

DEPARTMENT OF AGRICULTURE

FOOD AND DAIRY DIVISION

REGULATION NO. 546. APPLES FOR SALE UNDER SEAL OF QUALITY

(By authority conferred on the commission of agriculture by sections 5 and 14 of Act No. 70 of the Public Acts of 1961, and sections 9 and 177 of Act No. 380 of the Public Acts of 1965, being SS289.635, 289.644, 16.109, and 16.277 of the Michigan Compiled Laws)

R 285.546.1 Definitions.

Rule 1. (1) "Mature" means that the apples have reached the stage of development which will insure the proper completion of the ripening process. Before a mature apple becomes overripe it will show varying degrees of firmness, depending upon the stage of the ripening process. The following terms are used for describing different stages of firmness of apples:

(a) "Hard" means apples with a tenacious flesh and starchy flavor.

(b) "Firm" means apples with a tenacious flesh but which are becoming crisp with a slightly starchy flavor, except the Delicious variety.

(c) "Firm ripe" means apples with crisp flesh except that the flesh of the Gano, Ben Davis, and Rome Beauty varieties may be slightly mealy.

(d) "Ripe" means apples with mealy flesh and soon to become soft for the variety.

(2) "Overripe" means apples which are dead ripe, with flesh very mealy or soft, and past commercial utility.

(3) "Carefully handpicked" means that the apples do not show evidence of rough handling or of having been on the ground.

(4) "Clean" means that the apples are free from excessive dirt, dust, spray residue and other foreign material.

(5) "Fairly well formed" means that the apple may be slightly abnormal in shape but not to an extent which detracts materially from its appearance.

(6) "Injury" means any specific defect defined in this subrule; or an equally objectionable variation of any 1 of these defects, any other defect, or any combination of defects, which more than slightly detracts from the appearance, or the edible or shipping quality of the apple. The following specific defects shall be considered as injury:

(a) Russeting in the stem cavity or calyx basin which cannot be seen when the apple is placed stem end or calyx end down on a flat surface shall not be considered in determining whether or not an apple is injured by russeting. Smooth net-like russeting outside of the stem cavity or calyx basin shall be considered as injury when an aggregate area of more than 10% of the surface is covered, and the color of the russeting shows no very pronounced contrast with the background color of the apple, or lesser amounts of more conspicuous net-like russeting when the appearance is affected to a greater extent than the above amount permitted.

(b) Sunburn or sprayburn, when the discolored area does not blend into the normal color of the fruit.

(c) Dark brown or black limb rubs which affect a total area of more than 1/4 inch in diameter, except that light brown limb rubs of a russet character shall be considered under the definition of injury by russeting.

(d) Hail marks, drought spots, other similar depressions or scars; when the skin is broken, whether healed or unhealed; when there is appreciable discoloration of the surface; when any surface indentation exceeds 1/16 inch in depth; when any surface indentation exceeds 1/8 inch in diameter; or when the aggregate affected area of such spots exceeds 1/2 inch in diameter.

(e) Disease:

(i) Cedar rust infection which affects a total area of more than 3/16 inch in diameter.

(ii) Sooty blotch or fly speck which is thinly scattered over more than 5% of the surface, or dark, heavily concentrated spots which affect an area of more than 1/4 inch in diameter.

(iii) Red skin spots which are thinly scattered over more than 1/10 of the surface, or dark, heavily concentrated spots which affect an area of more than 1/4 inch in diameter.

(f) Insects:

(i) Any healed sting or healed stings which affect a total area of more than 1/8 inch in diameter including any encircling discolored rings.

(ii) Worm holes.

(7) "Damage" means any specific defect defined in this subrule or an equally objectionable variation of any 1 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 apple. The following specific defects shall be considered as damage:

(a) Russeting in the stem cavity or calyx basin which cannot be seen when the apple is placed stem end or calyx end down on a flat surface shall be considered in determining whether or not an apple is damaged by russeting, except that excessively rough or bark-like russeting in the stem cavity or calyx basin shall be considered as damage when the appearance of the apple is materially affected. The following types and amounts of russeting outside of the stem cavity or calyx basin shall be considered as damage:

(i) Russeting which is excessively rough on Roxbury Russet and other similar varieties.

