CHAPTER 1555

DEPARTMENT OF AGRICULTURE FOOD DEFINITIONS AND STANDARDS

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ORGANIC FOOD

1555.0005 **DEFINITIONS.**

Subpart 1. Scope. The definitions in subparts 2 to 13 apply to parts 1555.0005 to 1555.0012.

Subp. 2. [Repealed, 15 SR 11]

- Subp. 3. **Department.** "Department" means the Minnesota Department of Agriculture.
- Subp. 4. **Drug.** "Drug" means an article intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in animals other than humans and articles other than feed intended to affect the structure or any function of an animal's body.
- Subp. 5. Fertilizer material. "Fertilizer material" means a substance containing nitrogen, phosphorus, potassium, or a recognized plant food nutrient, or a compound which is used primarily for its plant nutrient content or for compounding mixed fertilizers except unmanipulated animal and vegetable manures.
- Subp. 6. Horticultural oils. "Horticultural oils" means a highly refined paraffinic petroleum product made solely for use on plants at specific dosages to act as an insecticide or miticide.
- Subp. 7. Natural organic fertilizer. "Natural organic fertilizer" means materials derived from either plant or animal products containing one or more elements (other than carbon, hydrogen, and oxygen) which are essential for plant growth. These materials may be subjected to biological degradation processes under normal conditions of aging, rainfall, sun curing, air drying, composting, rotting, enzymatic or anaerobic or aerobic bacterial action, or any combination of these. These materials must not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by physical manipulation such as drying, cooking, chopping, grinding, shredding, or pelleting.
- Subp. 8. **Pesticide.** "Pesticide" means a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating a pest, and a substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.
- Subp. 9. Plant amendment. "Plant amendment" means a substance applied to plants or seeds which is intended to improve conditions which facilitate germination, growth, yield, product quality, reproduction, flavor, or other desirable characteristics of plants except commercial fertilizers, soil amendments, agricultural liming materials, animal and vegetable manures, and pesticides.
- Subp. 10. Soap. "Soap" means fatty acids and their salts if the fatty acid occurs in nature.
- Subp. 11. Soil amendment. "Soil amendment" means (1) an aggregant, additive, or organic chemical substances, (2) a chemically or physically modified natural substance, (3) a naturally occurring substance, or (4) a manufacturing by-product, mixed or unmixed, which is represented as having a primary function of forming or stabilizing soil aggregants in soil to which it is to be applied and thereby improving the resistance of the soil to the slaking action of water, increasing its water and air permeability, improving the resistance of its surface to crusting, improving its ease of cultivation, or otherwise favorably modifying its structural or physical properties.
- Subp. 12. **Synthetic.** "Synthetic" means a complex compound artificially produced usually by chemical synthesis of elements or simple compounds.

Subp. 13. [Repealed, 15 SR 11]

Statutory Authority: MS s 31.94; 31.95 **History:** 12 SR 1366; 15 SR 11; 17 SR 1279

1555.0006 ORGANIC FOOD REQUIREMENTS.

Food for which the terms "organic food," "organically grown food," or a derivative of the word "organic" are used must be food which:

A. was produced, harvested, cleaned, stored, transported, distributed, processed, and packaged without the use of artificial irradiation, synthetic pesticides, synthetic plant or soil amendments, or fertilizer materials except natural organic fertilizers or as specifically allowed in part 1555.0007;

- B. contains no added artificial coloring, artificial flavoring, or artificial preservative;
- C. in the case of perennial crops, was grown in soil or growth medium free of synthetic pesticides, synthetic soil and plant amendments, and synthetic fertilizer materials, except as specifically allowed in part 1555.0007, for three years before and throughout the entire growing and harvesting season of the crop;
- D. in the case of annual crops and two-year crops, was grown in soil free of synthetic pesticides, synthetic soil and plant amendments, and synthetic fertilizer materials, except as allowed in part 1555.0007, for three years before planting or transplanting and throughout the entire growing and harvesting of the crop;
- E. in the case of meat, poultry, wild or domesticated game, shell fish, other nonplant life, or fish, was raised for at least the final 60 percent of its sale weight:
 - (1) on food produced in conformity with item C or D;
 - (2) without the application of any synthetic pesticides or drugs;
- (3) in a habitat for growth or culture that has been free of synthetic fertilizers, pesticides, hormones, antibiotics, growth stimulants, and arsenicals for at least three years, except as allowed in part 1555.0007;
- (4) without any drug or synthetic pesticides administered or introduced by any method, except for treatment of a specific disease or malady as diagnosed by a veterinarian not less than 90 days before the slaughter for meat, poultry, wild or domestic game, shell fish, other nonplant life, or fish; and
- F. in the case of milk or eggs, was produced by animals raised in accordance with item E, except that no synthetic pesticide or drug was administered or introduced less than 30 days before the production of the milk or eggs.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0007 EXCEPTIONS.

Exceptions to part 1555.0006 include:

- A. enzyme sources;
- B. cultures of living or killed microorganisms;
- C. bordeaux mixtures;
- D. elemental sulfur and lime sulfur;
- E. gypsum;
- F. diatomaceous earth;
- G. basic copper sulfate;
- H. horticultural oils;
- I. fish emulsion that is not synthetically produced;
- J. soap;
- K. naturally occurring mineral materials that are not chemically modified;
- L. botanically derived pesticides containing no other active pesticidal ingredient, which are not synthetically produced but which may contain synthetic compounds such as emulsifiers, synergists, and carriers; and
- M. pesticide or other toxic chemical residues, not to exceed ten percent of the tolerance established by the United States Food and Drug Administration or Environmental Protection Agency.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0008 TREATED SEED, TRANSPLANTS AND PROPAGATING PARTS.

Subpart 1. Organic food producers. If organic food producers wish to purchase and use treated seed, treated transplants, or treated propagating parts, they must

submit a written statement to the department that usable untreated seed transplants or propagating parts of the desired kind or variety are not available. A record of the purchase, including the kind and amount of seed, variety if any, the name and address of the seller and the date of purchase, must be maintained by the producer for three years after the crop is harvested.

Subp. 2. Certified organic food producers. If certified organic food producers wish to purchase and use treated seed, treated transplants, or treated propagating parts, they must submit a written statement to the certifying agency at the time of certification that usable untreated seed transplants or propagating parts of the desired kind or variety are not available. A record of the purchase, including the kind and amount of seed, variety if any, the name and address of the seller and the date of purchase, must be maintained by the producer for three years after the crop is harvested.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0009 RECORDS.

- Subpart 1. **Producer.** A producer who sells food derived from a crop which the producer has grown and which is identified as organic, organically grown, or by a derivative of the word "organic," shall accurately keep the following records: year and type of crop; location of the acreage used for growing that crop; additions made to the soil or applied to that crop; use of any treated seed, treated transplants, or treated propagating parts; and quantity, date, and acreage harvested. These records must be retained for three years after the food is sold and delivered by the producer.
- Subp. 2. **Processors and manufacturers.** A person who processes or manufactures a food which is sold or identified as organic, organically grown, or by a derivative of the word "organic," shall keep accurate records of the ingredients of that food, the names and addresses of persons from whom the ingredients were purchased, the date and quantity of ingredients purchased, and copies of invoices. These records must be retained for three years after the food is sold and delivered.
- Subp. 3. **Vendors.** A person who sells a food subject to subpart 1 or 2, shall keep accurate records of the names and addresses of persons from whom that food was purchased, the date and quantity of food purchased, and copies of invoices. These records must be retained for three years after the food is sold and delivered.
- Subp. 4. **Provision of information.** A producer, processor, manufacturer, or vendor of food subject to subpart 1, 2, or 3 shall provide the department, on demand, relevant information from the records required under this part.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0010 INSPECTION AUTHORITY.

The department may inspect at reasonable times an area where food identified, labeled, or advertised as organic, organically grown, or by a derivative of the word "organic," is grown, processed, manufactured, stored, or sold.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0011 [Repealed, 15 SR 11]

1555.0012 PROHIBITIONS.

No claim or implication may be made in the identification, labeling, advertising, or promotion of a food product, including processed food products, that the food product is organic, organically grown, or by a derivative of the word "organic," unless the product, including all of its ingredients, conforms to the requirements of parts 1555.0005 to 1555.0012.

Food that contains one or more organic ingredients may contain an information statement on the label, such as: "Contains organic rye flour," in letters not to exceed one-half the height of the letters used in the product identity. The word "organic" also must precede the name of each organic ingredient identified in the list of ingredients.

Statutory Authority: MS s 31.94

History: 12 SR 1366

1555.0013 [Repealed, 15 SR 11]

1555.0020 [Repealed, 24 SR 546]

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1555.0040 [Repealed, 24 SR 546]

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1555.2380 [Repealed, 24 SR 1451; L 2000 c 469 s 7]
1555.2390 [Repealed, 24 SR 1451; L 2000 c 469 s 7]
1555.2400 [Repealed, L 2000 c 469 s 7]
1555.2410 [Repealed, L 2000 c 469 s 7]
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TEA AND COFFEE

1555.2420 TEA.

"Tea" is the tender leaves, leaf buds, and tender internodes of different varieties of thea sinensis L., prepared and cured by recognized methods of manufacture. It conforms in variety and place of production to the name it bears; contains not less than four percent nor more than seven percent of ash; and meets the provisions of the Act of Congress approved March 2, 1897, as amended, regulating the importation and inspection of tea.

Statutory Authority: MS s 31.10; 31.101

1555.2430 COFFEE.

"Coffee" is the seed of cultivated varieties of Coffea arabica, C. liberica and C. robusta. "Green coffee," "raw coffee," "unroasted coffee" is coffee freed from all but a small portion of its spermoderm and conforms in variety and in place of production to the name it bears. "Roasted coffee," "coffee" is properly cleaned green coffee which by the action of heat (roasting) has become brown and has developed its characteristic aroma.

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Statutory Authority: MS s 31.10; 31.101
1555.2440 [Repealed, L 2000 c 469 s 7]
1555.2450 [Repealed, L 2000 c 469 s 7]
1555.2460 [Repealed, L 2000 c 469 s 7]
1555.2470 [Repealed, L 2000 c 469 s 7]
1555.2480 [Repealed, L 2000 c 469 s 7]
1555.2490 [Repealed, L 2000 c 469 s 7]
1555.2500 [Repealed, L 2000 c 469 s 7]
1555.2510 [Repealed, L 2000 c 469 s 7]
1555.2520 [Repealed, L 2000 c 469 s 7]
1555.2530 [Repealed, L 2000 c 469 s 7]
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1555.2540 [Repealed, L 2000 c 469 s 7]
1555.2550 [Repealed, L 2000 c 469 s 7]
1555.2560 [Repealed, L 2000 c 469 s 7]
1555.2570 [Repealed, L 2000 c 469 s 7]
1555.2580 [Repealed, L 2000 c 469 s 7]
1555.2590 [Repealed, L 2000 c 469 s 7]
1555.2600 [Repealed, L 2000 c 469 s 7]
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1555.2620 [Repealed, L 2000 c 469 s 7]
1555.2630 [Repealed, L 2000 c 469 s 7]
1555.2640 [Repealed, L 2000 c 469 s 7]
1555.2650 [Repealed, L 2000 c 469 s 7]
1555.2660 [Repealed, L 2000 c 469 s 7]
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1555.2790 [Repealed, L 2000 c 469 s 7]
1555.2800 [Repealed, L 2000 c 469 s 7]
1555.2810 [Repealed, L 2000 c 469 s 7]
1555.2820 [Repealed, L 2000 c 469 s 7]
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1555.2840 [Repealed, L 2000 c 469 s 7]
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- 1555.2870 [Repealed, L 2000 c 469 s 7]
- **1555.2880** [Repealed, L 2000 c 469 s 7]
- 1555.2890 [Repealed, L 2000 c 469 s 7]
- **1555.2900** [Repealed, L 2000 c 469 s 7]
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- **1555.3000** [Repealed, L 2000 c 469 s 7]
- **1555.3010** [Repealed, L 2000 c 469 s 7]
- 1555.3020 [Repealed, L 2000 c 469 s 7]
- 1555.3030 [Repealed, L 2000 c 469 s 7]
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- **1555.3110** [Repealed, L 2000 c 469 s 7]
- 1555.3120 [Repealed, L 2000 c 469 s 7]
- 1555.3130 [Repealed, L 2000 c 469 s 7]
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- **1555.3260** [Repealed, L 2000 c 469 s 7]
- **1555.3270** [Repealed, L 2000 c 469 s 7]

1555.3280	[Repealed, L 2000 c 469 s 7]
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1555.3590	[Repealed, L 2000 c 469 s 7]
1555.3600	[Repealed, L 2000 c 469 s 7]

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1555.3880 [Repealed, L 2000 c 469 s 7]
1555.3890 [Repealed, L 2000 c 469 s 7]
1555.3900 [Repealed, L 2000 c 469 s 7]
1555.3910 [Repealed, L 2000 c 469 s 7]
1555.3920 [Repealed, L 2000 c 469 s 7]
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VINEGARS

1555.3930 VINEGAR, CIDER VINEGAR, APPLE VINEGAR.

"Vinegar," "cider vinegar," "apple vinegar," is the product made by the alcoholic and subsequent acetous fermentations of the juice of apples and contains in 100 cubic centimeters (20 degrees Celsius) not less than four grams of acetic acid.

Statutory Authority: MS s 31.10; 31.101

1555.3940 WINE VINEGAR, GRAPE VINEGAR.

"Wine vinegar," "grape vinegar," is the product made by the alcoholic and subsequent acetous fermentations of the juice of grapes and contains, in 100 cubic centimeters (20 degrees Celsius), not less than four grams of acetic acid.

Statutory Authority: *MS s 31.10; 31.101*

1555.3950 MALT VINEGAR.

"Malt vinegar" is the product made by the alcoholic and subsequent acetous fermentations, without distillation, of an infusion of barley malt or cereals whose starch has been converted by malt and contains, in 100 cubic centimeters (20 degrees Celsius), not less than four grams of acetic acid.

