

**TITLE 61
LEGISLATIVE RULES
DEPARTMENT OF AGRICULTURE**

**SERIES 8
WEST VIRGINIA GRADES AND STANDARDS FOR APPLES**

§61-8-1. General.

1.1. Scope. -- These legislative regulations establish West Virginia State Grades and Standards for Apples.

1.2. Authority. -- W. Va. Code §19-5

1.3. Filing Date. -- April 19, 1966

1.4. Effective Date. -- June 1, 1966

§61-8-2. Red, partial red and blushed varieties.

2.1. West Virginia Extra Fancy or West Virginia First Grade. -- West Virginia Extra Fancy or West Virginia First Grade consists of apples of one (1) variety which are mature but not overripe, hand picked, clean, fairly well formed, free from decay, internal browning, internal breakdown, bitter pit, Jonathan spot, scald, freezing injury, broken skins, bruises (except those incident to proper handling and packing), and visible water core, and free from damage caused by russeting, sunburn or sprayburn, limb rubs, hail, drought spots, scars, stem or calyx cracks, other diseases, insects, mechanical or other means.

2.2. West Virginia Fancy or West Virginia Second Grade. -- West Virginia Fancy or West Virginia Second Grade consists of apples of one (1) variety which are mature but not overripe, hand picked, not seriously deformed, free from decay, internal browning, internal breakdown, scald, and freezing injury and free from serious damage caused by dirt, foreign matter, broken skins, bruises, russeting, sunburn, limb rubs, hail, drought spots, scars, stem or calyx cracks, visible water core, diseases, insects, mechanical or other means.

2.3. West Virginia C Grade or West Virginia Hail Grade. -- West Virginia C Grade or West Virginia Hail Grade consists of apples of one (1) variety which are

mature, hand picked, clean, not badly misshapen, sound and free from serious damage caused by hail or punctures.

§61-8-3. Green or yellow varieties.

3.1. West Virginia Extra Fancy or West Virginia First Grade. -- West Virginia Extra Fancy or West Virginia First Grade consists of apples of one (1) variety which are mature, hand picked, clean, well formed, and sound, free from bruises, russeting, sprayburn, sunburn, limb rubs, drought spots, hail marks, visible water core, broken skin, apple scab, disease, insect injury and stings, except slight blemishes shall be permitted in this grade.

3.2. West Virginia Fancy or West Virginia Second Grade. West Virginia Fancy or West Virginia Second Grade consists of apples of one (1) variety which are mature, handpicked, clean, fairly well formed, and sound, free from visible water core, broken skin, and damage caused by bruises, limb rubs, sprayburn, sunburn, russeting, drought spots, hail marks, apple scab, disease and insect injury.

3.3. West Virginia C Grade or West Virginia Third Grade. -- West Virginia C Grade or West Virginia Third Grade consists of apples of one (1) variety which are mature, handpicked, clean, not badly misshapen, and sound, free from serious damage caused by sunburn, sprayburn, limb rubs, russeting, growth cracks, visible water core, hail marks, drought spots, disease, insect injury, soft bruises and broken skin except that apples having Fancy or better color for variety may contain punctures not exceeding 1/4 inch in diameter.

3.4. West Virginia Hail Grade. -- West Virginia Hail Grade consists of apples which meet the grade and color requirements of West Virginia Combination Extra Fancy and West Virginia Fancy, except hail marks where the skin has not been broken and well healed hail marks where the skin has been broken

shall be permitted provided the apples are fairly well formed.

3.5. In addition, each apple in the preceding grades shall have the amount of color specified in 5.1 of these rules for the variety and grade.

3.6. West Virginia Early designation. -- The term "early" may be used in conjunction with 3.1 and 3.2 of these rules, or combination thereof, to describe lots of apples normally packed and marketed during the summer months. Apples shall meet the requirements of the grade as marked except they need not be mature, there is no color requirement and they are not less than 2 inches in diameter. The term "Early" shall next follow the grade statement and not be abbreviated. Early grades apply to those varieties listed in USDA Standards under No. 1 Early and shall include Summer Rambo and Northwestern Greenings.

