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**1510.0010** [Repealed, 9 SR 693]

### AGRICULTURAL SEEDS

#### **1510.0011 LABELING VARIETY, VARIETY NOT STATED, AND BRAND; EXAMPLES.**

Subpart 1. **Definition; brand.** As used in this part, "brand" means a word, mark, or picture representing a trademark or a term taken from a trademark which indicates the owner, originator, or labeler of the seed and does not indicate the genetic identity of the seed.

Subp. 2. **Labeling variety.** In accordance with Minnesota Statutes, section 21.82, subdivision 2, paragraph (a), the commissioner designates that all kinds of agricultural and vegetable seed must be labeled to show the variety name unless otherwise specified in subpart 3.

Subp. 3. **Labeling variety not stated.** Unless otherwise specified in this subpart, the words "variety not stated" must be shown on agricultural seed labels if any of the following circumstances exist:

A. the variety name is not known for a nonhybrid seed and it cannot be determined by examining the seed and records of the seed lot;

B. the variety name is known for a nonhybrid biennial or perennial seed, in which case the variety name may be omitted from the seed label but only when written permission to do so is signed by the owner or originator and is part of the record for the seed lot;

C. two or more varieties are combined to form a blend, in which case the variety names and the percentages by weight of the components together may be omitted from the seed label but only when information concerning the varieties used and the proportion of each in the blend is part of the record for the seed lot; or

D. lawn and turf grass seeds are sold in mixtures, in which case the variety name and the words "variety not stated" may be omitted from the seed label if none of the components are listed and sold by brand name.

Subp. 4. **Labeling brands.** When agricultural seed is labeled with a brand, trademark, or term taken from a brand or trademark, the seed label must clearly identify the term with the word "brand" and as being other than part of the variety name.

Subp. 5. **Examples.** The examples in this subpart indicate the required arrangements of terms used to label variety, variety not stated, and brand. The size type used to indicate the kind name on the seed label must also be used for all other terms specified in the examples.

A. When the variety name is stated, the terms designating the kind and variety may appear in any order but must be in close proximity to each other.

B. When both a brand and variety name are stated, the terms must be shown in the following order from left to right or top to bottom: the brand name, the word "brand," the variety name, and the kind name.

C. When a brand name but no variety name is stated, the terms must be shown on the seed label in the following order from left to right or top to bottom: the brand name, the word "brand," the kind name, and the words "variety not stated." If the seed offered for sale is a blend, the word "blend" must be inserted between the kind name and the words "varieties not stated."

**Statutory Authority:** *MS s 21.82 subd 2; 21.85 subd 11*

**History:** *10 SR 622*

#### 1510.0020 DISCLAIMER CLAUSE.

It shall be unlawful for vendors or sellers of agricultural seed to print upon the seed labels or tags, or to use, attach, or print upon literature, or state in any manner, any form of wording designed as a disclaimer or statement that purposes to disclaim responsibility of the vendor or seller for the data on the label required by law.

**Statutory Authority:** *MS s 21.85 subd 11*

#### 1510.0030 LABEL SHOWING PERCENT OF HARD SEED.

The label required on all agricultural seed containers shall show the percent of hard seed, when present, separately from the germination percent. It is permissible to combine these percentages and list them on the label as "total percent germination and hard seed." They shall not be stated as "total live seed," "total germination," or in any other unauthorized manner.

**Statutory Authority:** *MS s 21.85 subd 11*

#### 1510.0040 LABELING OF SEED BINS AND OTHER BULK CONTAINERS.

When agricultural seeds are sold out of the farmers' or seed vendors' bins or other bulk containers which are in retail sales rooms or to which the consumer buyers have access before buying for the purpose of examining the seed and the label thereof, a complete label shall be attached to such bin or other bulk container in a conspicuous place on the exterior of the container, where the buyer may read it conveniently before making a purchase of the seed. Seed labels and label data in the records or files of the seed seller do not meet the requirements of this part.