Statutory Authority: MS s 31.10; 31.101

1555,3960 SUGAR VINEGAR.

"Sugar vinegar" is the product made by the alcoholic and subsequent acetous fermentations of solutions of sugar, syrup, molasses, or refiners' syrup and contains, in 100 cubic centimeters (20 degrees Celsius), not less than four grams of acetic acid.

Statutory Authority: MS s 31.10; 31.101

1555.3970 GLUCOSE VINEGAR.

"Glucose vinegar" is the product made by the alcoholic and subsequent acetous fermentations of a solution of glucose, is dextrorotatory and contains, in 100 cubic centimeters (20 degrees Celsius), not less than four grams of acetic acid.

Statutory Authority: MS s 31.10; 31.101

1555.3980 SPIRIT VINEGAR, DISTILLED VINEGAR, GRAIN VINEGAR.

"Spirit vinegar," "distilled vinegar," "grain vinegar," is the product made by the acetous fermentation of dilute distilled alcohol and contains, in 100 cubic centimeters (20 degrees Celsius), not less than four grams of acetic acid.

Statutory Authority: MS s 31.10; 31.101

1555.3990 [Repealed, L 2000 c 469 s 7]

1555.4000 [Repealed, L 2000 c 469 s 7]

1555.4100 [Repealed, L 2000 c 469 s 7]

1555.4110 [Repealed, L 2000 c 469 s 7]

NONALCOHOLIC BEVERAGES

1555.4120 SODA WATER.

"Soda water" is the class of beverages made by absorbing carbon dioxide in potable water. The amount of carbon dioxide used is not less than that which will be absorbed by the beverage at a pressure of one atmosphere and at a temperature of 60 degrees Fahrenheit. It may contain buffering agents as provided in part 1555.4130, item E. It either contains no alcohol or only such alcohol (not in excess of 0.5 percent by weight of the finished beverage) as is contributed by the flavoring ingredient used. Soda water designated by a name including any proprietary name provided for in part 1555.4140 which includes the word "cola" or a designation as a "pepper" beverage that for years has become well known as being made with kola nut extract and/or other natural caffeine-containing extracts and thus as a caffeine-containing beverage shall contain caffeine in a quantity not to exceed 0.02 percent by weight.

Statutory Authority: MS s 31.10; 31.101

1555.4130 OPTIONAL INGREDIENTS.

Soda water may contain optional ingredients but if any such ingredient is a food additive or a color additive within the meaning of section 201 (s) or (t) of the Federal Food, Drug and Cosmetic Act, it is used only in conformity with the requirements established therefore. The optional ingredients that may be used in soda water in such proportions as are reasonably required to accomplish their intended effects are:

- A. nutritive sweeteners consisting of the dry or liquid form of sugar, invert sugar, dextrose, corn syrup, glucose syrup, sorbitol, or any combination of two or more of these:
- B. one or more of the following flavoring ingredients may be added in a carrier consisting of ethyl alcohol, glycerin, or propylene glycol:
- (1) fruit juices (including concentrated fruit juices), natural flavoring derived from fruits, vegetables, bark, buds, roots, leaves, and similar plant materials; or
 - (2) artificial flavoring;
 - C. natural and artificial color additives;
- D. one or more of the acidifying agents acetic acid, adipic acid, citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, or tartaric acid;
- E. one or more of the buffering agents consisting of the acetate, bicarbonate, carbonate, chloride, citrate, lactate, orthophosphate, or sulfate salts of calcium, magnesium, potassium, or sodium;
 - F. emulsifying, stabilizing, or viscosity-producing agents:
- (1) one or more of the emulsifying, stabilizing, or viscosity-producing agents brominated vegetable oils, carob bean gum (locust bean gum), glycerol ester of wood rosin, guar gum, gum acacia, gum tragacanth, hydroxylated lecithin, lecithin, methyl-cellulose, mono- and diglycerides of fat-forming fatty acids, pectin, polyglycerol esters of fatty acids, propylene glycol alginate, sodium carboxymethyl cellulose, sodium metaphosphate (sodium hexametaphosphate);
- (2) when one or more of the optional ingredients in subitem (1) are used, dioctyl sodium sulfosuccinate complying with the requirements of Code of Federal Regulations, title 21, section 172.810 (Federal Food and Drug Administration Regulations) may be used in a quantity not in excess of 0.5 percent by weight of such ingredients;
- G. one or more of the foaming agents ammoniated glycyrrhizin, gum ghatti, licorice, or glycyrrhiza, yucca (Joshua-tree), yucca (Mohave);
- H. caffeine, in an amount not to exceed 0.02 percent by weight of the finished beverage;
- I. quinine, as provided in Code of Federal Regulations, title 21, section 172.575, in an amount not to exceed 83 parts per million by weight of the finished beverage;
- J. one or more of the chemical preservatives ascorbic acid, benzoic acid, BHA, BHT, calcium disodium EDTA, erythorbic acid, glucose-oxidasecatalase enzyme, methyl or propyl paraben, mordihydroguaiaretic acid, propyl gallate, potassium or sodium benzoate, potassium or sodium bisulfite, potassium or sodium metabisulfite, potassium or sodium sorbate, sorbic acid, sulfur dioxide, or tocopherols; stannous chloride in a quantity not to exceed 11 parts per million calculated as tin (Sn), and in the case of canned soda water, with or without one or more of the other chemical preservatives listed in this item;
- K. the defoaming agent dimethylpolysiloxane in an amount not to exceed ten parts per million.

Statutory Authority: *MS s 31.10; 31.101*

1555.4140 NAMES OF BEVERAGES.

- Subpart 1. **Beverage neither flavored nor sweetened.** The name of the beverage for which a definition and standard of identity is established by parts 1555.4120 to 1555.4160, which is neither flavored nor sweetened, is soda water, club soda, or plain soda
- Subp. 2. Beverage containing flavoring and sweetening. The name of each beverage containing flavoring and sweetening ingredients as provided for in part 1555.4130 is "______ soda" or "_____ soda water" or "_____ carbonated beverage,"

the blank being filled in with the word or words that designate the characterizing flavor of the soda water; for example, "grape soda."

Subp. 3. **Soda water designated by common name.** If the soda water is one generally designated by a particular common name; for example, ginger ale, root beer, or sparkling water, that name may be used in lieu of the name prescribed in subparts 1 and 2. For the purposes of parts 1555.4120 to 1555.4160, a proprietary name that is commonly used by the public as the designation of a particular kind of soda water may likewise be used in lieu of the name prescribed in subparts 1 and 2.

Statutory Authority: MS s 31.10; 31.101

1555.4150 OPTIONAL INGREDIENTS LABELING.

Soda water that contains the optional ingredient caffeine as provided for in part 1555.4130, item H, artificial flavoring, artificial coloring, or any combination of these shall be labeled to show that fact by the label statement "with _____" or "____added," the blank being filled in with the word or words, "caffeine," "artificial flavoring," "artificial coloring," or a combination of these words, as appropriate. If the soda water contains one or more of the optional ingredients set forth in part 1555.4130, item J, which has or is intended to have a preservative effect in the finished beverage, it shall be labeled to show that fact by one of the following statements: "_____ added as a preservative" or "preserved with _____" the blank being filled in with the common name of the preservative ingredient. If soda water contains quinine salts, the label shall bear a prominent declaration either by use of the word "quinine" in the name of the article or by separate declaration.

Statutory Authority: MS s 31.10; 31.101

1555.4160 PLACEMENT OF LABEL STATEMENTS.

The label statements prescribed in part 1555.4150 for declaring the optional ingredients present shall appear on a labeling surface of the beverage in such a manner as to render the statement likely to be read by the ordinary individual under customary conditions of purchase or use of such beverage. These statements shall immediately and conspicuously precede or follow the name of the beverage, wherever such name is prominently displayed, without intervening, written, printed, or graphic matter; provided, that where such name is part of a trademark or brand, then other written, printed, or graphic matter that is also a part of such trademark or brand may intervene if the label statement required by parts 1555.4140 and 1555.4150 is so placed as to be conspicuously related to the name of the beverage.

Statutory Authority: MS s 31.10; 31.101

1555.4170 BACTERIAL, YEAST, AND MOLD STANDARDS FOR NONALCOHOLIC BEVERAGES.

No canned or bottled carbonated or still beverages, carbonated, plain, or otherwise, manufactured, mixed, or compounded, shall be sold, offered, or exposed for sale or held in possession for sale in this state, the bacterial count of which at any time after manufacturing, mixing, or compounding exceeds 100 bacteria per milliliter, 20 molds per milliliter, or a mixture of yeasts and molds which exceeds 20 per milliliter collectively, standard plate count, as determined by the arithmetical averages of four consecutive tests of beverage samples taken on separate days.

Statutory Authority: *MS s 31.10; 31.101*

1555.4180 PURIFIED WATER.

"Purified water" is a water produced by distillation, deionization, or by reverse osmosis and shall not contain more than ten parts per million of total dissolved solids and otherwise conforms to the sanitary standards for water. Purified water shall be designated by the name "purified water" and the statement "produced by ______," the blank being filled in with the appropriate descriptive words describing the water treatment process; for example, "purified water produced by distillation." These label

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1555.4180 FOOD DEFINITIONS AND STANDARDS

statements shall appear on the labeling surface of the container in such a manner as to render the statement likely to be read by the ordinary individual under customary conditions of purchase or use. For the purposes of this part the use of the names "distilled water," "deionized water," or "reverse osmosis water" may be used in lieu of the labeling prescribed herein when it properly describes the character and process of the water so designated.

Statutory Authority: MS s 31.10; 31.101

OTHER BEVERAGES

1555.4190 PHOSPHATE BEVERAGE.

A product labeled or sold as a phosphate beverage must contain an appreciable amount of phosphoric acid or acid phosphate, with or without other acid material commonly used in the preparation of beverages, provided that none of the acid ingredients are of such a nature as to render the product injurious to health.

Statutory Authority: MS s 31.10; 31.101

1555.4200 INFORMATION ON BOTTLES.

The information required to be given on the bottles containing a beverage may appear on a label pasted on the side of the bottle, on the crown or cap, or may be blown in the glass on the side of the bottle, or appear in applied color label on the side of the bottle. All information required by law or rulings must be plainly and conspicuously set forth, in proximity to the name of the article, through any one of the above named methods of labeling.

Statutory Authority: MS s 31.10; 31.101

1555.4210 MISBRANDING.

The information placed on the bottle by the manufacturer or bottler, whether in the form of a printed label or by means of lettering blown in the glass, must in each case be truly descriptive of the product contained in the bottle. The interchanging of labels, whether printed on paper or on the crown cap or blown in the glass of the bottle, whereby the matter contained in the label is not truly descriptive of the product or its origin, constitutes a misbranding.

Statutory Authority: MS s 31.10; 31.101

1555.4220 CERTAIN NONALCOHOLIC BEVERAGES.

Beverages which conform to cordials, wines, creme de menthe, etc. in all respects except as to alcoholic content, may be labeled as "nonalcoholic cordials," "nonalcoholic creme de menthe," "nonalcoholic wine," etc. as the case may be.

Statutory Authority: MS s 31.10; 31.101

1555.4230 MODIFIED FRUIT JUICE.

Such terms as "apple juice," "grape juice," "loganberry juice," "cherry juice," etc. are applicable only to the pure juice of the fruit specified. A fruit juice which has been modified in any way or to which sugar, dextrose, corn syrup, or corn syrup solids have been added shall be plainly labeled so as to indicate such modification or addition, as for example, grape juice with added sugar.

Statutory Authority: MS s 31.10; 31.101

1555.4240 [Repealed, 24 SR 1451]

1555.4250 [Repealed, 24 SR 1451]

1555.4260 [Repealed, 24 SR 1451]

1555.4270 [Repealed, 24 SR 1451]

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1555.4280	[Repealed, 24 SR 1451
1555.4290	[Repealed, 24 SR 1451
1555.4300	[Repealed, 24 SR 1451
1555.4310	[Repealed, 24 SR 1451
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1555.4360	[Repealed, 24 SR 1451]
1555.4370	[Repealed, 24 SR 1451]
1555.4380	[Repealed, 24 SR 1451]
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1555.5160	[Repealed, 24 SR 1451]
1555.5170	[Repealed, 24 SR 1451]
1555.5180	[Repealed, 24 SR 1451]
1555.5210	[Repealed, 24 SR 1451]
1555.5220	[Repealed, 24 SR 1451]
1555.5230	[Repealed, 24 SR 1451]
1555.5240	[Repealed, 24 SR 1451]
1555.5250	[Repealed, 24 SR 1451]
1555.5260	[Repealed, 24 SR 1451]

[Repealed, 24 SR 1451]
[Repealed, 24 SR 1451]

1555.5570 [Repealed, 24 SR 1451] **1555.5580** [Repealed, 24 SR 1451]

1555.5590	[Repealed, 24 SR 1451]
1555.5600	[Repealed, 24 SR 1451]
1555.5610	[Repealed, 24 SR 1451]
1555.5620	[Repealed, 24 SR 1451]
1555.5630	[Repealed, 24 SR 1451]
1555.5640	[Repealed, 24 SR 1451]
1555.5650	[Repealed, 24 SR 1451]
1555.5660	[Repealed, 24 SR 1451]
1555.5670	[Repealed, 24 SR 1451]
1555.5680	[Repealed, 24 SR 1451]
1555.5690	[Repealed, 24 SR 1451]
1555.5700	[Repealed, 24 SR 1451]
1555.5710	[Repealed, 24 SR 1451]
1555.5720	[Repealed, 24 SR 1451]
1555.5730	[Repealed, 24 SR 1451]
1555.5740	[Repealed, 24 SR 1451]
1555.5745	[Repealed, 24 SR 1451]
1555.5750	[Repealed, 24 SR 1451]
1555.5760	[Repealed, 24 SR 1451]
1555.5770	[Repealed, 24 SR 1451]
1555.5780	[Repealed, 24 SR 1451]
1555.5790	[Repealed, 24 SR 1451]
1555.5800	[Repealed, 24 SR 1451]
1555.5820	[Repealed, 24 SR 1451]
1555.5830	[Repealed, 24 SR 1451]
1555.5840	[Repealed, 24 SR 1451]
1555.5850	[Repealed, 24 SR 1451]
1555.5860	[Repealed, 24 SR 1451]
	[Repealed, 24 SR 1451]
	[Repealed, 24 SR 1451]
	[Repealed, 24 SR 1451]
1555.5900	[Repealed, 24 SR 1451]
1555.6000	[Repealed, 24 SR 1451]