(ii) Smooth net-like russeting, when an aggregate area of more than 15% of the surface is covered, and the color of the russeting shows no very pronounced contrast with the background color of the apple, or lesser amounts of more conspicuous net-like russeting when the appearance is affected to a greater extent than the above amount permitted.

(iii) Smooth solid russeting, when an aggregate area of more than 5% of the surface is covered, and the pattern and color of the russeting shows no very pronounced contrast with the background color of the apple, or lesser amounts of more conspicuous solid russeting when the appearance is affected to a greater extent than the above amount permitted.

(iv) Slightly rough russeting which covers an aggregate area of more than 1/2 inch in diameter.

(v) Rough russeting which covers an aggregate area of more than 1/4 inch in diameter.

(b) Sunburn or sprayburn which has caused blistering or cracking of the skin, or when the discolored area does not blend into the normal color of the fruit unless the injury can be classed as russeting.

(c) Limb rubs which affect a total area of more than 1/2 inch in diameter, except that light brown limb rubs of a russet character shall be considered under the definition of damage by russeting.

(d) Hail marks, drought spots and other similar depressions or scars:

(i) When an unhealed mark is present.

(ii) When any surface indentation exceeds 1/8 inch in depth.

(iii) When the skin has not been broken and the aggregate affected area exceeds 1/2 inch in diameter.

(iv) When the skin has been broken and well healed, and the aggregate affected area exceeds 1/4 inch in diameter.

(e) Stem or calyx cracks which are not well healed, or well healed stem or calyx cracks which exceed an aggregate length of 1/4 inch.

(f) Invisible water core existing around the core and extending to water core in the vascular bundles; or surrounding the vascular bundles when the affected areas surrounding 3 or more vascular bundles meet or coalesce; or existing in more than slight degree outside the circular area formed by the vascular bundles.

(g) Diseases:

(i) Scab spots which affect a total area of more than 1/4 inch in diameter.

(ii) Cedar rust infection which affects a total area of more than 1/4 inch in diameter.

(iii) Sooty blotch or fly speck which is thinly scattered over more than 1/10 of the surface, or dark, heavily concentrated spots which affect an area of more than 1/2 inch in diameter.

(iv) Red skin spots which are thinly scattered over more than 1/10 of the surface, or dark, heavily concentrated spots which affect an area of more than 1/2 inch in diameter.

(h) Insects:

(i) Any healed sting or healed stings which affect a total area of more than 3/16 inch in diameter including any encircling discolored rings.

(ii) Worm holes.

(8) "Serious damage" means any specific defect defined in this subrule, or an equally objectionable variation of any 1 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 apple. The following specific defects shall be considered as serious damage:

(a) The following types and amounts of russeting shall be considered as serious damage: Smooth solid russeting, when more than 1/2 of the surface in the aggregate is covered, including any russeting in the stem cavity or calyx basin, or slightly rough, or excessively rough or bark-like russeting, which detracts from the appearance of the fruit to a greater extent than the amount of smooth solid russeting permitted. However, any amount of russeting shall be permitted on Roxbury Russet and other similar varieties.

(b) Sunburn or sprayburn which seriously detracts from the appearance of the fruit.

(c) Limb rubs which affect more than 1/10 of the surface in the aggregate.

(d) Hail marks, drought spots, or scars, if they materially deform or disfigure the fruit, or if such defects affect more than 1/10 of the surface in the aggregate. However, no hail marks which are unhealed shall be permitted and not more than an aggregate area of 1/2 inch shall be allowed for well healed hail marks where the skin has been broken.

(e) Stem or calyx cracks which are not well healed, or well healed stem or calyx cracks which exceed an aggregate length of 1/2 inch.

(f) Visible water core which affects an area of more than 1/2 inch in diameter.

(g) Diseases:

(i) Scab spots which affect a total area of more than 3/4 inch in diameter.