**Statutory Authority:** *MS s 21.85 subd 11*

#### 1510.0050 TOLERANCES.

The following tolerances shall be recognized between the percentages or rates of occurrence found by analysis, test, or examination in the administration of the law and percentages or rates of occurrence required or stated as required by the law. Unless otherwise provided, tolerances shall be determined by applying the formulas in parts 1510.0060 to 1510.0100 to the percentages or rates of occurrence found in the administration of the law.

**Statutory Authority:** *MS s 21.85 subd 11*

#### 1510.0060 PURITY TOLERANCES.

In determination of the tolerance for the percentage of the distinguishable kind, type, or variety (pure seed), weed seeds, other crop seeds, and inert matter, the sample shall be first considered as made up of two parts:

A. the percentage of the component (pure seed, weed seed, crop seed, or inert matter as the case may be) being considered, and

B. the difference between that percentage and 100.

The number represented by item A is then multiplied by the number represented by item B and the product is divided by 100. The resulting number is then multiplied by

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0.2 (2/10) and the resulting product added to 0.2 or 0.6 as indicated in the following formulas:

$$\text{Pure seed tolerance} = 0.6 + \frac{(0.2 \times a \times b)}{100}$$

$$\text{Weed seeds, other crop seeds and inert matter tolerance} = 0.2 + \frac{(0.2 \times a \times b)}{100}$$

**Statutory Authority:** *MS s 21.85 subd 11*

## 1510.0070 ADDITIONAL TOLERANCE.

An additional tolerance shall be allowed for the following kinds of seeds and mixtures containing any of these kinds of seeds singly or combined in excess of 50 percent. The tolerance is to be obtained by adding to the regular tolerance mentioned above the product obtained by multiplying the regular tolerance by the lesser of part 1510.0060, items A and B divided by 100.

Agrostis spp.  
Andropogon spp.  
Bermuda grass  
Bouteloua spp.  
Brome grass  
Buffalo grass  
Carpet grass  
Dallis grass  
Festuca spp.  
Guinea grass  
Indian grass, yellow  
Meadow foxtail  
Molasses grass  
Oatgrass, tall  
Orchard grass  
Panic grass, blue  
Poa spp.  
Rhodes grass  
Ricegrass, Indian  
Sweet vernal grass  
Switch grass  
Vasey grass  
Velvet grass  
Wheatgrass, crested  
Wheatgrass, western  
Wild-rye, Canada

**Statutory Authority:** *MS s 21.85 subd 11*

## 1510.0080 NOXIOUS WEED SEED TOLERANCES.

The following tolerances for rates of occurrence of noxious weed seeds (prohibited and restricted) shall be recognized and shall be applied to the number of noxious weed seeds found by analysis in the quantity of seed specified by the state seed laboratory. Representations showing the rate of occurrence indicated in columns 2 and 4 shall be considered within the tolerance if no more than the accompanying number in columns 1 and 3 are found by analysis in the administration of the law. For rates of occurrence higher than those shown in the table and in case of additional or more extensive

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analysis, a tolerance based on a degree of certainty of five percent ( $P = 0.05$ ) will be recognized.

Number Found By Analysis	The Following Are Within The Tolerance
2	0
4	1
6	2
8	3
9	4
11	5
12	6
13	7
14	8
16	9
17	10
18	11
20	12
21	13
22	14
23	15
24	16
25	17
27	18
28	19
29	20
30	21

**Statutory Authority:** *MS s 21.85 subd 11*

## 1510.0090 GERMINATION.

The following tolerances are applicable to the percentage of germination and also to the sum of the germination plus the hard seed when 400 or more seeds are tested.

Found by test	Tolerance
96 or over	5
90 or over but less than 96	6
80 or over but less than 90	7
70 or over but less than 80	8
60 or over but less than 70	9
Less than 60	10

When only 200 seeds of a component in a mixture are tested, two percent shall be added to the above germination tolerances.