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1555.6010	[Repealed, 24 SR 1451]
1555.6020	[Repealed, 24 SR 1451]
1555.6030	[Repealed, 24 SR 1451]
1555.6040	[Repealed, 24 SR 1451]
1555.6050	[Repealed, 24 SR 1451]
1555.6060	[Repealed, 24 SR 1451]
1555.6070	[Repealed, 24 SR 1451]
1555.6080	[Repealed, 24 SR 1451]
1555.6090	[Repealed, 24 SR 1451]
1555.6100	[Repealed, 24 SR 1451]
1555.6110	[Repealed, 24 SR 1451]
1555.6120	[Repealed, 24 SR 1451]
1555.6130	[Repealed, 24 SR 1451]
1555.6140	[Repealed, 24 SR 1451]
1555.6150	[Repealed, 24 SR 1451]
1555.6160	[Repealed, 24 SR 1451]
1555.6170	[Repealed, 24 SR 1451]
1555.6180	[Repealed, 24 SR 1451]
1555.6190	[Repealed, 24 SR 1451]
1555.6200	[Repealed, 24 SR 1451]
1555.6210	[Repealed, 24 SR 1451]
1555.6220	[Repealed, 24 SR 1451]
1555.6230	[Repealed, 24 SR 1451]
1555.6240	[Repealed, 24 SR 1451]
1555.6250	[Repealed, 24 SR 1451]
1555.6260	[Repealed, 24 SR 1451]
1555.6270	[Repealed, 24 SR 1451]
	[Repealed, 24 SR 1451]
1555.6290	[Repealed, 24 SR 1451]
1555.6300	[Repealed, 24 SR 1451]
1555.6310	[Repealed, 24 SR 1451]
1555.6320	[Repealed, 24 SR 1451]

APPLES

1555.6330 **DEFINITIONS.**

- Subpart 1. **Mature.** "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 of apples.
- A. "Hard" means apples with a tenacious flesh and starchy flavor. Apples at this stage are suitable for storage and long-distance shipment.
- B. "Firm" means apples with a tenacious flesh but which are becoming crisp with a slight starchy flavor, except the Delicious variety. Apples at this stage are also suitable for storage and long-distance shipment.
- C. "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. Apples at this stage may be shipped long distances but should be moved into consumption within a short period of time.
- D. "Ripe" means apples with mealy flesh and soon to become soft for the variety. Apples at this stage should be moved immediately into consumption.
- Subp. 2. **Overripe.** "Overripe" means apples which are dead ripe, with flesh very mealy or soft and past commercial utility.
- Subp. 3. Carefully hand-picked. "Carefully hand-picked" means that the apples do not show evidence of rough handling or of having been on the ground.
- Subp. 4. Clean. "Clean" means that the apples are free from excessive dirt, dust, spray residue, and other foreign material.
- Subp. 5. Well formed. "Well formed" means that the apple has the normal shape characteristic of the variety, except that the shape may be slightly irregular, provided, it does not detract from the general appearance of the apple.
- Subp. 6. **Injury.** "Injury" means any defect which more than slightly affects the appearance, or the edible or shipping quality of the apples.
- 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, except that rough or barklike russeting in the stem cavity or calyx basin shall be considered as injury 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 injury:
- (1) smooth, net-like russeting, when an aggregate area of more than five percent 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;
- (2) smooth, solid russeting which covers an aggregate area of more than one-half inch in diameter 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 (see part 1555.6365);
- (3) slightly rough russeting which covers an aggregate area of more than one-fourth inch in diameter (see part 1555.6365);
- (4) rough russeting, unless it is well within the stem cavity or calyx basin and is not readily apparent.
- B. Any one of the following defects or any combination thereof the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as injury:

- (1) sunburn or spray burn, when the discolored area does not blend into the normal color of the fruit;
- (2) dark brown or black limb rubs which affect a total area of more than one-eighth inch in diameter, except that light brown limb rubs of a russet character shall be considered under the definition of injury by russeting in item A (see part 1555.6365);
- (3) hail marks, drought spots, or other similar depressions or scars where there is appreciable discoloration other than russeting or when the indentations are not superficial or when an individual indentation exceeds one-eighth inch in diameter or the total affected area exceeds one-fourth inch in diameter (see part 1555.6365);
- (4) stem or calyx cracks which are not well healed or well healed stem or calyx cracks which exceed a length of one-eighth inch;
- (5) diseases: cedar rust infection which affects a total area of more than one-eighth inch in diameter (see part 1555.6365); sooty blotch or fly speck which is thinly scattered over more than five percent of the surface or dark, heavily concentrated spots which affect an area of more than one-fourth inch in diameter (see part 1555.6365); red skin spots which are thinly scattered over more than one-tenth of the surface or dark, heavily concentrated spots which affect an area of more than one-fourth inch in diameter (see part 1555.6365);
- (6) insects: Any healed sting or healed stings which affect a total area of more than one-eighth inch in diameter including any encircling discolored rings (see part 1555.6365); and worm holes.
- Subp. 7. Fairly well formed. "Fairly well formed" means that the apple may be slightly abnormal in shape but not to an extent which detracts materially from its appearance.

Statutory Authority: MS s 30.55

1555,6340 DAMAGE.

"Damage" means any defect which materially affects the appearance or the edible or shipping quality of the apples.

- 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 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:
- (1) russeting which is excessively rough on Roxbury Russet and other similar varieties;
- (2) smooth net-like russeting, when an aggregate area of more than 15 percent 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:
- (3) smooth solid russeting, when an aggregate area of more than five percent 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;
- (4) slightly rough russeting which covers an aggregate area of more than one-half inch in diameter (see part 1555.6365);
- (5) rough russeting which exceeds one-fourth inch in diameter, unless it is well within the stem cavity or calyx basin and is not readily apparent (see part 1555.6365).

- B. Any one of the following defects or any combination thereof the seriousness of which exceeds the maximum allowed for any one defect shall be considered as damage:
- (1) sunburn or spray burn 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;
- (2) limb rubs which affect a total area of more than one-half inch in diameter, except that light brown limb rubs of a russet character shall be considered under the definition of damage by russeting in part 1555.6330, subpart 6, item A (see part 1555.6365);
- (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 one-half inch in diameter (see part 1555.6365);
- (4) stem or calyx cracks which are not well-healed or well-healed stem or calyx cracks which exceed an aggregate length of one-fourth inch;
- (5) diseases: scab spots which affect a total area of more than one-fourth inch in diameter (see part 1555.6365); cedar rust infection which affects a total area of more than one-fourth inch in diameter (see part 1555.6365); sooty blotch or fly speck which is thinly scattered over more than one-tenth of the surface or dark, heavily concentrated spots which affect an area of more than one-half inch in diameter (see part 1555.6365); and red skin spots which are thinly scattered over more than one-tenth of the surface or dark, heavily concentrated spots which affect an area of more than one-half inch in diameter (see part 1555.6365);
- (6) insects: any healed sting or healed stings which affect a total area of more than 3/16 inch in diameter including any encircling discolored rings (see part 1555.6365); and worm holes.

Statutory Authority: MS s 30.55

1555.6350 SERIOUSLY DEFORMED.

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

Statutory Authority: MS s 30.55

1555.6360 SERIOUS DAMAGE.

"Serious damage" means any defect which seriously affects the appearance or the edible or shipping quality of the apples.

- A. The following types and amounts of russeting shall be considered as serious damage: smooth solid russeting, when more than one-half 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; provided, that any amount of russeting shall be permitted on Roxbury Russet and other similar varieties.
- B. Any one of the following defects or any combination thereof the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:
- (1) sunburn or spray burn which seriously detracts from the appearance of the fruit;
- (2) limb rubs which affect more than one-tenth of the surface in the aggregate;
- (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 one-half inch shall be allowed for well-healed hail marks where the skin has been broken (see part 1555.6365);

- (4) stem or calyx cracks which are not well-healed or well-healed stem or calyx cracks which exceed an aggregate length of one-half inch;
- (5) visible water core which affects an area of more than one-half inch in diameter;
- (6) diseases: scab spots which affect a total area of more than three-fourths inch in diameter (see part 1555.6365); cedar rust infection which affects a total area of more than three-fourths inch in diameter (see part 1555.6365); sooty blotch or fly speck which affects more than one-third of the surface; red skin spots which affect more than one-third of the surface; and 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;
- (7) insects: healed stings which affect a total area of more than one-fourth inch in diameter including any encircling discolored rings (see part 1555.6365); and worm holes.

Statutory Authority: MS s 30.55

1555.6365 AREA.

In designated area measurements in parts 1555.6330 to 1555.6360, the area refers to that of a circle of the specified diameter.

Statutory Authority: MS s 30.55

1555.6370 APPLICABILITY.

The provisions of parts 1555.6330 to 1555.6530 shall not be applicable to any apples bearing a grade as determined by official inspection under regulations and standards of either the federal or any state regulatory department having requirements for the various grades of apple labeling equal to or in excess of the standards and quality required by the state of Minnesota.

Statutory Authority: MS s 30.55

1555.6380 APPLES NOT MEETING GRADE REQUIREMENTS.

All apples which fail to meet the requirements of Minnesota extra fancy, Minnesota fancy, Minnesota No. 1, Minnesota No. cookers, Minnesota No. early, Minnesota No. 2, and Minnesota hair grade shall be conspicuously marked with a label bearing the word "utility." Letters of size not less than three-fourths inch height shall be conspicuously printed or stamped on the container.

Statutory Authority: MS s 30.55

1555.6390 GRADES.

Subpart 1. Minnesota extra fancy. Minnesota extra fancy consists of apples of one variety which are: mature, but not overripe; carefully hand-picked; clean; well formed; and free from decay, internal browning, internal breakdown, scald, scab, bitter pit, Jonathan spot, freezing injury, broken skins and bruises (except those that are slight and incident to proper handling and packing), and visible water core. The apples also shall be free from injury caused by russeting, sunburn or spray burn, limb rubs, hail, drought spots, scars, stem or calyx cracks, other diseases, insects, or mechanical or other means. Each apple of this grade shall have the amount of color specified hereinafter for the variety. (See parts 1555.6400 to 1555.6490.)

Subp. 2. Minnesota fancy. Minnesota fancy consists of apples of one variety which are mature, but not overripe; carefully hand-picked; clean; fairly well-formed; and free from decay, internal browning, internal breakdown, bitter pit, Jonathan spot, scald, freezing injury, broken skins and bruises (except those incident to proper handling and packing) and visible water core. The apples also shall be free from damage caused by russeting, sunburn or spray burn, limb rubs, hail, drought spots, scars, stem or calyx

cracks, other diseases, insects, or mechanical or other means. Each apple of this grade shall have the amount of color specified hereinaster for the variety. (See parts 1555.6400 to 1555.6490.)

- Subp. 3. Minnesota No. 1. Minnesota No. 1 consists of apples meeting the same requirements as Minnesota fancy except for color and russeting. In this grade less color is required for all varieties except yellow and green varieties, for which the requirements for both grades are the same. Apples of this grade shall be free from excessive damage caused by russeting which means that they shall meet the russeting requirements for Minnesota fancy as defined under the definitions of "damage by russeting," part 1555.6340; provided, that the aggregate area of an apple which may be covered by smooth net-like russeting shall not exceed 25 percent; and further provided, that the aggregate area of an apple which may be covered by smooth solid russeting shall not exceed ten percent. (See parts 1555.6400 to 1555.6490.)
- Subp. 4. Minnesota No. 1 cookers. Minnesota No. 1 cookers consists of apples of one variety which meet the requirements of Minnesota No. 1 grade except as to color. This grade is provided for apples which are mature but which may not have sufficient color to meet the specifications of Minnesota No. 1. (See parts 1555.6450 to 1555.6490.)
- Subp. 5. Minnesota No. 1 early. Minnesota No. 1 early consists of apples of one variety which meet the requirements of Minnesota No. 1 grade except as to color, maturity, and size. Apples of this grade have no color requirements, need not be mature, and shall be not less than two inches in diameter. This grade is provided for varieties such as Duchess. Gravenstein. Red June, Twenty Ounce, Wealthy, Williams, Yellow Transparent and Lodi, or other varieties which are normally marketing during the summer months. (See parts 1555.6450 to 1555.6490.)
- Subp. 6. Minnesota No. 2. Minnesota No. 2 consists of apples of one variety which are mature, but not overripe; carefully hand-packed; not seriously deformed; free from decay, internal browning, internal breakdown, scald, and freezing injury. The apples also shall be free from serious damage caused by dirt or other foreign matter, broken skins, bruises, russeting, sunburn, spray burn, limb rubs, hail, drought spots, scars, stem or calyx cracks, visible water core, other diseases, insects, or mechanical or other means. (See parts 1555.6450 to 1555.6490.)
- Subp. 7. Combination grades. Combinations of the above grades can be used as follows: combination Minnesota extra fancy and Minnesota fancy; combination Minnesota fancy and Minnesota No. 1; and combination Minnesota No. 1 and Minnesota No. 2. Combinations other than these are not permitted in connection with the Minnesota apple grades. When combination Minnesota extra fancy and Minnesota fancy is packed, at least 25 percent of the apples in any lot shall meet the requirements of the higher grade in the combination. When combination Minnesota fancy and Minnesota No. 1 or combination Minnesota No. 1 and Minnesota No. 2 is packed, at least 50 percent of the apples in any lot shall meet the requirements of the higher grade in the combination. (See parts 1555.6400 to 1555.6490.)
- Subp. 8. Minnesota hail grade. Minnesota hail grade consists of apples which meet the requirements of Minnesota No. 1 grade except that 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. (See parts 1555.6400 to 1555.6490.)