(ii) Cedar rust infection which affects a total area of more than 3/4 inch in diameter.

(iii) Sooty blotch or fly speck which affects more than 1/3 of the surface.

(iv) Red skin spots which affect more than 1/3 of the surface.

(v) Bitter pit or Jonathan spot which is thinly scattered over more than 1/10 of the surface and does not materially deform or disfigure the fruit.

(h) Insects:

(i) Healed stings which affect a total area of more than 1/4 inch in diameter including any encircling discolored rings.

(ii) Worm holes.

(9) "Seriously deformed" means that the apple is so badly misshapen that its appearance is seriously affected.

(10) "Diameter," when measuring for minimum size, means the greatest dimension of the apple measured at right angles to a line from stem to blossom end. "Diameter," when measuring for maximum size, means the smallest dimension of the apple determined by passing the apple through a round opening in any position.

(11) "Fairly tight" means that apples are of the proper size for molds and cell compartments in which they are packed, and that molds or cells are filled in such a way that no more than slight movement of apples within molds or cells is possible. The top layer of apples, or any pad or space filler over the top layer of apples shall be not more than 3/4 inch below the top edge of the carton.

(12) "Fairly well filled" means that the net weight of apples in containers ranging from 2,100 to 2,900 cubic inch capacity is not less than 37 pounds for Cortland, Gravenstein, Jonathan, McIntosh and Golden Delicious varieties and not less than 40 pounds for all other varieties.

(13) "Area" means the area of a circle of the specified diameter.

(14) "Damage by water core" means externally invisible water core existing around the core and extending to water core in the vascular bundles; or surrounding the vascular bundles when the affected areas surrounding 3 or more vascular bundles meet or coalesce; or existing in more than slight degree outside the circular area formed by the vascular bundles; or any externally visible water core.

(15) "U.S. condition standards for export" means that:

(a) Not more than 5% of the apples in any lot shall be further advanced in maturity than firm ripe.

(b) Not more than 5% of the apples in any lot shall be damaged by storage scab.

(c) Not more than a total of 5% of the apples in any lot shall be affected by scald, internal breakdown, freezing injury, or decay; or damaged by water core, bitter pit, Jonathan spot, or other condition factors, except that:

(i) Not more than a total of 2% shall be allowed for apples affected by decay and soft scald;

(ii) Not more than 2% shall be allowed for apples affected by internal breakdown; and

(iii) Not more than 2% shall be allowed for apples affected by slight scald.

(d) Container packs shall comply with packing requirements specified in R 285.545.13.

(e) Any lot of apples shall be considered as meeting the U.S. condition standards for export if the entire lot averages within the requirements specified. However, no package in any lot shall have more than

double the percentages specified, except that for packages which contain 10 pounds or less, individual packages in any lot may have not more than 3 times the tolerance or 1 apple (whichever is the greater amount).

History: 1979 AC.

R 285.546.2 Source, condition, and grade.

Rule 2. (1) Only apples produced, packed, and processed within the state of Michigan may be identified with the Michigan seal of quality.

(2) Each lot of apples identified with the Michigan seal of quality shall be graded in accordance with standards set forth in these rules.

(3) Each lot of apples shall be accompanied by a federal-state inspection certificate denoting compliance with seal of quality grade.

(4) The grade for Michigan seal of quality shall be a combination of U.S. extra fancy and U.S. fancy grades, and U.S. condition standards for export shall be applied to apples packed under the Michigan seal of quality. When packing this combination grade, at least 50% of the apples in any lot shall meet the requirements of the higher grade.

History: 1979 AC.

R 285.546.3 Seal of quality.

Rule 3. The Michigan seal of quality label, tag, or other device bearing the official emblem shall be obtained only at sources approved by the Michigan department of agriculture and at a cost as set forth in the established schedule of fees. The Michigan seal of quality is available for use in marketing apples to any person, firm, or corporation who complies with these rules and any instructions issued therewith.

History: 1979 AC.

R 285.546.4 Agreements and permits.