**Statutory Authority:** *MS s 21.85 subd 11*

## 1510.0100 PURE LIVE SEED.

The tolerance for pure live seed shall be determined by applying the respective tolerances to the germination plus the hard seed and the pure seed.

**Statutory Authority:** *MS s 21.85 subd 11*

## 1510.0110 [Repealed, 27 SR 1820]

**1510.0111 INFORMATION REQUIRED ON HYBRID SEED CORN LABELS.**

Seed labels for hybrid corn varieties or blends of varieties for either grain or forage purposes must include the day classification listed under the heading "Relative Maturity." The labeled day classification must be within three days of the actual maturity rating determined in comparative trials by the Minnesota agricultural experiment station. For hybrid seed corn blends, the relative maturity and the germination percentage must be derived by averaging the relative maturities and germination percentages according to the proportion of each component in the blend.

**Statutory Authority:** *MS s 21.85*

**History:** *9 SR 693; 22 SR 973*

**1510.0120** [Repealed, 9 SR 693]

**1510.0130** [Repealed, 27 SR 1820]

**1510.0140** [Repealed, 27 SR 1820]

**1510.0150** [Repealed, 27 SR 1820]

**1510.0160** [Repealed, 9 SR 693]

**1510.0161 KINDS OF LAWN AND TURF GRASS SEEDS EXEMPT FROM TEN PERCENT INERT MATTER LIMITATION.**

In accordance with Minnesota Statutes, section 21.82, subdivision 5, paragraph (a), Kentucky bluegrass is a kind of lawn and turf grass seed for which the ten percent inert matter limitation does not apply.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** *9 SR 693*

**1510.0170** [Repealed, 9 SR 693]

**1510.0171 STANDARDS, REQUIREMENTS, AND CONDITIONS FOR LABELING HERMETICALLY SEALED SEEDS.**

In accordance with Minnesota Statutes, section 21.86, subdivision 1, paragraph (a), the following standards, requirements, and conditions must be met before seed is considered to be hermetically sealed:

A. The seed must be packed within nine months after harvest.

B. The container used must not allow water vapor penetration through any wall, including the seals, greater than 0.05 grams of water per 24 hours per 100 square inches of surface at 100 degrees Fahrenheit with a relative humidity on one side of 90 percent and on the other side of zero percent. Water vapor penetration or WVP is measured by the standards of the United States Bureau of Standards as:

gm. H<sub>2</sub>O/24 hr./100 sq. in./100°F/90<sup>HV.0</sup>H

C. The agricultural seed in the container must not exceed the following percentages of moisture, on a wet weight basis:

- (1) beet, field, 7.5 percent;
- (2) beet, sugar, 7.5 percent;
- (3) bluegrass, kentucky, 6.0 percent;
- (4) clover, crimson, 8.0 percent;
- (5) fescue, red, 8.0 percent;
- (6) ryegrass, annual, 8.0 percent;
- (7) ryegrass, perennial, 8.0 percent;
- (8) all others, 6.0 percent; and
- (9) mixture of above, 8.0 percent.

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D. The vegetable seeds in the container must not exceed the following percentages of moisture, on a wet weight basis:

- (1) bean, garden, 7.0 percent;
- (2) bean, lima, 7.0 percent;
- (3) beet, 7.5 percent;
- (4) broccoli, 5.0 percent;
- (5) brussels sprout, 5.0 percent;
- (6) cabbage, 5.0 percent;
- (7) carrot, 7.0 percent;
- (8) cauliflower, 5.0 percent;
- (9) celeriac, 7.0 percent;
- (10) celery, 7.0 percent;
- (11) chard, Swiss, 7.5 percent;
- (12) Chinese cabbage, 5.0 percent;
- (13) chives, 6.5 percent;
- (14) collards, 5.0 percent;
- (15) corn, sweet, 8.0 percent;
- (16) cucumber, 6.0 percent;
- (17) eggplant, 6.0 percent;
- (18) kale, 5.0 percent;
- (19) kohlrabi, 5.0 percent;
- (20) leek, 6.5 percent;
- (21) lettuce, 5.5 percent;
- (22) muskmelon, 6.0 percent;
- (23) mustard, India, 5.0 percent;
- (24) onion, 6.5 percent;
- (25) onion, Welsh, 6.5 percent;
- (26) parsley, 6.5 percent;
- (27) parsnip, 6.0 percent;
- (28) pea, 7.0 percent;
- (29) pepper, 4.5 percent;
- (30) pumpkin, 6.0 percent;
- (31) radish, 5.0 percent;
- (32) rutabaga, 5.0 percent;
- (33) spinach, 8.0 percent;
- (34) squash, 6.0 percent;
- (35) tomato, 5.5 percent;
- (36) turnip, 5.0 percent;
- (37) watermelon, 6.5 percent; and
- (38) all others, 6.0 percent.

