of the product. The following allowances provide a guide for scoring frozen succotash that is practically free from defects: For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than $\frac{3}{16}$ square inch ($\frac{1}{2}$ inch x $\frac{3}{8}$ inch) on one surface of the piece, or pieces; and $\frac{1}{4}$ cubic centimeter of the pieces of cob.
- (c) **"B" classification.** If the frozen succotash is reasonably free from defects, a score of 24 to 26 points may be given. Frozen succotash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). **Reasonably free from defects** means that the aforesaid defects, individually or collectively, do not materially affect the appearance or eating quality of the product. The following allowances provide a guide for scoring frozen succotash that is reasonably free from defects: For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than $\frac{3}{8}$ square inch ($\frac{1}{2}$ inch x $\frac{3}{4}$ inch) on one surface of the piece, or pieces; and $\frac{1}{2}$ cubic centimeter of pieces of cob.
- (d) **"C" classification.** Frozen succotash that is fairly free from defects may be given a score of 21 to 23 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly free from defects** means that the aforesaid defects, individually or collectively, do not seriously affect the appearance or eating quality of the product. the following allowances provide a guide for scoring frozen succotash that is fairly free from defects. For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than $\frac{3}{4}$ square inch ($\frac{1}{2}$ inch x $1\frac{1}{2}$ inch) on one surface of the piece, or pieces; and 1 cubic centimeter of pieces of cob.
- (e) **"SStd" classification.** Frozen succotash that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points. Frozen succotash that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.2019 Tenderness.

- (a) **"A" classification.** Frozen succotash consisting of vegetables that are tender may be given a score of 36 to 40 points. **Tender** means that the vegetables in the frozen succotash, after cooking, are tender, and, prior to cooking, meet the following additional requirements:
- (1) **Corn, whole kernel or whole grain.** The kernels are in the milk or early cream stage of maturity.
 - (2) **Lima beans.** The lima beans are young and tender.
 - (3) **Soybeans.** The soybeans are young and tender.
 - (4) **Green beans or wax beans.** The green beans or wax beans are full-fleshed for the variety, and the seeds are in the early stage of maturity.
- (b) **"B" classification.** If the frozen succotash consists of vegetables that are reasonably tender, a score of 32 to 35 points may be given. **Reasonably tender** means that the vegetables in the frozen succotash, after cooking, are reasonably tender, and, prior to cooking, meet the following additional requirements:
- (1) **Corn, whole kernel.** The kernels are in the cream stage of maturity.
 - (2) **Lima beans.** The lima beans are reasonably young and reasonably tender.
 - (3) **Soybeans.** The soybeans are reasonably young and reasonably tender.
 - (4) **Green beans or wax beans.** The green beans or wax beans may have lost their fleshy texture to some extent and the seeds may have passed the early stage of maturity and have not reached the late stage of maturity.
- (c) **"C" classification.** Frozen succotash consisting of vegetables that are fairly tender may be given a score of 28 to 31 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly tender** means that the vegetables in the frozen succotash, after cooking, are fairly tender, and, prior to cooking, meet the following additional requirements:

- (1) **Corn, whole kernel.** The kernels are in the early dough or dough stage of maturity.
 - (2) **Lima beans.** The lima beans may be nearly mature.
 - (3) **Soybeans.** The soybeans may be nearly mature.
 - (4) **Green beans or wax beans.** The green beans or wax beans may have lost to a considerable extent their fleshy structure and the seeds may be well developed and nearly mature.
- (d) **"SStd" classification.** Frozen succotash in which the vegetables fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points. Frozen succotash that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.2020 Method for determining proportion of ingredients.

- (a) The proportion of ingredients is determined on the thawed succotash in the following manner:
- (1) Separate each of the vegetables from all of the containers in the sample.
 - (2) Composite each of the vegetables thus separated and weigh.
 - (3) Add the weights of the composited vegetables to obtain the total weight of vegetables in the sample.
 - (4) Divide the total weight of each of the composited vegetables by the grand total weight of all the vegetables in the sample and multiply by 100. The result shall be considered to be the percentage, by weight, of each composited vegetable in the sample.

§52.2021 Ascertaining the grade of a lot.

The grade of a lot of frozen succotash covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 to 52.83; 22 F.R. 3535).

§52.2022 Score sheet for frozen succotash.

Size and kind of container		
Container mark		
or	Packages	
Identification	Cases	
Label (list of ingredients, etc.)		
Net weight (ounces)		
Kind, type, and style of ingredients	Aggregate weight each ingredient	Proportion of ingredients
Corn-white kernel (white or golden)	 OZ.	 %
Lima beans (type ...)	 OZ.	 %
Soybeans	 OZ.	 %
Green or wax beans, cut ... to ... inches	 OZ.	 %
Total weight	 OZ.	 100%
() Meets proportions; () Fails proportions		
Factors	Score points	
Color	30	"A" 27-30 "B" 24-26 "C" 1/ 21-23 "SStd" 1/ 0-20
Absence of defects	30	"A" 27-30 "B" 1/ 24-26 "C" 1/ 21-23 "SStd" 1/ 0-20
Tenderness	<u>40</u>	"A" 35-40 "B" 32-35 "C" 1/ 30-34 "SStd" 1/ 0-29
Total Score	100	
Flavor and odor after cooking: () Good; () fairly good; () off.		
Grade		

1/ Indicates limiting rule.

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Marketing Services.

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