§61-8-4. Combination grades.

4.1. Combination West Virginia Extra Fancy and West Virginia Fancy. -- When West Virginia Extra Fancy and West Virginia Fancy apples are packed together, the boxes may be marked "Combination West Virginia Extra Fancy and West Virginia Fancy" and shall contain at least eighty percent (80%) Extra Fancy apples, except Newtowns which shall contain at least twenty-seven percent (27%) Extra Fancy apples.

4.2. Combination West Virginia Fancy and West Virginia C Grade. -- When West Virginia Fancy and West Virginia C Grade are packed together, the boxes may be marked "Combination West Virginia Fancy and West Virginia C Grade" and shall contain at least eighty percent (80%) Fancy apples, except Newtowns which shall contain at least twenty-five percent (25%) Fancy apples.

4.3. West Virginia Economy Grade. -- West Virginia Economy Grade consists of apples of one (1) variety which may be hand picked or drops, free from dirt or foreign material, shall contain not more than two percent (2%) Soft Rot or be otherwise seriously damaged to cause a loss over twenty percent (20%) by weight of an individual apple over normal loss occurring during customary preparation if the apple were sound. Five percent (5%) tolerance shall be allowed to cover variations incident to proper grading

and handling. Five percent (5%) may be below the minimum size stated on the container.

§61-8-5. Color requirements.

5.1. Percentage of color. -- In addition to the requirement specified for the grades set forth in 2.1 and 3.4 of these rules, apples of these grades shall have the percentage of color specified for the variety in Table I (Appendix 1) appearing in this section. For the solid red varieties, the percentage stated refers to the area of the surface which must be covered with a good shade of solid red characteristic of the variety: Provided, That the 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 provided it has sufficient additional area covered so that the apple has as good an appearance as one with the minimum percentage of good red characteristic of the variety required for the grade. 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: Provided, 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. Faded brown stripes shall not be considered as color except in the case of the Gray Baldwin variety. (See Appendix 1)

§61-8-6. Tolerances.

6.1. Grading and handling. -- In order to allow for variations incident to proper grading and handling, not more than a total of ten percent (10%) of the apples in any container may be below the requirements of the grade: Provided, That not more than five percent (5%) shall be seriously damaged by insects, not more than one tenth (1/10) of this amount, or one percent (1%) shall be allowed for decay and/or internal breakdown. Slight imperfections which are not discernible in good commercial sorting practices shall not be considered defects of grades.

6.2. In addition, a ten percent (10%) tolerance shall be allowed for boxes which fail to meet standard pack

requirements.

6.3. When applying the foregoing tolerances to the combination grades, no part of any tolerance shall be used to reduce the percentage of apples of the higher grade required in the combination.

6.4. Application of tolerance. - The contents of individual packages in the lot are subject to the following limitations: Provided, That the average for the entire lot are within the tolerances specified for the grade. For a specified tolerance of ten percent (10%), not more than one and one-half (1 1/2) times the tolerance shall be allowed in any one (1) package. For specified tolerances of five percent (5%) or less, not more than double the tolerance shall be allowed in any one (1) package.

6.5. After fruit has been placed in storage or in transit, scald, breakdown, decay, bitter pit or physical injury affecting keeping quality which may have developed or may only have become evident after apples are packed are considered affecting conditions rather than grade.

§61-8-7. Packing requirements.

7.1. Tray packed or cell packed. -- Apples tray packed or cell packed in cartons shall be arranged according to approved and recognized methods. Packs shall be at least fairly tight¹ or fairly well filled.²

7.2. Closed cartons. -- Closed cartons containing apples not tray or cell packed shall be fairly well filled² or the pack shall be sufficiently tight to prevent any appreciable movement of the apples.

7.3. Wooden boxes or baskets. -- 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.

7.4. Apples to be representative. -- Apples on the shown face of any container shall be reasonably representative in size, color and quality of the contents.

7.5. Tolerances. -- In order to allow for variations incident to proper packing, not more than ten percent

(10%) of the containers in any lot may fail to meet these requirements.