Statutory Authority: MS s 30.55

1555.6400 COLOR REQUIREMENTS.

In addition to the requirements specified for the above grades, apples of these grades shall have the percentage of color specified for the variety in part 1555.6430.

Statutory Authority: MS s 30.55

1555.6410 SOLID RED VARIETIES.

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 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, 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.

Statutory Authority: MS s 30.55

1555.6420 STRIPED RED VARIETIES.

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, that 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.

Statutory Authority: MS s 30.55

1555.6430 COLOR REQUIREMENTS FOR SPECIFIED MINNESOTA GRADES OF APPLES, BY VARIETIES.

Variety	Minnesota Extra Fancy	Minnesota Fancy	· Minnesota Number 1
	Percent	Percent	Percent
Solid Red:			
Beacon	75	50	25
Black Ben	75	50	25
Gano	75	50	25
Lakeland	75	50	25
Minjon	75	50	25
Redwell	75	50	25
Winesap	. 75	50	25
Other similar varieties ¹	75	50	25
Red Sport varieties ²	75	50	25
Striped or partially red:			
Cortland	66	33	25
Fireside	66	33	25
Haralson	66	33	25
Jonathan	66	33	25
McIntosh	66	33	25
Melba	66	33	25
Prairie Spy	66	33	25
Other similar varieties ³	66	33	25
Baldwin	50	25	15
Ben Davis	50	25	15
Delicious	50	25	15
Early McIntosh	50	25	15
Mammoth Black Twig	50	25	15
Northern Spy	50	25	15
Rome Beauty	50	25	15

Stayman	50	25	15
Turley	50	25	15
Wagener	50	25	15
Wealthy	50	25	15
Willow Twig	50	25	15
York Imperial	50	25	15
Other similar varieties ⁴	50	25	15
Hubbardston	50	15	10
Stark	50	15	10
Other similar varieties ⁵	50	15	10
Red June ·	50	15	5
Williams	50	15	5
Other similar varieties	· 50	15	5
Duchess	25	10	5
Gravenstein	25	10	5
Other similar varieties ⁶	25	10	5
Yellow varieties	7	7	7
Golden Delicious	8	8	8

¹Arkansas Black, Detroit Red, Esopus Spitzenburg, King David, Lowry.

NOTE: "Characteristic color", when the white around the lenticels predominates over the green color, creating a mottling effect on the surface of the apple, it shall be considered as the minimum characteristic color.

Statutory Authority: MS s 30.55

1555.6440 UTILITY DESIGNATION.

Utility consists of apples which are not graded in conformity with any of the foregoing grades. The term "utility" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Statutory Authority: MS s 30.55

1555.6450 TOLERANCES.

In order to allow for variations incident to proper grading and handling, not more than a total of ten percent of the apples in any lot may fail to meet the requirements of the grade; provided, that not more than one-half of this amount, or five percent, shall be allowed for apples which are seriously damaged by insects and including not more than one percent for apples affected by decay or internal breakdown or both.

Statutory Authority: MS s 30.55

1555.6460 APPLYING TOLERANCES.

When applying the foregoing tolerances to combination Minnesota extra fancy and Minnesota fancy grade, no part of any tolerance shall be allowed to reduce, for the lot as a whole, the 25 percent of apples of the higher grade required in the combination, but individual containers shall have not less than 15 percent of the higher grade.

²When Red Sport varieties are specified as such they shall meet the color requirements specified for Red Sport varieties.

³Kendall, Macoun, Snow (Fameuse), Jewell Winter, Victory.

⁴Bonum, Limbertwig, Milton, Nero, Paragon.

⁵Tinge of color.

⁶Red Astrachan, Smokehouse, Summer Rambo, Oriole.

⁷Characteristic ground color.

⁸⁷⁵ percent characteristic color.

When applying the foregoing tolerances to combination Minnesota fancy and Minnesota No. 1 grade and to combination Minnesota No. 1 and Minnesota No. 2 grade, no part of any tolerance shall be allowed to reduce, for the lot as a whole, the 50 percent of apples of the higher grade required in the combination, but individual containers shall have not less than 40 percent of the higher grade.

Statutory Authority: MS s 30.55

1555.6470 CONTENTS OF INDIVIDUAL PACKAGES IN A LOT.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations, provided the averages for the entire lot are within the tolerances specified for the grade:

- A. for packages which contain more than ten pounds and a tolerance of ten percent or more is provided (as in the case of size, where a tolerance of 15 percent is provided) individual packages in any lot shall have not more than 1-1/2 times the tolerance specified;
- B. for packages which contain more than ten pounds and a tolerance of less than ten percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one apple which is seriously damaged by insects or affected by decay or internal breakdown may be permitted in any package;
- C. for packages which contain ten pounds or less, individual packages in any lot are not restricted as to the percentage of defects; provided, that not more than one apple which is seriously damaged by insects or affected by decay or internal breakdown may be permitted in any package.

Statutory Authority: MS s 30.55

1555.6480 BASIS OF CALCULATING PERCENTAGES.

When the numerical count is marked on the container, percentages shall be calculated on the basis of count. When the minimum diameter or minimum and maximum diameters are marked on the container, percentages shall be calculated on the basis of weight. When the apples are in bulk, percentages shall be calculated on the basis of weight.

Statutory Authority: MS s 30.55

1555.6490 CONDITION AFTER STORAGE OR TRANSIT.

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.

Statutory Authority: MS s 30.55

1555.6500 SIZE REQUIREMENTS.

The size of the apples packed in a closed container shall be indicated on the container. The minimum size shall be plainly stamped, stenciled, or otherwise marked on the container in terms of whole inches, whole and half inches, whole and quarter inches, or whole and eighth inches, as 2-1/2 inches minimum, 2-1/4 inches minimum, or 2-5/8 inches minimum, in accordance with the facts.

Statutory Authority: MS s 30.55

1555.6510 MEASUREMENT FOR MINIMUM SIZE.

The measurement for minimum size shall be the largest diameter of the apple taken at right angles to a line from the stem end to the blossom end. The measurement for maximum size shall be the smallest dimension of the apple determined by passing the apple through a round opening.

Statutory Authority: MS s 30.55

1555.6520 VARIATIONS.

In order to allow for variations incident to proper sizing, not more than five percent of the apples in any lot may not meet the size requirements; provided, that when the maximum and minimum sizes are both stated, an additional ten percent tolerance shall be allowed for apples which are larger than the maximum size stated.

Statutory Authority: MS s 30.55

1555.6530 SUGGESTED ABBREVIATIONS FOR MARKING CONTAINERS.

In order to conserve space, abbreviations may be used for marking Minnesota grade names on containers. The following abbreviations are suggested where it is not desired to use the full grade name: Minn. Ex. Fcy. for Minnesota Extra Fancy; Minn. Fcy. for Minnesota Fancy; Minn. No. 1 for Minnesota No. 1; Minn. No. 2 for Minnesota No. 2. Combination grades may be designated by abbreviations of the grades preceded by the abbreviation "Comb." as "Comb. Minn. Fcy -- Minn. No. 1."

Statutory Authority: MS s 30.55

POTATOES

1555.6540 **DEFINITIONS.**

- Subpart 1. Artificially colored. The term "artificially colored" when used to refer to potatoes shall mean and include the addition of any substance or material to the surface of potatoes or to transparent containers in which potatoes are displayed for sale which changes the appearance of said potatoes.
- Subp. 2. Clean. "Clean" means that the individual potato is practically free from dirt or staining and practically no loose dirt or other foreign matter is present in the container.
- Subp. 3. Closed container or package. "Closed container or package" means any container so secured that a prospective purchaser is unable to make a selection of individual potatoes from its contents.
- Subp. 4. **Damage.** "Damage," unless otherwise specifically defined in this part, means any defect which materially affects the edible or shipping quality, or the internal or external appearance of the individual potato, or any external defect which cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:
- A. dirt or other foreign matter 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 container;
- B. sunburn when the discoloration extends into the flesh to such an extent that it cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the affected area;
- C. greening caused by exposure to natural or artificial light when the appearance of the individual potato is materially affected by yellowish or greenish surface discoloration, or when discoloration extends into the flesh of the potato and cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area;
- D. second growth which materially affects the appearance of the individual potato;
- E. growth cracks which materially affect the appearance of the individual potato;
- F. air cracks which are deep, or shallow air cracks which materially affect the appearance of the individual potato;

- G. hollow heart which materially affects the internal appearance of the potato cut longitudinally;
- H. internal discoloration, any part of which affects the vascular ring or occurs between the ring and the skin of the potato when the discoloration cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area, or discoloration occurring entirely within the area bounded by the vascular ring when there is more than the equivalent of three scattered light brown spots one-eighth inch in diameter in a round or intermediate type potato 2-1/2 inches in diameter or in a long type potato six ounces in weight, or correspondingly lesser or greater numbers of spots on smaller or larger potatoes;
- I. external discoloration when the appearance of the potato is materially affected;
- J. shriveling when the potato is more than moderately shriveled, spongy, or flabby;
- K. sprouting when more than ten percent of the potatoes in the lot have external sprouts over three-fourths inch in length, or when the removal of an ingrown sprout causes a loss of more than five percent of the total weight of the potato including peel covering the defective area;
- L. scab when surface scab shows no pronounced contrast with the background color of the potato and the aggregate area exceeds five percent of the surface, or when surface scab shows a pronounced contrast with the background color and the aggregate area exceeds three percent of the surface; when pitted scab affects the appearance of the potato to a greater extent than the amount of surface scab permitted or causes a loss of more than five percent of the total weight of the potato including peel covering the defective area; or when russet scab materially affects the appearance of the potato;
- M. rhizoctonia when the appearance of the potato is materially affected, or when the surface is materially caked with black scurf;
- N. dried stems when pliable and over one-eighth inch in diameter and over 2-1/2 inches long, or when stiff and over one-eighth inch in diameter and over one inch long;
- O. insects, larvae, or worms when present inside the potato, or when any hole caused by them or by grass root or similar injury in a round or intermediate type potato 2-1/2 inches in diameter, or in a long type potato six ounces in weight, is more than three-fourths inch long, or when the aggregate length of all holes in such potatoes is more than 1-1/4 inches, or correspondingly shorter or longer holes in smaller or larger potatoes, or when other types of injury materially affect the appearance of the potato or cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area;
- P. mechanical or other means when cuts, shatter bruises or other bruises, punctures, or other injuries materially affect the appearance of the potato or cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area.
- Subp. 5. Fairly clean. "Fairly clean" means that the individual potato is reasonably free from dirt or staining and not more than a slight amount of loose dirt or other foreign matter is present in the container.
- Subp. 6. **Fairly well matured.** "Fairly well matured" means that not more than ten percent, by weight, of the individual potatoes in the lot have more than one-fourth of the skin missing or feathered.
- Subp. 7. **Fairly well shaped.** "Fairly well shaped" means that the individual potato is not materially pointed, dumbbell-shaped, or otherwise ill-formed.
- Subp. 8. Label. The term "label" as used in parts 1555.6550 to 1555.6710 includes any legend or descriptive matter or design appearing upon potatoes or their container and also includes circulars, pamphlets, and the like, which are packed with and go with the potatoes to the purchaser, and such letters, circulars, and pamphlets to which reference is made either on the label attached to the container or on the container

itself. The term "tag label" means a label which is attached to but is not a permanent part of the container.

- Subp. 9. Lot. "Lot" means any number of containers which contain a product of the same kind located in the same conveyance, warehouse, packing house, or on the same dock or platform and which are available for inspection at the same time; provided, that:
- A. products which are different from each other as to grade, variety, size, condition, identification marks, or other factors may be deemed to be separate lots;
- B. if the applicant requests more than one inspection certificate covering different portions of the same lot, the quantity of the lot covered by each certificate shall be deemed to be a separate lot; and
- C. if said product is packed in more than one size or type of container, each such size or type may be deemed to be a separate lot.
- Subp. 10. Serious damage. "Serious damage," unless otherwise specifically defined in this part, means any defect which seriously affects the edible or shipping quality, or the internal or external appearance of the individual potato, or any external defect which cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering the defective area. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:
- A. dirt or other foreign matter when the individual potato is badly caked with dirt or badly stained, or when an excessive amount of loose dirt or other foreign matter is present in the container;
- B. sunburn when the discoloration extends into the flesh to such an extent that it cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering the affected area;
- C. greening caused by exposure to natural or artificial light when the appearance of the individual potato is seriously affected by yellowish or greenish surface discoloration or when such discoloration extends into the flesh of the potato and cannot be removed without a loss of more than five percent of the total weight of the potato including peel covering the defective area;
- D. second growth which seriously affects the appearance of the individual potato;
- E. growth cracks which seriously affect the appearance of the individual potato;
 - F. air cracks which seriously affect the appearance of the individual potato;
- G. hollow heart which seriously affects the internal appearance of the potato cut longitudinally;
- H. internal discoloration, any part of which affects the vascular ring or occurs between the ring and the skin of the potato when the discoloration cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering the defective area, or discoloration occurring entirely within the area bounded by the vascular ring when there is more than the equivalent of six scattered light brown spots one-eighth inch in diameter in a round or intermediate type potato 2-1/2 inches in diameter or in a long type potato six ounces in weight, or correspondingly lesser or greater numbers of spots on smaller or larger potatoes;
- I. external discoloration when the appearance of the potato is seriously affected;
 - J. shriveling when the potato is excessively shriveled, spongy, or flabby;
- K. scab when surface scab shows no pronounced contrast with the background color of the potato and the aggregate area exceeds 50 percent of the surface, or when surface scab shows a pronounced contrast with the background color and the aggregate area exceeds 25 percent of the surface; when pitted scab affects the appearance of the potato to a greater extent than the amount of surface scab permitted or causes a loss of

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more than ten percent of the total weight of the potato including peel covering the defective area; or when russet scab seriously affects the appearance of the potato;

L. rhizoctonia when the appearance of the potato is seriously affected, or when the surface is badly caked with black scurf;

M. insects, larvae, or worms when present inside the potato, or when any hole caused by them or by grass roots or similar injury in a round or intermediate type potato 2-1/2 inches in diameter or in a long type potato six ounces in weight, is more than 1-1/2 inches long, or when the aggregate length of all holes in such potatoes is more than two inches, or correspondingly shorter or longer holes in smaller or larger potatoes, or when other types of injury seriously affect the appearance of the potato or cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering the defective area; and

N. mechanical or other means when a fairly smooth cut such as is made by a knife to remove injury occurs on both ends of the potato; provided, that such a cut shall be permitted on one end of the potato if the length of the remaining portion of the clipped potato is more than 1-1/2 times the greatest diameter of the cut and that the remaining portion of a clipped long-type potato weighs at least six ounces; or when other cuts, shatter bruises or other bruises, punctures, or other injuries seriously affect the appearance of the potato or cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering the defective area.