E. The container must be conspicuously labeled in not less than 8-point type to indicate:

- (1) that the container is hermetically sealed;
- (2) that the seed has been preconditioned as to moisture content; and
- (3) the calendar month and year in which the germination test was completed.

F. The percentage of germination of seed at the time of packaging must be equal to or above the standards in part 1510.0231, subpart 1.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

#### **1510.0180 STATE SEED LABORATORY REPORT.**

The report of any examination, test, or determination of the state seed laboratory as provided in Minnesota Statutes, section 21.85, subdivisions 2 and 12, applies directly to the sample of seed received and examined by the seed analyst and does not apply directly to any other sample or to the bulk of seed from which this sample was drawn, or to any other lot of seed. Any discrepancy between the analysis and the nature of the lot of seed from which the sample was drawn indicates inadequate sampling, and is the responsibility of the dealer or seller of the seed.

**Statutory Authority:** *MS s 21.85 subd 11*

#### **1510.0190 PROHIBITED ADVERTISING; USES OF STATE TEST RESULTS.**

The words "state tested" or "state" or the name of the state, the state Department of Agriculture, or state seed laboratory shall not be used for advertising or sales purpose or any other purpose in connection with any analysis test, identification, or examination of any seed or other material or any seed label price list, literature, or advertisement or in any other way to give the impression that the state or any of its subdivisions guarantees the data on any seed label or elsewhere or in any way assumes responsibility for the quality or nature of any seed or other material covered by any seed label, price list, advertisement, or literature.

**Statutory Authority:** *MS s 21.85 subd 11*

#### **1510.0200 GRAIN SOLD UNDER VARIETY NAMES.**

Flax, oats, and other grains sold to farmers in seed quantities in the spring or at seeding time under variety names or where variety names are mentioned in the transaction are subject to all agricultural seed requirements as to cleaning, testing, and labeling unless such seed sales are definitely known to be for nonseed purposes.

**Statutory Authority:** *MS s 21.85 subd 11*

#### **1510.0210 LABELING FOR SEED SAMPLES.**

Samples of all sizes of agricultural seed which are sent to or given to persons or are exposed or displayed for sale as an inducement to prospective retail or consumer purchases shall be labeled fully. The responsibility for such labeling shall rest on the person who owns the seed or in whose possession or place of business such samples are placed on display. No person shall permit any agricultural seed for sale or samples thereof to be on display in or on the person's premises which are not fully labeled.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 17 SR 1279

#### **1510.0220 CORRECTION OF ERRONEOUS SEED LABELS.**

Whenever, by examination of the label or by resampling and retesting of the seed or by other dependable information, the label on any seed container of agricultural seed is found to be unlawful or to be in error beyond the limits of tolerance allowed by law, the label shall be corrected at once if the seed is of legal quality. Otherwise the seed shall be removed from sale at once.