¹"Fairly tight" means that apples are of the proper size for molds or 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 three-fourths (3/4) inch below the top edge of the carton.

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

§61-8-8. Definition of terms - general.

8.1. "Mature" means that the apples have reached the stage of growth which will ensure 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 these different stages of firmness:

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

8.1.2. "Firm" means apples with a tenacious flesh but which are becoming crisp with a slight starch flavor (except the Delicious variety).

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

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

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

8.3. "Hand Picked" means that the apples do not

show evidence of rough handling or of having been on the ground.

8.4. "Clean" means that the apples are free from excessive dirt, dust, spray residue or other foreign material.

8.5. "Damage" means any defect, or combination of injury or defects, which materially affects the appearance or the edible or shipping quality of the apples.

8.6. "Serious Damage" means any injury or defect, or any combination of injuries and/or defects, which seriously detract from the appearance or shipping quality of the apples.

8.7. "Aggregate Area" means all extents of the defect under consideration may be assembled into one (1) area to determine the maximum extent specified.

8.8. "Not Badly Misshapen" means that an apple may be more irregularly shaped than "Fairly Well Formed," but shall not be deformed to the extent of materially affecting its culinary value or its general appearance.

§61-8-9. Definition of terms: red, partially red and blushed varieties.

9.1. "Fairly Well Formed" means that the apple may be slightly abnormal in shape but not to an extent which detracts materially from its appearance

9.2. "Damage Defects":

9.2.1. 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 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 the stem cavity or calyx basin shall be considered as damage:

9.2.1.1. Russeting which is extensively rough on Roxbury Russet and other similar varieties.

9.2.1.2. Smooth net-like russeting, when an aggregate area of more than fifteen percent (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 the greater extent than the above amount permitted.

9.2.1.3. Smooth solid russeting, when an aggregate area of more than five percent (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.

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

9.2.1.5. Rough russeting which exceed 1/4 inch in diameter, unless it is well within the stem cavity or calyx basin and is not readily apparent.

9.2.2. Any of the following defects or any combination thereof, the seriousness of which exceeds the maximum allowed for any one (1) defect, shall be considered as damage:

9.2.2.1. 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

9.2.2.2. Limbrubs 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.

9.2.2.3. Hail marks, drought spots or other similar depressions or scars which are not superficial, or when such injury affects a total area of more than 1/2 inch in diameter.

9.2.2.4. 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.

9.2.2.5. Diseases:

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

9.2.2.5.b. Cedar rust infection which affects total area of more than 1/4 inch in diameter.

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

9.2.2.5.d. 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.

9.2.2.6. Insects:

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

9.2.2.6.b. Worm holes.

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

9.2.2.8. The following types and amounts of russetting shall be considered as serious damage:

9.2.2.8.a. Smooth solid russetting, when more than one half of the surface in aggregate is covered, including any russetting in the stem cavity or calyx basin or slightly rough, or excessively rough or bark-like russetting which detracts from the appearance of the fruit to a greater extent than the amount of smooth solid russetting permitted: Provided, That any amount of russetting shall be permitted on Roxbury Russet and other similar varieties.

9.2.3. Any one (1) of the following defects, or any combination thereof, the seriousness of which exceeds the maximum allowed for any one (1) defect, shall be considered as serious damage:

9.2.3.1. Sunburn or sprayburn which seriously detracts from the appearance of the fruit.

9.2.3.2. Limb rubs which affect more than one tenth of the surface in the aggregate.

9.2.3.3. Hail marks, drought spots or scars if they materially deform or disfigure the fruit, or if such defects affect more than one tenth of the surface in the aggregate: Provided, That 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.

9.2.3.4. 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.

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

9.2.4. Diseases:

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

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

9.2.4.3. Sooty blotch or fly speck which affect more than one third of the surface.

9.2.4.4. Red skin spots which affect more than one third of the surface.

9.2.4.5. Bitter pit and Jonathan spot which is thinly scattered over more than one tenth of the surface and does not materially deform or disfigure the fruit.