- Subp. 11. **Seriously misshapen.** "Seriously misshapen" means that the individual potato is seriously pointed, dumbbell-shaped, or otherwise badly deformed.
- Subp. 12. **Soft rot or wet breakdown.** "Soft rot or wet breakdown" means any soft, mushy, or leaky condition of the tissue such as slimy soft rot, leak, or wet breakdown following freezing injury or sunscald.
- Subp. 13. **Well shaped.** "Well shaped" means that the potato has the normal shape for the variety and is not pointed, dumbbell-shaped, or otherwise ill-formed.

Statutory Authority: MS s 30.102

1555.6550 MINNESOTA FANCY POTATOES.

- Subpart 1. General. "Minnesota fancy" consists of potatoes of one variety or similar varietal characteristics which are fairly well matured and fairly well shaped; which are clean; which are not frozen; and which are free from freezing injury, blackheart, late blight, southern bacterial wilt, ring rot, soft rot, or wet breakdown, and free from damage caused by sunburn, greening, second growth, growth cracks, air cracks, hollow heart, internal discoloration, external discoloration, shriveling, sprouting, scab, dry rot, rhizoctonia, dried stems, insects, larvae, worms, other disease, or mechanical or other means.
- Subp. 2. Size. Unless otherwise specified, the size shall be as follows: the diameter of each potato shall be not less than two inches; for round or intermediate shaped varieties such as Irish Cobbler, Katahdin, Sebago, Pontiac, Kennebec, Green Mountain, or other similar varieties, not less than 60 percent of the potatoes in any lot shall be 2-1/4 inches or larger but not larger than 3-3/4 inches in diameter, including therein not less than 30 percent which are 2-3/4 inches or larger. For long varieties such as Russet Burbank, Early Gem, White Rose, or other similar varieties, not less than 60 percent of the potatoes in any lot shall be six ounces or more in weight, including therein not less than 30 percent which are ten ounces, but not more than 14 ounces in weight.
- Subp. 3. Tolerances for defects. In order to allow for variations, other than size, incident to proper grading and handling, not more than ten percent, by weight, of the potatoes may be fairly clean, not more than a total of five percent may fail to meet the other requirements of this grade relating to external and internal defects; provided, that not more than two-fifths of this amount, or two percent, shall be allowed for potatoes which are frozen or affected by southern bacterial wilt, ring rot, late blight, soft rot, or

wet breakdown, including therein not more than one-half of one percent for potatoes which are frozen or affected by soft rot or wet breakdown. (See part 1555.6640.)

Statutory Authority: MS s 30.102

1555.6560 MINNESOTA NO. 1 POTATOES.

Subpart 1. **General.** "Minnesota No. 1" consists of potatoes of one variety or similar varietal characteristics which are fairly well shaped; which are not frozen; and which are free from freezing injury, blackheart, late blight, southern bacterial wilt, ring rot, soft rot, or wet breakdown, and free from damage caused by dirt or other foreign matter, sunburn, greening, second growth, growth cracks, air cracks, hollow heart, internal discoloration, external discoloration, shriveling, sprouting, scab, dry rot, rhizoctonia, dried stems, insects, larvae, worms, other disease, or mechanical or other means. (See part 1555.6630.)

Subp. 2. **Size.** Unless otherwise specified, the diameter of each potato shall be not less than 1-7/8 inches. (See parts 1555.6600 to 1555.6620.)

Subp. 3. Tolerances for defects. In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 11 percent, by weight, of the potatoes in any lot may fail to meet the requirements of this grade; provided, that included in this amount not more than the following percentages shall be allowed for the defects listed: six percent for potatoes having external defects; and five percent for potatoes which are damaged by hollow heart, internal discoloration, or other internal defects; and provided further, that included in the above tolerances for external and internal defects not more than three percent shall be allowed for potatoes which are frozen or affected by southern bacterial wilt, ring rot, blight, soft rot, or wet breakdown, including therein not more than one percent for potatoes which are frozen or affected by soft rot or wet breakdown. (See part 1555.6640.)

Statutory Authority: MS s 30.102

1555.6570 MINNESOTA NO. 2 POTATOES.

Subpart 1. General. "Minnesota No. 2" consists of potatoes of one variety or similar varietal characteristics which are not seriously misshapen or frozen; and which are free from freezing injury, blackheart, late blight, southern bacterial wilt, ring rot, soft rot, or wet breakdown, and free from serious damage caused by dirt or other foreign matter, sunburn, greening, second growth, growth cracks, air cracks, hollow heart, internal discoloration, external discoloration, shriveling, scab, dry rot, rhizoctonia, insects, larvae, worms, other disease, or mechanical or other means. (See part 1555.6630.)

Subp. 2. Size. Unless otherwise specified, the diameter of each potato shall be not less than 1-1/2 inches. (See parts 1555.6600 to 1555.6620.)

Subp. 3. Tolerances for defects. In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 11 percent, by weight, of the potatoes in any lot may fail to meet the requirements of this grade; provided, that included in this amount not more than the following percentages shall be allowed for the defects listed: six percent for potatoes having external defects; and five percent for potatoes which are seriously damaged by hollow heart, internal discoloration, or other internal defects; and provided further, that included in the above tolerances for external and internal defects not more than three percent shall be allowed for potatoes which are frozen or affected by southern bacterial wilt, ring rot, late blight, soft rot, or wet breakdown, including therein not more than one percent for potatoes which are frozen or affected by soft rot or wet breakdown. (See part 1555.6640.)

Statutory Authority: MS s 30.102

1555.6580 MINNESOTA UTILITY POTATOES.

Subpart 1. **General.** "Minnesota utility" consists of potatoes of one variety or similar varietal characteristics which are not frozen; and which are free from freezing

injury, blackheart, late blight, southern bacterial wilt, ring rot, soft rot, or wet breakdown, and free from serious damage caused by sunburn, greening, shriveling, dry rot, insects, larvae, worms, other disease, or other means. (See part 1555.6630.)

Subp. 2. **Size.** Unless otherwise specified, the diameter of each potato shall be not less than 1-1/2 inches. (See parts 1555.6600 to 1555.6620.)

Subp. 3. Tolerances for defects. In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 11 percent, by weight, of the potatoes in any lot may fail to meet the requirements of this grade; provided, that included in this amount not more than the following percentages shall be allowed for the defects listed: six percent for potatoes having external defects listed in this part; and five percent for potatoes which are seriously damaged by internal defects listed in this part; and provided further, that included in the above tolerances for external and internal defects not more than three percent shall be allowed for potatoes which are frozen or affected by southern bacterial wilt, ring rot, late blight, soft rot, or wet breakdown, including therein not more than one percent for potatoes which are frozen or affected by soft rot or wet breakdown. (See part 1555.6640.)

Statutory Authority: MS s 30.102

1555.6590 UNCLASSIFIED POTATOES.

"Unclassified" consists of potatoes which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.

Statutory Authority: MS s 30.102

1555.6600 SIZE.

The count, minimum size, or range of size may be specified in connection with the grade in terms of number of potatoes per container, or diameter or weight of the individual potato, or in accordance with one of the following size classifications:

A. Size A: for round or intermediate shaped varieties such as Irish Cobbler, Katahdin, Sebago, Pontiac, Kennebec, Green Mountain, or other similar varieties, the diameter of each potato shall be not less than 1-7/8 inches, and not less than 60 percent of the potatoes in the lot shall be 2-1/4 inches or larger; for long varieties such as Russet Burbank, Early Gem, White Rose, or other similar varieties, the diameter of each potato shall be not less than 1-7/8 inches, and not less than 40 percent of the potatoes in the lot shall be six ounces or more in weight;

B. Size B: for all varieties the potatoes shall be from 1-1/2 to 2-1/4 inches in diameter, inclusive; and

C. Size C: for all varieties the potatoes shall be from one inch to 1-1/2 inches in diameter, inclusive.

Statutory Authority: MS s 30.102

1555.6610 DIAMETER.

"Diameter" means the greatest dimension at right angles to the longitudinal axis.

Statutory Authority: MS s 30.102

1555.6620 TOLERANCES FOR SIZE.

In order to allow for variations incident to proper sizing, the following tolerances shall be allowed. Not more than three percent of the potatoes in any lot may fail to meet the specified minimum size except that a tolerance of five percent shall be allowed for potatoes packed to meet a minimum size of 2-1/4 inches or more in diameter or six ounces or more in weight. In addition, not more than ten percent may fail to meet any specified maximum size. When a percentage of the potatoes is specified to be of a certain size and larger, individual packages containing 15 pounds or less shall have not less than one-half of the percentage specified, and individual

packages containing more than 15 pounds shall have not less than three-fourths of the percentage specified. When a number of potatoes per package is specified, the number of potatoes in individual packages shall not vary more than five percent from the number specified.

Statutory Authority: MS s 30.102

1555.6630 SKINNING CLASSIFICATION.

The following optional skinning classifications are provided as a basis for classifying lots of potatoes as to the degree of skinning. "Practically no skinning" means that not more than five percent of the potatoes in the lot have more than one-tenth of the skin missing or "feathered." "Slightly skinned" means that not more than ten percent of the potatoes in the lot have more than one-fourth of the skin missing or "feathered." "Moderately skinned" means that not more than ten percent of the potatoes in the lot have more than one-half of the skin missing or "feathered." "Badly skinned" means that more than ten percent of the potatoes in the lot have more than one-half of the skin missing or "feathered."

Statutory Authority: MS s 30.102

1555.6640 APPLICATION OF TOLERANCES.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations; provided, that the averages for the entire lot are within the tolerances specified for the grade. For packages which contain more than 15 pounds, when a tolerance of ten percent or more is provided, individual packages in the lot shall have not more than 1-1/2 times the tolerance specified, and when a tolerance of less than ten percent is provided, individual packages in the lot shall have not more than double the tolerance specified, except that for potatoes which are frozen or affected by soft rot or wet breakdown, en route or at destination, not more than one-tenth of the packages may contain not more than four times the tolerance specified, and except that at least one defective and one offsize potato may be permitted in any package. For packages which contain 15 pounds or less, individual packages in the lot are not restricted as to the percentage of defects and offsize; provided, that not more than one-tenth of the packages may have more than one potato which is frozen or affected by soft rot or wet breakdown.

Statutory Authority: MS s 30.102

1555.6650 BULK DISPLAY.

All potatoes offered for sale at retail in bulk shall be displayed in bins or other open containers and shall not be represented as conforming to any grade, but may be identified as unclassified.

Statutory Authority: MS s 30.102

1555.6660 PACKAGED POTATOES LABELING.

Except as noted in part 1555.6710, all potatoes offered for sale in packaged form (closed containers), in addition to one of the grades specified in parts 1555.6550 to 1555.6580:

A. shall be labeled with the name "potatoes," the net weight, and the name and address, including the zip code, of the packer or distributor, and said label shall not be false or misleading in any particular. If the distributor's name is used, it shall be qualified with the word "distributor" or its equivalent. The variety of potatoes may be named on the label, and, if the variety is named, the potatoes in the labeled container shall conform to the variety named. Tag labels, as described in part 1555.6670, may be used:

B. shall not be packaged in a transparent container which is artificially colored as described in part 1555.6540; and

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C. shall not be labeled unclassified. **Statutory Authority:** *MS s* 30.102

1555.6670 TAG LABELS.

Tag labels may be used on unprinted new closable containers, on printed new closable containers to supply required information omitted in the printing, and on used containers which, if printed with incorrect label information, shall be turned inside out before being filled, or the incorrect information shall be removed or obliterated. Tag labels shall be printed in a color contrasting with the background. The grade designation shall be shown in letters not less than one-fourth inch high, and all other required information shall be easily readable. All label information may appear on one side of the tag but if it appears in part on both sides of the tag, the name "potatoes," the grade, and the net weight shall appear on the same side of the tag.

Statutory Authority: MS s 30.102

1555.6680 GRADE EXCEPTIONS.

Packaged potatoes, the label of which declares a United States grade in lieu of a Minnesota consumer grade and which otherwise are labeled in accordance with parts 1555.6540 to 1555.6710, shall be permitted to be sold at retail in Minnesota.

Statutory Authority: MS s 30.102

1555.6690 PACKAGED POTATOES.

Packaged potatoes shall conform to the grade declared on the label.

Statutory Authority: MS s 30.102

1555.6700 USED CONTAINERS.

Used containers which are reasonably clean may be reused to market potatoes provided that they are properly labeled as provided for in parts 1555.6650 to 1555.6710.

Statutory Authority: MS s 30.102

1555.6710 EXCLUSION FROM GRADE LABELING REQUIREMENTS.

The grade labeling requirements of part 1555.6660, item A shall not apply to a producer who sells in closed containers potatoes of the producer's own production directly to the final consumer for said consumer's own personal use.