Rule 4. No person, firm, or corporation shall use the Michigan seal of quality in connection with the grading and labeling of apples unless there is in force an official written agreement between the applicant and the Michigan department of agriculture. The director shall issue a permit to make an imprint on tags, labels, and other devices of the Michigan seal of quality for apples to manufacturers who sign an official agreement with the Michigan department of agriculture. Agreements and permits shall be renewed annually upon request prior to date of expiration and shall be in effect unless the holders are otherwise notified by the director.

History: 1979 AC.

R 285.546.5 Penalties.

Rule 5. A violation of any of the applicable laws and rules shall be grounds for revocation of the permit to use the Michigan seal of quality and subjects the violator to other penalties as prescribed by law.

History: 1979 AC.

R 285.546.6 Standards of quality; U.S. extra fancy.

Rule 6. "U.S. extra fancy" consists of apples of 1 variety which are mature but not overripe, carefully handpicked, clean, fairly well formed; free from decay, internal browning, internal breakdown, scald, scab, bitter pit, Jonathan spot, freezing injury, visible water core, and broken skins and bruises except those which are slight and incident to proper handling and packing. The apples are also free from injury caused by smooth net-like russetting, sunburn or sprayburn, limb rubs, hail, drought

spots, scars, disease, insects, or other means; and free from damage by smooth solid, slightly rough or rough russetting, or stem or calyx cracks. Each apple of this grade has the amount of color specified in table 1 for the variety.

History: 1979 AC.

R 285.546.7 Standards of quality; U.S. fancy.

Rule 7. "U.S. fancy" consists of apples of 1 variety which are mature but not overripe, carefully handpicked, clean, fairly well formed; free from decay, internal browning, internal breakdown, bitter pit, Jonathan spot, scald, freezing injury, visible water core, and broken skins and bruises except those which are incident to proper handling and packing. The apples are also free from damage caused by russetting, sunburn or sprayburn, limb rubs, hail, drought spots, scars, stem or calyx cracks, disease, insects, or damage by other means. Each apple of this grade has the amount of color specified in table 1 for the variety.

History: 1979 AC.

R 285.546.8 Color.

Rule 8. (1) In addition to the requirement specified for the grades set forth in R 285.546.6 and R 285.546.7, apples of these grades shall have the percentage of color specified for the variety in table 1 appearing in this section.

(2) For the solid red varieties the percentage stated refers to the area of the surface which shall be covered with a good shade of solid red characteristic of the variety. However, an apple having color of a lighter shade of solid red or striped red than that considered as a good shade of red characteristic of the variety may be admitted to a grade, if it has sufficient additional area covered so that the apple has as good an appearance as one with the minimum percentage of good red color characteristic of the variety required for the grade.

(3) For the striped red varieties the percentage stated refers to the area of the surface in which the stripes of a good shade of red characteristic of the variety shall predominate over stripes of lighter red, green, or yellow. However, an apple having color of a lighter shade than that considered as a good shade of red characteristic of the variety may be admitted to a grade, if it has sufficient additional area covered so that the apple has as good an appearance as one with the minimum percentage of stripes of a good red characteristic of the variety required for the grade.

(4) Faded brown stripes shall not be considered as color except in the case of the Gray Baldwin variety.

Table 1
Color for Michigan Seal of Quality Grade for Apples by Variety

Variety	U.S. Extra Fancy Percent	U.S. Fancy Percent
Solid Red:		
Winesap	66	40
Red Sport Varieties 1	66	40
Stripped or Partially Red		
Jonathan	66	33
McIntosh	50	33
Cortland	50	33
Rome Beauty	50	33
Stayman	50	33
Delicious	50	33
Turley	50	25
Northern Spy	50	25
Golden Delicious 2	50	25

Any other variety not listed shall have the same color requirements specified for U.S. grades of apples by variety.

1. When Red Sport varieties are specified as such, they shall meet the color requirements specified for Red Sport variety.
2. Seventy-five percent or more of the surface of the apple shall show white or light green predominating over the green color.

History: 1979 AC.

R 285.546.9 Tolerances.