9.2.5. Insects:

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

9.2.5.2. Worm holes.

9.2.6. In West Virginia C Grade or West Virginia Hail Grade, punctures not exceeding 1/4 inch in diameter and healed hail marks shall not be considered as serious damage: Provided, That the apples otherwise meet the requirements of West

Virginia Fancy Grade.

§61-8-10. Definitions of terms: green or yellow varieties.

10.1. "Well Formed" means having the normal shape characteristic of the variety except the shape may be slightly irregular: Provided, That it does not detract from the general appearance of the apple.

10.2. "Fairly Well Formed" means the apple shall have the normal shape characteristic of the variety except one half of the apple may deviate slightly or the apple may be slightly flattened as by frost injury.

10.3. "Sound" means apples that at the time of packing are free from visible defects such as decay, breakdown, scald, bitter pit or physical injury affecting quality.

10.4. "Slight Blemishes" means defects not in excess of the following:

10.4.1. Slight handling bruises and box bruises such as are incident to good commercial handling in the preparation of a tight pack.

10.4.2. Smooth russeting shall be permitted at the stem end: Provided, That such russeting is not visible for more than 1/2 inch when the apple is placed stem end down on a flat surface, except in the Newton variety characteristic russet beginning at the stem end shall be permitted as long as it is continuous from the stem bowl and not extending beyond the center of the apple.

10.4.3. Smooth net-like russeting which does not extend over an aggregate area of more than five percent (5%) of the surface of the apple.

10.4.4 Sunburn or sprayburn when slight and when the normal color of the apple is but slightly changed and the affected area does not exceed five percent (5%) of the surface of the apple.

10.4.5. Smooth solid russeting, light limb rubs, hail marks or sprayburn of a russet character shall be permitted when the aggregate area affected does not exceed that of a circle 1/4 inch in diameter.

10.4.6. Slight hail marks or other depressions

when there is no discoloration, when the indentations are very shallow and no individual indentation exceeds 1/8 inch in diameter and the aggregate area affected does not exceed 1/4 inch (refers to area of a circle).

10.4.7. Thrips marks not to exceed three (3) in number shall be permitted.

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

10.5. "Damage" means defects which are in excess of the following:

10.5.1. Slight handling bruises and box bruises such as are incident to commercial handling and packing.

10.5.2. Limb rubs not to exceed 1/2 inch in aggregate area.

10.5.3. Sprayburn which has altered or discolored natural pigment when the normal color of the apples is not seriously affected, when there is no blistering or cracking of the skin. Sprayburn of a russet nature shall be governed by the definition covering solid russeting

10.5.4. Sunburn when the normal color of the apple is not seriously affected, there is no blistering or cracking of the skin, and the discolored area blends into the normal color or the fruit.

10.5.5. Slight rough russeting which does not cover an area of more than 1/2 inch in diameter if it is not continuous with the russeting in the stem basin or calyx cavity.

10.5.6. Smooth russeting shall be permitted at the stem or calyx and: Provided, That such russeting is not visible for more than 1/2 inch when the apple is placed with the russet end down on a flat surface, except in the Newtown variety characteristic russet beginning at the stem or calyx end and not exceeding beyond the center of the apple shall be permitted as long as it is continuous from the stem or calyx bowl.

10.5.7. Smooth net-like russeting which does not extend over an aggregate area of more than

twenty percent (20%) of the surface.

mj10.5.8. Solid russeting, such as is character of frost, sprayburn, hail and certain insect and disease injury affecting a total aggregate area not to exceed 1/2 inch.

10.5.9. Hail marks, drought spots or other depressions when the injury is slight, the skin is not broken and the depressions do not exceed an aggregate area of 1/2 inch in diameter or detract seriously from the appearance of the fruit.

10.5.10. Apple scab spots affecting a total area of not more than 1/4 inch in diameter.

10.5.11. Four (4) stings, each having an encircling hard ring, usually green, or a slight depression: Provided, That stings do not exceed 1/8 inch in diameter exclusive of any encircling ring.