Statutory Authority: MS s 30.102

History: 17 SR 1279

SEED POTATO CERTIFICATION

1555.6720 AUTHORITY.

Parts 1555.6720 to 1555.6950 provide standards for the inspection, certification, production, and marketing of certified seed potatoes in the state of Minnesota. The authority to adopt these rules is contained in Minnesota Statutes, section 21.118.

Statutory Authority: MS s 21.113

1555.6730 **DEFINITIONS.**

- Subpart 1. General. As used in parts 1555.6720 to 1555.6950, the following definitions apply unless the context clearly indicates otherwise.
- Subp. 2. Certified. "Certified" has the meaning given it in Minnesota Statutes, section 21.111, subdivision 3.
- Subp. 3. **Certified seed potatoes.** "Certified seed potatoes" means potatoes which have been produced, graded, sacked or placed in bulk, and inspected and certified in accordance with parts 1555.6720 to 1555.6950.

- Subp. 3a. Class. "Class" means the seed quality level as it relates to compliance with the specified tolerances for diseases and varietal purity.
- Subp. 3b. Clone. "Clone" means a unit of seed potatoes, being the progeny of one plant, which has been tested to become eligible to produce Primary Foundation 1 seed potatoes.
- Subp. 4. **Commissioner.** "Commissioner" means the commissioner of agriculture or the commissioner's authorized representative.
 - Subp. 5. Crop. "Crop" means all lots produced on a farm in one year.
 - Subp. 6. Department, "Department" means the Department of Agriculture.
- Subp. 6a. **Explant.** "Explant" means an in vitro potato plant or plantlet produced by rooting an excised tip of a tuber sprout or an axillary bud from a growing plant which serves as a parent for a whole clone or accession of micropropagated plants or plantlets.
- Subp. 7. Farm. "Farm" means a seed potato enterprise. It includes all land, equipment, storage facilities, and laborers used to produce certified seed potatoes.
- Subp. 8. **Field.** "Field" means a plot of land on a farm on which potatoes are grown for certification. The potatoes shall be of one variety from one certified seed potato growing operation and shall be grown in physical separation from other fields.
- Subp. 9. **Inspected.** "Inspected" has the meaning given it in Minnesota Statutes, section 21.111, subdivision 2.
- Subp. 10. Lot. "Lot" means a group of seed potatoes entered for certification that have passed the field inspection requirements. For the purposes of parts 1555.6720 to 1555.6950, a lot of potatoes also means that the group is of one variety, from one or more fields, grown on the same farm, and stored in physical separation from other lots.
- Subp. 10a. Material in maintenance. "Material in maintenance" means propagative material, plantlets, or tubers that are maintained, not multiplied under controlled laboratory conditions.
- Subp. 10b. **Physical separation.** "Physical separation" means separated by at least the width of one row, or markings such as flags that are at every corner of the lot or at least 100 yards apart, whichever is less. The markings must be visible to the inspector from anywhere on the separation.
- Subp. 11. **Rejected.** "Rejected" means that a field or lot fails to meet the standards provided for in parts 1555.6720 to 1555.6950.
- Subp. 12. **Seed potato certification inspector.** "Seed potato certification inspector" means an employee of the department authorized by the commissioner to inspect seed potato plants and tubers entered for certification.
- Subp. 13. **Seed potatoes.** "Seed potatoes" has the meaning given it in Minnesota Statutes, section 21.111, subdivision 5.
- Subp. 14. **Tolerance.** "Tolerance" means a specified allowance for variation from the standards provided for diseases and physical defects, as provided in parts 1555.6720 to 1555.6950.
- Subp. 15. **Tuber unit.** "Tuber unit" means the separate pieces of one tuber that are planted consecutively in two or more hills in a row.

Statutory Authority: MS s 21.113; 21.118

History: 21 SR 482; 24 SR 546

1555.6740 GENERAL GUIDANCE.

- Subpart 1. **Scope.** The provisions of this part govern the production of potatoes for use as certified seed potatoes.
- Subp. 2. Seed potato certification. In order to produce certified seed potatoes, a grower must comply with the following procedures:

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- A. Potatoes entered for certification shall be inspected while growing in the field and again after harvest at the time of shipment. Certification shall be based upon visual inspection by the commissioner of sample plants and tubers from each field and lot, or for varieties that do not express visible symptoms of a specific pathogen, seed potatoes must be subjected to laboratory tests to determine the level of the pathogen in a seed lot. This testing may occur during the growing season, storage season, or winter testing. Certificates shall be issued to show the varietal purity, freedom from disease, and physical defects of the potatoes at the time of inspection.
- B. Participation in the certified seed potato program shall be voluntary. The applicant may withdraw at any time. Farming and sanitation practices are the responsibility of the applicant. Certification and inspection under parts 1555.6720 to 1555.6950 shall be conducted by the commissioner. Failure of the applicant to comply with the requirements of these parts shall be cause for rejection of any field or lot. Potatoes from rejected fields or lots cannot be sold as certified seed potatoes.
- Subp. 3. Winter testing. In order to detect certain virus diseases, samples from all classes as defined in parts 1555.6840 and 1555.6845 shall be winter tested. In the event of serious malfunctions of the winter test, classification of lots in the certified classes must be based on the previous summer field readings.
- Subp. 4. Certified seed potato classes. Seed potato certification classes are differentiated by their compliance level with disease tolerances and varietal purity. The origin of the seed also determines the class. The classes, according to their origin, in the generation system in descending order are: Prenuclear (PN), Nuclear (N), Generation 1 (G1), Generation 2 (G2), Generation 3 (G3), Generation 4 (G4), and Generation 5 (G5). Equivalent to this in the clonal system in descending order are: Primary Foundation 1 (PF1), Primary Foundation 2 (PF2), Foundation 1 (F1), Foundation 2 (F2), and Certified (C).
- Subp. 5. Certified seed potato grades. Grades of certified seed potatoes are established according to the physical defects of the tubers. There are three grades used for shipping Minnesota certified seed potatoes.
- A. The blue tag certified seed potato grade, the first grade, has tolerances for physical defects of the tubers stricter than the other grades. This grade may be used by growers of Primary Foundation certified, Foundation certified, Generation certified, and Certified seed potatoes. The blue tag grade may be used for intrastate and interstate shipments of certified seed potatoes.
- B. The yellow tag certified seed potato grade is the second grade. This grade allows more physical defects of the tubers than the blue tag certified seed potato grade. It may be used by growers of Primary Foundation certified, Foundation certified, Generation certified, and Certified seed potatoes. The yellow tag grade may also be used for intrastate and interstate shipments of certified seed potatoes.
- C. The white tag certified seed potato grade is the third grade. The tolerances for physical defects of the tubers are determined by agreement between purchaser and seller of the certified seed potatoes. It may only be used for intrastate shipments of certified seed potatoes.
- Subp. 6. Zero tolerance for bacterial ring rot and potato spindle tuber viroid. Certification rules make provisions to allow the presence of certain diseases at levels sufficiently low as to preclude significant effects on certified seed potato value. For bacterial ring rot and potato spindle tuber viroid, there is a zero tolerance, and the discovery of a single plant in the field or a tuber in storage infected with one of these diseases shall cause the rejection of the field or lot. The absence of a finding shall not be construed to mean that the field or lot inspected is free from the disease.
- Subp. 7. Warranty. A certification does not represent a warranty of any kind, express or implied, including merchantability, as to the quality of the crop produced from the certified seed potatoes. A certification represents only that the seed potatoes

were produced, graded, sacked or placed in bulk, and inspected in accordance with parts 1555.6720 to 1555.6950.

Statutory Authority: *MS s 21.113; 21.118*

History: 8 SR 1659; 21 SR 482; 22 SR 1547; 25 SR 1142

1555.6750 [Repealed by amendment, 8 SR 1659]

1555.6760 APPLICATION FOR INSPECTION.

Subpart 1. Eligibility; procedure. All potatoes planted on a farm must be entered for certification. Application for inspection must be made before June 16 each year on forms furnished by the commissioner. Applications postmarked after June 15 but before July I must be charged a 50 cents per acre late registration fee. No applications may be accepted that are postmarked later than June 30. The commissioner may extend the deadline due to special circumstances, such as natural disasters, which make it impractical or impossible for planting to be completed by the deadline and which affect an area or large number of growers.

- Subp. 2. Shipping point inspection certificates, bulk seed certificates, or certificates of origin. An application for the inspection of a field planted with purchased certified seed potatoes must include copies of either the shipping point inspection certificates, bulk seed certificates, or certificates of origin for the total amount of purchased certified seed potatoes planted. Use of certificates of origin requires approval of both the seller and the purchaser and is restricted to intrastate shipments between certified seed potato producers. The certificate of origin must contain information considered necessary by the commissioner and must at a minimum identify seed potatoes as to the producer, variety, classification, and lot. The limitation of warranty in part 1555.6740, subpart 7, must be further limited to exclude any representation as to condition of the potatoes at the time of shipment.
- Subp. 3. **Separate application.** A separate application must be completed for each field planted.
- Subp. 4. **Sufficient acreage.** No application for inspection may be accepted from a grower in a community or county in which there is not sufficient acreage for the total inspection fee charges to cover the cost of wages and expenses of the inspectors providing the inspection service. Determination of sufficient acreage must be made by the commissioner.

Statutory Authority: MS s 21.113; 21.118

History: 11 SR 2164

1555.6770 [Repealed, 11 SR 2164]

1555.6780 [Repealed, 11 SR 2164]

1555.6790 [Repealed, 11 SR 2164]

1555.6800 SEED POTATOES ELIGIBLE FOR MINNESOTA CERTIFICATION PLANTING.

Subpart 1. **Authorization.** A field may not be inspected for certification unless both the seed potato variety and the particular lot planted have the authorization of the commissioner. In considering seed potato varieties for authorization for certification planting, the commissioner shall consider scientific evidence and expert opinion. To be eligible for certification planting, seed potatoes must meet the requirements of subpart 2 or 3.

Subp. 2. Minnesota grown seed potatoes. The following classes of seed potatoes grown in Minnesota are eligible for planting: Prenuclear, Nuclear, Generation 1, Generation 2, Generation 3, Generation 4, Primary Foundation 1, Primary Foundation 2, Foundation 1, Foundation 2, and experimental status seed potatoes. The commissioner shall authorize the planting of Certified class or Generation 5 class seed

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potatoes if there is no source of higher classes than Certified class or Generation 5 class seed potatoes available to the grower, the lot has been winter tested, and the seed does not pose a serious disease threat.

- Subp. 3. Non-Minnesota grown seed potatoes. Seed potatoes grown outside of the state approved for certification planting by the certifying agency in another state or a Canadian province may be planted if requirements for certification meet Minnesota requirements for certified seed potatoes of classes higher than Certified class or Generation 5 class, as indicated on an import affidavit.
- Subp. 4. Experimental status. Seedlings or numbered selections may be accepted for entrance into the certification system in an experimental status. The applicant shall submit a written statement with the certification application from the breeder, originator, or originator's designee that the applicant has full and unrestricted rights to introduce the seedling or numbered selection into the commercial market, and that the seedling or numbered selection must be named within five years from acceptance of the application. If the seedling or numbered selection is not named within five years from acceptance of the application, a two-year waiting period must pass before the seedling or numbered selection may be reentered into the certification program. Seedlings or numbered selections in experimental status must be designated as a class and conform to the requirements of that class. The word "EXPERIMENTAL" must be added on the tag. Lots from a breeder's seed that have not gone through the testing and, when necessary, virus-freeing, are considered either Foundation class 1 or 2, "EXPERIMENTAL."
- Subp. 5. **Protected varieties.** Before a seed potato variety protected under the Plant Variety Protection Act Amendments of 1994 may be entered into the certification system, the applicant must submit a written statement with the certification application from the breeder, originator, or originator's designee that the applicant has full and unrestricted rights to introduce the protected variety into the commercial market.

Statutory Authority: *MS s 21.113; 21.118*

History: 8 SR 1659; 21 SR 482; 24 SR 546; 25 SR 1142

1555.6810 [Repealed, 21 SR 482]

1555.6820 [Repealed, 21 SR 482]

1555.6830 [Repealed, 21 SR 482]

1555.6840 REQUIREMENTS FOR CERTIFIED SEED POTATO PRODUCTION.

Subpart 1. **Requirements.** The standards in this part and part 1555.6845 must be met before potatoes may be classified as certified seed potatoes.

- Subp. 2. Field inspection and laboratory testing. Certification must be based upon information regarding the following: stand, general vigor, varietal purity, disease tolerances, and factors affecting field inspection. At least two field inspections must be made of each field during the growing season. A final inspection must be made for bacterial ring rot, when symptom expression is optimal. If a final inspection cannot be carried out, because of management practices of the grower, or for reasons out of the grower's control, a laboratory test is necessary to maintain eligibility for certification. Additional inspections and laboratory tests may be made if necessary to meet phytosanitary requirements in established markets such as other states and Canadian provinces.
- A. Stand. A field shall be rejected if there are a large number of plants missing due to disease.
- B. General vigor. A field shall be rejected if it contains a large number of weak plants.
- C. Ring rot. If bacterial ring rot is found in any field or lot, the remaining crop is not eligible for certification planting.

- D. Varietal purity. A field must be rejected if it contains more than the tolerances acceptable for a specific class as listed in Tables 1 and 2 in part 1555.6845, subparts 11 and 12.
- E. Disease tolerances (percentage of infected plants). A field must be rejected if it contains percentages of diseased plants in excess of those acceptable for a specific class as listed in Tables 1 and 2 in part 1555.6845, subparts 11 and 12.
- F. Factors affecting field inspection. A field shall be rejected if any of the following are present to such an extent that satisfactory inspection for diseases cannot be made: early or late blight; blackleg or wilt of any kind; weeds; insect injury; chemical damage.

A field shall be rejected if any other conditions are present to such an extent that satisfactory inspection for diseases cannot be made. A field is ineligible for certification if there are cull piles in such close vicinity to the field that contamination of the field can be expected.