Rule 9. (1) Apples to which the Michigan seal of quality emblem has been affixed shall meet the following requirements:

(a) Defects: 10% of the apples in any lot may fail to meet the requirements of the grade, but not more than 1/2 of this amount, or 5% shall be allowed for apples which are seriously damaged, including therein not more than 1% for apples affected by decay or internal breakdown.

(b) When applying the foregoing tolerances to combination grades no part of any tolerance shall be allowed to reduce, for the lot as a whole, the 50% of apples of the higher grade required in the combination but individual containers shall have not less than 40% of the higher grade.

(c) Size:

(i) When size is designated by the numerical count for a container, not more than 5% of the apples in the lot may vary more than 1/4 inch in diameter.

(ii) When size is designated by minimum or maximum diameter, not more than 5% of the apples in any lot may be smaller than the designated minimum and not more than 10% may be larger than the designated maximum.

History: 1979 AC.

R 285.546.10 Application of tolerances.

Rule 10. The contents of individual packages in the lot based on sample inspection are subject to the following limitations if the average for the entire lot is within the tolerances specified for the grade:

(a) Packages which contain more than 10 pounds shall have not more than 1 1/2 times a specified tolerance of 10% or more and not more than double a tolerance of less than 10%, except that at least 1 apple which is seriously damaged by insects or affected by decay or internal breakdown may be permitted in any package.

(b) Packages which contain 10 pounds or less shall have not over 10% of the packages with more than 3 times the tolerance specified, except that at least 1 defective apple may be permitted in any package. However, not more than 1 apple or more than 6% (whichever is the larger amount) may be seriously damaged by insects or affected by decay or internal breakdown.

History: 1979 AC.

R 285.546.11 Calculation of percentages.

Rule 11. (1) When the numerical count is marked on the container, percentages shall be calculated on the basis of count.

(2) When the minimum diameter or minimum and maximum diameters are marked on the container, percentages shall be calculated on the basis of weight.

(3) When the apples are in bulk, percentages shall be calculated on the basis of weight.

History: 1979 AC.

R 285.546.12 Condition after storage or transit.

Rule 12. Decay, scald, or any other deterioration which may have developed on apples after they have been in storage or transit shall be considered as affecting condition and not the grade.

History: 1979 AC.

R 285.546.13 Packing.

Rule 13. (1) Apples tray packed or cell packed in cartons shall be arranged according to approved and recognized methods. Packs shall be at least fairly tight or fairly well filled.

(2) Closed cartons containing apples not tray or cell packed shall be fairly well filled or the pack shall be sufficiently tight to prevent any appreciable movement of the apples.

(3) Packs in wooden boxes or baskets shall be sufficiently tight to prevent any appreciable movement of apples within containers when the packages are closed. Each wrapped apple shall be completely enclosed by its individual wrapper.

(4) Apples on the shown face of any container shall be reasonably representative of size, color, and quality of the contents.

(5) Tolerances: In order to allow for variations incident to proper packing, not more than 10% of the containers in any lot may fail to meet these requirements.

(6) Two or more varieties may be packed in the same container.

History: 1979 AC.

R 285.546.14 Marking.

Rule 14. (1) The numerical count or the minimum diameter of the apples packed in a closed container shall be indicated on the container.

(2) When the numerical count is not shown, the minimum diameter shall be plainly stamped, stenciled, or otherwise marked on the container in terms of whole inches, or whole inches and not less than 1/8 inch fractions thereof, in accordance with the facts.

(3) "Minimum," or its abbreviation, when following a diameter size marking, means that the apples are of the size marked or larger.

History: 1979 AC.

R 285.546.15 Coolers, holding rooms, and storage facilities.

Rule 15. Coolers, holding rooms, and any other facility in which apples are held, stored, or in any manner maintained for periods longer than required for normal movement of fresh apples shall:

(a) Be constructed, maintained, and operated in compliance with Michigan laws and rules governing food establishments, food handling, and sanitation.

(b) Not be used for commodities and products not compatible with food products.

(c) Be free from objectionable odors and from molds.

(d) Be maintained in a sanitary condition.

History: 1979 AC.