10.5.12. Slight aphid signs or thrips marks which do not roughen or pelt the surface of the apple.

10.6. Combination of defects. -- An apple may show any one (1) or a combination of the following defects if the aggregate area does not exceed the specified tolerance for the defects and the aggregate of the combination does not exceed 1/2 inch. The defects are: Scab, hail marks, drought spots, solid russeting and limb rubs.

10.7. "Serious Damage" means defects which are in excess of the following:

10.7.1. Sunburn or spray burn which does not seriously detract from the appearance of the fruit.

10.7.2. Limb rubs which affect not more than one tenth of the surface of the aggregate.

10.7.3. Smooth solid russeting which affects not more than 1/2 the surface in the aggregate, including any russeting in the stem basin or rough or barklike russeting which does not detract from the appearance of the fruit to a greater extent than the smooth solid russeting permitted.

10.7.4. Growth cracks, such as occur in Stayman, shall be permitted when no crack exceed

1/2 inch in length.

10.7.5. Visible water core which does not affect an area of more than 1/2 inch in diameter.

10.7.6. Hail marks, drought spots or other depressions, when the injury is slight, the skin is not broken and the depressions do not exceed an aggregate area of ten percent (10%) of the surface in red or partial red varieties or more than twenty percent (20%) of the surface in green or yellow varieties.

10.7.7. Scab spots affecting an aggregate area of not to exceed 1/2 inch in diameter.

10.7.8. Five (5) stings, each having an encircling hard ring, usually green, or a slight depression: Provided, That stings do not exceed 1/8 inch in diameter exclusive or any encircling ring.

10.7.9. Aphid pebbling or thrips marks not seriously detracting from the appearance of the apple.

§61-8-11. West Virginia state condition standards.

11.1. Maturity. -- Not more than an average of five percent (5%) of the apples in any lot, with more than ten percent (10%) in any one (1) sample shall be further advanced in maturity than firm ripe.

11.2. Damage. -- Not more than a total of five percent (5%) of the apples in any lot, with not more than ten percent (10%) in any one (1) sample shall be damaged by bitter pit, Jonathan spot, common scald, visible water core, freezing or other such condition factors, excluding delayed sunburn.

11.3. Affected apples. -- Not more than any average of two percent (2%) each in any lot, with not more than eight percent (8%) in any sample shall be allowed for apples affected by decay, visible breakdown, or by soft scald, except that after March 1 not more than an average of three percent (3%) each in any lot with not more than ten percent (10%) in any sample shall be allowed for apples affected by decay, visible breakdown or by soft scald.

§61-8-12. Official certificates.

12.1. On request, when qualified, official certifi-

cates will bear the statement "Meets West Virginia
State Condition Standards."

APPENDIX I

Table 1

Color Requirements for Specified West Virginia Grades of Apples by Variety

	Ex. Fcy.	Fcy.	C Gr.	
	%	%	%	
Solid Red:				
Red Delicious.....	65	25	15	
Arkansas Black.....	50	25	15	
Winesap.....	50	25	15	
King David.....	50	25	15	
Red Sport Varieties*.....	50	25	15	* When sports varieties are marked as such, they shall meet the color requirements of Red Sports varieties.
Striped or Partially Red:				
Delicious.....	50	25	15	
Stayman.....	40	25	10	** Refers to Characteristic color. In the Golden Delicious variety when the white or light green color predominates over the green color, it shall be considered as the minimum characteristic color.
York.....	40	25	10	
Black Twig.....	40	25	10	
Jonathan.....	40	25	10	
McIntosh.....	40	25	10	
Rome.....	40	25	0	
Other similar varieties.....	40	25	10	
Red Cheeked or Blushed:				
Winter Banana	Some Color	0	0	
Green & Yellow Varieties:				
Golden Delicious.....	75**	75**	33-1/3**	
No Color:				
Dutchess, Gravenstein, King, Wolf River, Twenty Ounce, Grimes (Golden), Ortley, Newtown, White Winter Pearmain, Yellow Transparent.				