- Subp. 3. **Roguing.** If any of the diseases listed in part 1555.6845 are present in a field in amounts less than the maximum disease tolerance level, the field must be rogued and the infected plants removed before the final inspection. If roguing is done after tubers form, the tubers from the rogued plants shall also be removed and destroyed.
- Subp. 4. **Storage.** Lots shall not be stored in any warehouse where other potatoes are stored, nor shall they be stored under conditions of possible disease contamination. If more than one grower stores lots in the same warehouse, each grower's lots shall be properly identified by labeling the bin with the grower's name and address, variety, and amount in the bin. If the lots are to be stored in a public warehouse or storage unit not directly under the control of the grower, a complete record giving location of the storage unit, number of the bin, variety, and the quantity stored shall be sent to the commissioner when the lots are put into storage. If it is available, a copy of the warehouse receipt shall also be sent to the commissioner.

Equipment used for grading and handling lots shall not be used for any other potatoes. If any equipment is used on other potatoes, the lots shall be rejected.

Any firm handling lots on contract shall label all bins containing lots with the name of the grower whose lots are being stored. Responsibility for proper labeling and subsequent handling rests with the firm. No certification tags or bulk certificates shall be issued until this is done.

Each grower shall submit a completed storage and yield report on each lot on forms furnished by the commissioner. Certification tags shall not be issued to growers who have not submitted the report.

Subp. 5. Tags and bulk certificates. Official blue, yellow, or white tags, bearing the grower's name and address, the potato variety, and the crop year shall be issued when the potatoes meet the certification requirements described in parts 1555.6740 to 1555.6845. Tags shall be fastened onto sacks so as to constitute a seal at the time the lots are prepared for shipment. Bulk certificates must also show the date of issuance, the class, the grade, and the approximate weight of the load.

Tags shall be issued only to growers, except when lots are stored in a public warehouse or in a storage unit not under direct control of the grower. They shall be issued to the owner or manager of the storage unit upon receipt of written authorization from the grower.

Responsibility for ordering tags shall rest entirely with each grower.

Subp. 6. **Grading.** All lots shall be inspected at the loading point whenever possible. If inspection at the loading point is impossible, request for grading inspection in transit shall be made. Every bagged lot or shipment offered for sale and bearing official certification tags shall be in new even-weight sacks. Bulk shipments shall be identified with a bulk certificate. Both bagged and bulk lots or shipments must meet

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grade standards specified in part 1555.6950. Lots or shipments that fail to meet grade standards when inspected shall be reconditioned, or:

- A. if the lot or shipment is in sacks, the tags shall be removed under the supervision of a state or federal/state inspector before the lot or shipment is allowed to proceed to its destination; and
 - B. if the shipment is in bulk, no bulk certificate shall be issued.

All costs of reconditioning to meet grade shall be borne by the shipper.

Statutory Authority: MS s 21.113; 21.118

History: 11 SR 335; 17 SR 438; 21 SR 482; 24 SR 546

1555.6845 REQUIREMENTS FOR PRODUCTION OF DIFFERENT CLASSES OF CERTIFIED SEED POTATOES.

- Subpart 1. Prenuclear class certified seed potatoes (PN).
- A. A lot grown as and intended to be Prenuclear must be grown from plants tested and shown to be free from the following pathogens:
 - (1) Clavibacter michiganensis ssp. sepedonicus (ring rot);
 - (2) Erwinia carotovora (blackleg);
 - (3) potato virus X;
 - (4) potato virus S;
 - (5) potato virus A;
 - (6) potato virus M;
 - (7) potato virus Y;
 - (8) potato spindle tuber viroid; and
 - (9) potato leaf roll virus.

Each initial explant or tuber must also have been tested for any other organisms for which testing is required by the phytosanitary requirements in another state or Canadian province. Material in maintenance must have been tested during the year of the production of prenuclear class.

- B. Prenuclear class seed potatoes must be produced in a greenhouse or screenhouse under sanitary conditions, free from insects and weeds that can harbor or transmit potato diseases or other conditions of possible disease contamination. All facilities must be sufficiently insulated from insects by screens and double doors. The facilities and the equipment are subject to inspection to verify freedom from possible disease contamination.
- C. One percent of each lot or ten plants or tubers from each lot, whichever is greater, must be tested during the growing season to verify that the crop is free from potato virus X, potato virus Y, potato leaf roll virus, C. michiganensis, and E. carotovora.
- D. Prenuclear tubers may originate from greenhouse tubers for one year only if the greenhouse tubers have remained at the same growing operation and have remained isolated from field-grown tubers.
- E. A lot must be rejected if it contains any diseased plants at any inspection, or varietal mixture at final inspection.
- F. The allowable tolerances for disease and varietal mixture for seed potatoes classified as prenuclear are in Table 1 in subpart 11 under column PN.
- Subp. 2. Nuclear class certified seed potatoes (N). Nuclear class seed potatoes must meet the following requirements:
 - A. The seed source must be either Prenuclear tubers or plantlets.
 - B. Tubers or plantlets must be planted in identifiable family units.
- C. Each field must be tested during the growing season for potato virus X. For a lot to be tagged "virus tested (VT)," no more than one percent of the plants tested may be infected with potato virus X.

- D. Each lot must be stored in an individual identifiable unit.
- E. The allowable tolerances for disease and varietal mixture for seed potatoes classified as Nuclear are in Table 1 in subpart 11 under column N.
- Subp. 3. Generation 1 class certified seed potatoes (G1). Generation 1 class seed potatoes must originate from Nuclear class seed potatoes. Each field may be tested during the growing season for potato virus X at grower's request. For a lot to be tagged "virus tested (VT)," no more than three percent of the plants tested may be infected with potato virus X. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G1.
- Subp. 4. Generation 2 class certified seed potatoes (G2). Generation 2 class seed potatoes must originate from Generation 1 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G2.
- Subp. 5. Generation 3 class certified seed potatoes (G3). Generation 3 class seed potatoes must originate from Generation 2 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G3.
- Subp. 6. Generation 4 class certified seed potatoes (G4). Generation 4 class seed potatoes must originate from Generation 3 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G4.
- Subp. 7. Generation 5 class certified seed potatoes (G5). Generation 5 class seed potatoes must originate from Generation 4 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 1 in subpart 11 under column G5.

Subp. 8. Primary Foundation classes (PF).

- A. A lot grown as and intended to be Primary Foundation certified seed potatoes must originate from clonal selection, with all clones laboratory tested and be proven free from the following pathogens:
 - (1) Clavibacter michiganensis ssp. sepedonicus (ring rot);
 - (2) potato virus A;
 - (3) potato virus M;
 - (4) potato virus Y;
 - (5) potato spindle tuber viroid; and
 - (6) potato leaf roll virus.
- B. A lot must be kept under direct control of the grower and must not be stored in any warehouse in which other potatoes are stored.
 - C. The two classes of Primary Foundation seed potatoes are PF1 and PF2.
- (1) PF1 class certified seed potatoes must originate from clonal multiplication where all clones have been laboratory-tested. PF1 class seed potatoes are tuber united. Crops must be free of bacterial ring rot for a minimum of two years to be eligible to be PF1 class seed potatoes. The allowable tolerances for disease and variety mixture are in Table 2 in subpart 12 under column PF1.
- (2) PF2 class certified seed potatoes must originate from PF1 class seed potatoes and originate from the same farm operation. They must be grown from potatoes produced on a tuber unit seed plot. Crops must be free of bacterial ring rot for a minimum of two years to be eligible to be PF2 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column PF2.
- Subp. 9. Foundation classes (F). The two classes of Foundation class seed potatoes are F1 and F2.
- A. F1 class certified seed potatoes must originate from Primary Foundation class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column F1.

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B. F2 class certified seed potatoes must originate from F1 class seed potatoes. The allowable tolerances for disease and varietal mixture are in Table 2 in subpart 12 under column F2.

Subp. 10. Certified class certified seed potatoes. Certified class seed potatoes must originate from Foundation or Generation classes of seed potatoes. The allowable tolerances for disease and varietal mixture are in subpart 11, Table 2, under column C.

Subp. 11. Table 1.

TABLE 1
TOLERANCES FOR DISEASES AND VARIETAL
MIXTURE FOR GENERATION CLASSES

	CLASSES							
	PN	N	G1	G2	G3	G4	G5	
Severe Mosaic	0	0.1	0.2	0.2	0.3	0.3	0.4	
Leaf roll	0	0.1	0.2	0.2	0.3	0.3	0.4	
Total	0	0.1	0.2	0.2	0.3	0.3	0.4	
Total other viruses								
(S and X excluded)	0	0.1	0.2	0.2	0.3	0.3	0.4	
Mycoplasms	0	0.1	0.2	0.2	0.3	0.3	0.4	
Total	0	0.1	0.2	0.2	0.3	0.3	0.4	
Mild Mosaic (S)	0							
Mild Mosaic (X)	0	VT:1	VT:3	VT:3	VT:3	VT:3	VT:3	
Blackleg	0	0	0.2	0.5	1.0	exc.	exc.	
Varietal Mixture	0	0	0	0	0.1	0.1	0.2	
Ring Rot and Spindle Tuber	0	0	0	0	0	0	0	
Winter Test:								
Virus, Ch. Dam.		0.5	0.5	0.5	0.5	0.5		
BRR, PSTV		0	0	0	0	0		
Summer Test:								
PVX, VT*	0	1.0	3.0	3.0	3.0	3.0	3.0	
Virus, BRR, PSTV	0							

Numbers represent percentages

VT means Virus Tested

Mycoplasms: Haywire, Witches Broom, Yellow Dwarf

Severe Mosaic: PVY, PVA, PVM BRR means Bacterial Ring Rot

PSTV means Potato Spindle Tuber Viroid

Ch. Dam. means Expressing symptoms of chemical damage

* For the classes G1 and lower, the summer test for PVX is done on request of the grower only. The lot may be labeled "Virus Tested," if the tolerance of one percent for N and three percent for the lower classes is met.

Subp. 12. Table 2.

TABLE 2
TOLERANCES FOR DISEASES AND VARIETAL MIXTURE FOR CLASSES ORIGINATING FROM CLONAL MULTIPLICATION

		CLASSES						
	CLONE	PF1	PF2	F1	F2	С		
Severe Mosaic	0	0.1	0.2	0.3	0.3	1.00		

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Leaf roll	0	0.1	0.2	0.3	0.3	0.3	
Total	0	0.1	0.2	0.3	0.3	1.0	
Total other viruses							
(S and X excluded)	0	0.1	0.2	0.3	0.3	0.5	
Mycoplasms	0	0.1	0.2	0.3	0.3	0.5	
Total	0	0.1	0.2	0.3	0.3	0.5	
Mild Mosaic (S)							
Mild Mosaic (X)							
Blackleg		0.1	0.2	exc.	exc.	exc.	
Varietal Mixture				0.1	0.2	0.2	
Ring Rot and Spindle Tuber	0	0	0	0	0		
Winter Test:							
Virus, Ch. Dam.		0.5	0.5	0.5	0.5		
BRR, PSTV		0	0	0	0		
Summer Test:							
Virus, BRR, PSTV	0						

Numbers represent percentages

VT means Virus Tested

Mycoplasms: Haywire, Witches Broom, Yellow Dwarf

Severe Mosaic: PVY, PVA, PVM BRR means Bacterial Ring Rot

PSTV means Potato Spindle Tuber Viroid

Ch. Dam. means Expressing symptoms of chemical damage.

Statutory Authority: MS s 21.118

History: 21 SR 482; 24 SR 546; 25 SR 1142

1555.6850 [Repealed, 21 SR 482]

1555.6851 [Repealed, 21 SR 482]

1555.6852 [Repealed, 21 SR 482]

1555.6860 [Repealed, 21 SR 482]

1555.6870 [Repealed, 21 SR 482]

1555.6880 [Repealed, 21 SR 482]

1555.6890 [Repealed, 21 SR 482]

1555.6900 [Repealed, 21 SR 482]

1555.6910 FEES.

Fees shall be set by the commissioner in amounts necessary to carry out the seed potato certification service. Fees shall be reviewed annually and notice of the current fee schedule sent to growers from time to time.

Statutory Authority: MS s 21.113

1555.6920 FIELD INSPECTION FEES.

Field inspection fees shall be paid at time of application for entry into the certification program.

Statutory Authority: MS s 21.113

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1555,6930 WINTER-TESTING FEES.

Winter-testing fees shall be paid before results are sent to the grower.

Statutory Authority: MS s 21.113

1555.6940 FEES FOR OTHER DISEASE TESTING.

Fees for other disease testing shall be paid before results are listed in the Minnesota Seed Potato Certification Directory.

Statutory Authority: MS s 21.113

1555.6950 MINNESOTA CERTIFIED SEED POTATO GRADES AND TOLERANCES.

Subpart 1. Minnesota certified seed potato grades. Before potatoes are eligible for grading as certified seed potatoes, the requirements of parts 1555.6750 to 1555.6845 must be met.

- Subp. 2. **Minnesota blue tag certified seed potato grade.** To be graded as Minnesota blue tag certified seed potatoes, the potatoes must meet the requirements in items A to C.
- A. Condition. The potatoes must be, at the time of final inspection, of one variety, unwashed, fairly well-shaped, free from bacterial ring rot, powdery scab, late blight, freezing, black heart, and soft rot or wet breakdown, and free from damage caused by soil or other foreign matter, second growth, air cracks, cuts, shriveling, sprouts, pitted scab, surface scab, russet scab, dry rot, other diseases, insects or worms, mechanical or other means, flattened or depressed areas with underlying flesh discoloration, and from serious damage caused by hollow heart, wire worm, growth cracks, or internal discoloration other than hollow heart. Sunburn and silver scurf are not factors.
- B. Size. For round or intermediate shaped varieties, the maximum size shall be not more than 12 ounces (340.2 grams) and, unless otherwise specified, the minimum size shall be not less than 1-1/2 inches (38.1 millimeters) in diameter. For long varieties, the maximum size shall be not more than 14 ounces (396.9 grams) and, unless otherwise specified, the minimum size shall be not less than 1-1/2 inches (38.1 millimeters) in diameter. For all varieties, size "B," the minimum diameter shall be not less than 1-1/2 inches (38.1 millimeters) and the maximum size shall be not more than 2-1/4 inches (57.1 millimeters) in diameter.
- C. Lot tolerances. In order to allow for variations incident to proper grading and handling, the following tolerances, by weight, are provided:
 - (1) For defects:
 - (a) ten percent for potatoes seriously damaged by hollow heart;
- (b) five percent for potatoes seriously damaged by internal discoloration (other than hollow heart);
 - (c) ten percent for potatoes damaged by soil or other foreign matter;
 - (d) 20 percent for potatoes damaged by sprouts;
 - (e) ten percent for potatoes seriously damaged by wireworm; and
- (f) six percent for potatoes which fail to meet the remaining requirements of the grade, provided that included in that amount not more than the following percentages are allowed for the following defects:
 - i. soft rot, frozen, or wet breakdown, 0.5 percent;
 - ii. damage by surface or pitted scab, 2.0 percent;
- iii. damage by dry rot, 2.0 percent, of which not more than 1.0 percent late blight tuber rot;
 - iv. bacterial ring rot, 0.0 percent;
 - v. powdery scab, 0.0 percent; and
 - vi. late blight tuber rot, 1.0 percent; and

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- (g) the following do not affect seed quality and must not be scored against the grade:
 - i. brown discoloration following skinning;
 - ii. dried stems;
 - iii. flattened or depressed areas showing no underlying flesh

discoloration;

iv. greening;

v. sunburn;

vi. skin checks; and

vii. silver scurf.

- (2) For offsize:
- (a) five percent for potatoes which fail to meet the required or specified minimum size; and
- (b) ten percent for potatoes which fail to meet the required maximum size.
 - Subp. 3. [Repealed, 22 SR 1547]
- Subp. 3a. Minnesota yellow tag certified seed potato grade. To be graded as Minnesota yellow tag certified seed potatoes, the potatoes must meet the requirements in items A to D.
- A. Condition. At the time of final inspection, the potatoes must be of one variety, unwashed, fairly well-shaped, free from bacterial ring rot, powdery scab, late blight, freezing, black heart, and soft rot or wet breakdown, and free from damage caused by second growth, air cracks, cuts, shriveling, pitted scab, surface scab, dry rot, other diseases, insects or worms, mechanical means or other means, and from serious damage caused by soil or other foreign matter, hollow heart, wireworm, growth cracks, russet scab, or internal discoloration other than hollow heart. Sunburn and silver scurf are not factors.
- B. Size. For all varieties, the maximum size is 14 ounces (396.9 grams) and the minimum size is 1-1/2 inch (38.1 mm) in diameter. For all varieties, the minimum diameter for size "B" shall not be less than 1-1/2 inches (38.1 millimeters) and the maximum diameter shall not be more than 2-1/4 inches (57.1 millimeters). The department may grade potatoes that do not meet the maximum and minimum size specifications as Minnesota yellow tag certified seed potatoes if the buyer agrees to accept potatoes of alternate size specifications from the grower and these specifications are listed on the tag or bulk inspection certificate issued by the department.
- C. Lot tolerances. In order to allow for variations incident to proper grading and handling, the following tolerances, by weight, are provided:
 - (1) for defects:
 - (a) 20 percent for potatoes seriously damaged by hollow heart;
- (b) five percent for potatoes seriously damaged by internal discoloration (other than hollow heart);
- (c) ten percent for potatoes seriously damaged by soil or other foreign matter;
 - (d) ten percent for potatoes seriously damaged by wireworm;
- (e) 20 percent for potatoes that fail to meet the remaining requirements of the grade with not more than six percent serious damage provided that included in that amount not more than the following percentages are allowed for the following defects:
 - i. soft rot, frozen, or wet breakdown, 0.5 percent;
 - ii. damaged by surface or pitted scab, 5.0 percent;
- iii. damaged by dry rot, 2.0 percent, of which not more than 1.0 percent is late blight tuber rot;
 - iv. bacterial ring rot, 0.0 percent;

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v. powdery scab, 0.0 percent; and

vi. late blight tuber rot, 1.0 percent; and

(f) the following do not affect seed quality and must not be scored against the grade:

i. brown discoloration following skinning;

ii. dried stems;

iii. flattened or depressed areas with or without underlying flesh

discoloration:

iv. greening;

v. sunburn

vi. skin checks:

vii. silver scurf: and

viii. sprouts; and

- (2) for offsize:
- (a) five percent for potatoes that fail to meet the required or specified minimum size; and
- (b) ten percent for potatoes that fail to meet the required maximum size.
- D. Shape. The potatoes must be fairly well shaped, with an exception for long varieties when specified as "except for shape." In that case the tubers may be misshapen.
- Subp. 4. Minnesota white tag certified seed potato grade. Minnesota white tag certified seed potato grade consists of certified seed potatoes that are graded according to agreement between the seller and the purchaser as to size and defects, except that not more than one-half percent of soft rot, frozen, or wet breakdown and two percent dry rot, of which not more than one percent late blight tuber rot is allowed.

The use of the white tag certified seed potato grade must be restricted to intrastate shipments.

- Subp. 5. Application of tolerance. The contents of individual containers, other than bulk conveyances, in the lot are subject to the following limitations provided that the averages for the entire lot are within the tolerances specified for the grade. An individual container in any lot may contain not more than double the tolerance specified except for sprouts and except that at least one defective specimen, other than bacterial ring rot or powdery scab, and one offsize specimen may be permitted in any container.
- Subp. 6. Condition after transit. Deterioration developing in transit shall be considered as affecting condition and not grade.
- Subp. 7. **Definitions.** For the purpose of this part, the terms in items A to J have the meanings given them unless the context clearly indicates otherwise.
- A. "Mature" means that the outer skin (epidermis) does not loosen or "feather" readily during the ordinary methods of handling.
 - B. "Well-shaped" means the normal shape for the variety.
- C. "Fairly well-shaped" means that the individual potato is not materially pointed, dumbbell-shaped, or otherwise ill-formed.
- D. "Fairly clean" means that the individual potato is reasonably free from dirt, staining, or other foreign matter.
- E. "Slightly dirty" means that the appearance of the individual potato is not materially affected by dirt, staining, or other foreign matter.
- F. "Diameter" means the greatest dimension at right angles to the longitudinal axis. The long axis shall be used without regard to the position of the stem (stolon).
- G. "Soft rot or wet breakdown" means any soft, mushy, or leaky condition of the tissues.

- H. "Dry rot" means decaying tissue that is dry.
- I. "Damage" means any defect or combination of defects which materially affects the appearance of the individual potato or which cannot be removed without a loss of more than five percent of the total weight of the potato including the peel covering the defective area. Any one of the following defects or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:
- (1) russet scab when it materially detracts from the appearance of the individual potato;
- (2) second growth or growth cracks which have developed to such an extent as to materially affect the appearance of the individual potato;
- (3) air cracks when removal causes a loss of more than five percent of the total weight of the potato;
- (4) shriveling when the potato is more than moderately shriveled, spongy, or flabby;
- (5) sprouting when the individual potato has sprouts over one inch in length;
- (6) surface or pitted scab, individually or in combination, which covers an area of more than five percent of the surface of the potato in the aggregate, or causes a loss of more than five percent of the total weight of the potato including peel covering defective area;
- (7) soil if the individual potato has more than 50 percent of its surface affected by lightly caked soil which is scattered, or more than 15 percent of its surface badly caked with soil.
- J. "Serious damage" means any defect or combination of defects which seriously affects the appearance of the individual potato or which cannot be removed without a loss of more than ten percent of the total weight of the potato including the peel covering the defective area. Any one of the following defects or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:
- (1) russet scab when it seriously detracts from the appearance of the potato;
- (2) dirt when the appearance of the individual potato is seriously affected by caked or smeared dirt or other foreign matter;
- (3) cuts when both ends are clipped or when more than an estimated one-fourth of the potato is cut away from one end or when the remaining portion of the clipped potato weighs less than six ounces;
- (4) other cuts which seriously affect the appearance of the individual potato or which cannot be removed without a loss of more than ten percent of the total weight of the potato including peel covering defective area;
 - (5) shriveling when the potato is excessively shriveled, spongy, or flabby;
- (6) surface or pitted scab, individually or in combination, which covers an area of more than 25 percent of the surface of the potato in the aggregate, or causes a loss of more than ten percent of the total weight of the potato including peel covering defective area;
- (7) wireworm and air cracks when removal causes a loss of more than ten percent of the total weight of the potato.

Statutory Authority: *MS s 21.113; 21.118*

History: 8 SR 1659; 11 SR 1407; 12 SR 1809; 17 SR 1829; 21 SR 482; 22 SR 1547

1555.7410 FOOD DEFINITIONS AND STANDARDS

TOM AND JERRY BATTER, TOM AND JERRY MIX

1555.7410 TOM AND JERRY BATTER, TOM AND JERRY MIX.

"Tom and Jerry batter," "Tom and Jerry mix," is a manufactured food product consisting of water and sugar or other approved sweeteners to which are added spices and fresh, frozen, or dried egg yolks or whole eggs with or without Grade A dairy products, approved stabilizers, flavors, colors, and emulsifiers.

Statutory Authority: MS s 31.10

1555.7420 TOM AND JERRY BASE.

"Tom and Jerry base" is a manufactured food product containing all of the ingredients of Tom and Jerry batter, Tom and Jerry mix, except that water has been omitted or removed.

Statutory Authority: MS s 31.10

1555.7430 LABELING.

The name of the food product is "Tom and Jerry batter," "Tom and Jerry mix," and the name of the base is "Tom and Jerry base." The name of the product "Tom and Jerry batter," "Tom and Jerry mix" shall be qualified by the word "pasteurized" and if it is homogenized, the word "homogenized."

Statutory Authority: MS s 31.10

1555.7440 LABELING WHEN ARTIFICIAL COLORING IS USED.

When any artificial coloring is used in Tom and Jerry batter, Tom and Jerry mix, or Tom and Jerry base, directly or as a component of any ingredient, the label shall bear the words "artificially colored" or "______ an artificial color added," the blank being filled with the common or usual name of the artificial color; or, in lieu thereof, in case the artificial color is a component of another ingredient, "_____ artificially colored."

Statutory Authority: MS s 31.10

1555.7450 LABELING WHEN ARTIFICIAL FLAVOR IS USED.

When artificial flavor is used in Tom and Jerry batter, Tom and Jerry mix, or Tom and Jerry base, either directly or as a component of any ingredient, the label shall bear the words "artificial flavor added" or "artificial ______ flavor added," the blank being filled in with the common name of the flavor simulated by the artificial flavor. If both artificial color and artificial flavorings are used, the label statements may be combined.

Statutory Authority: MS s 31.10

1555.7460 PASTEURIZATION.

Every particle of Tom and Jerry batter, Tom and Jerry mix, shall be heated to a temperature of not less than 155 degrees Fahrenheit and held at that temperature for not less than 30 minutes in properly operated equipment approved by the commissioner, or to a temperature of not less than 175 degrees Fahrenheit and held at that temperature for not less than 25 seconds in properly operated equipment approved by the commissioner. Nothing contained in this part shall be construed as excluding any other process which has been demonstrated to be equally efficient and is approved by the commissioner.

Statutory Authority: MS s 31.10

1555.7470 COOLING.

Immediately after pasteurization such Tom and Jerry batter, Tom and Jerry mix, shall be cooled in properly operated equipment approved by the commissioner to a

temperature of 50 degrees Fahrenheit, or lower, and held at such temperature until delivered to the final consumer.

Statutory Authority: MS s 31.10

1555.7480 RECORDS.

A recording thermometer record chart, properly completed, identified, and dated, of each batch of Tom and Jerry batter, Tom and Jerry mix, pasteurized and cooled shall be available at the plant of pasteurization at all reasonable times for examination by the commissioner or the commissioner's agents and shall be retained for a period of three months.

Statutory Authority: MS s 31.10

History: 17 SR 1279

1555.7490 BACTERIAL COUNTS AND COLIFORM COUNTS.

At no time after pasteurization and cooling shall Tom and Jerry batter, Tom and Jerry mix, have a bacterial count exceeding 20,000 bacteria per gram, standard plate count, nor a coliform count exceeding ten coliforms per gram nor a temperature above 50 degrees Fahrenheit in more than two of the last four consecutive samples taken on separate days.

Statutory Authority: MS s 31.10

1555.7500 SANITATION.

Establishments in which Tom and Jerry batter, Tom and Jerry mix, or Tom and Jerry base are manufactured shall conform to all of the applicable items of sanitation described under parts 1525.0720 to 1525.1350; 1525.1360, 1525.1370, 1525.1390 and 1525.1410; provided, that if the room or rooms where such Tom and Jerry batter, Tom and Jerry mix, or Tom and Jerry base are manufactured, packaged, and stored and equipment and utensils are washed are not wet locations, the construction requirements of parts 1525.0730 to 1525.0740 and 1525.0770 to 1525.0830, and the plumbing and liquid waste disposal requirements of parts 1525.0960 to 1525.0970 shall be satisfied if:

- A. the floors of such room or rooms are impervious or are solid floors covered with tightly sealed, approved washable material and are kept clean and in good repair;
- B. the walls and ceilings of such room or rooms are smooth, washable, light-colored, and are kept clean and in good repair;
- C. said room or rooms are used for no other purpose at the time when such products are being manufactured, pasteurized, cooled, further processed and/or packaged; and
- D. liquid wastes from drip, spillage, and washing of utensils and equipment are disposed of in accordance with the provisions of Minnesota Plumbing Code, as adopted by Minnesota Department of Health, October 16, 1951.

Statutory Authority: MS s 31.10