**Statutory Authority:** *MS s 21.85 subd 11*

#### **1510.0230 [Repealed, 9 SR 693]**

**1510.0231 GERMINATION STANDARDS; STANDARDIZED GERMINATION TESTING PROCEDURES.**

Subpart 1. **Vegetable seed germination.** In accordance with Minnesota Statutes, section 21.82, subdivision 7, paragraph (a), clause (2), the germination standards for vegetable seeds prepared for use by home gardeners are as follows:

- A. artichoke, 60 percent;
- B. asparagus, 70 percent;
- C. asparagus bean, 75 percent;
- D. bean, garden, 70 percent;
- E. bean, lima, 70 percent;
- F. bean, runner, 75 percent;
- G. beet, 65 percent;
- H. broadbean, 75 percent;
- I. broccoli, 75 percent;
- J. brussels sprout, 70 percent;
- K. burdock, great, 60 percent;
- L. cabbage, 75 percent;
- M. cabbage, tronchuda, 75 percent;
- N. cantaloupe (see muskmelon);
- O. cardoon, 60 percent;
- P. carrot, 55 percent;
- Q. cauliflower, 75 percent;
- R. celeriac, 55 percent;
- S. celery, 55 percent;
- T. chard, Swiss, 65 percent;
- U. chicory, 65 percent;
- V. Chinese cabbage, 75 percent;
- W. chives, 50 percent;
- X. citron, 65 percent;
- Y. collards, 80 percent;
- Z. corn, sweet, 75 percent;
- AA. cornsalad, 70 percent;
- BB. cowpea, 75 percent;
- CC. cress, garden, 75 percent;
- DD. cress, upland, 60 percent;
- EE. cress, water, 40 percent;
- FF. cucumber, 80 percent;
- GG. dandelion, 60 percent;
- HH. eggplant, 60 percent;
- II. endive, 70 percent;
- JJ. kale, 75 percent;
- KK. kale, Chinese, 75 percent;
- LL. kale, Siberian, 75 percent;
- MM. kohlrabi, 75 percent;
- NN. leek, 60 percent;
- OO. lettuce, 80 percent;
- PP. muskmelon, 75 percent;
- QQ. mustard, India, 75 percent;
- RR. mustard, spinach, 75 percent;

- SS. okra, 50 percent;
- TT. onion, 70 percent;
- UU. onion, Welsh, 70 percent;
- VV. pak-choi, 75 percent;
- WW. parsley, 60 percent;
- XX. parsnip, 60 percent;
- YY. pea, 80 percent;
- ZZ. pepper, 55 percent;
- AAA. pumpkin, 75 percent;
- BBB. radish, 75 percent;
- CCC. rhubarb, 60 percent;
- DDD. rutabaga, 75 percent;
- EEE. salsify, 75 percent;
- FFF. sorrel, 65 percent;
- GGG. soybean, 75 percent;
- HHH. spinach, 60 percent;
- III. spinach, New Zealand, 40 percent;
- JJJ. squash, 75 percent;
- KKK. tomato, 75 percent;
- LLL. tomato, husk, 50 percent;
- MMM. turnip, 80 percent;
- NNN. watermelon, 70 percent;

Subp. 2. **Flower seed germination.** In accordance with Minnesota Statutes, section 21.82, subdivision 8, paragraph (a), clause (3), the germination standards for flower seeds prepared for use by home gardeners are set in this subpart.

A. The kinds of flower seeds listed below are those for which standard testing procedures have been prescribed. The percentage listed opposite each kind is the germination standard for that kind. For the kinds marked with an asterisk, the percentage is the total of percentage germination and percentage hard seed.

- (1) Achillea (The Pearl), *Achillea ptarmica*, 50 percent;
- (2) African Daisy, *Dimorphotheca aurantiaca*, 55 percent;
- (3) Ageratum, *Ageratum mexicanum*, 60 percent;
- (4) Agrostemma (rose campion), *Agrostemma coronaria*, 65 percent;
- (5) Alyssum, *Alyssum compactum*, *A. maritimum*, *A. procumbens*, *A. saxatile*, 60 percent;
- (6) Amaranthus, (*Amaranthus* spp.) 65 percent;
- (7) Anagalis (pimpernel), (*Anagalis arvensis*, *Anagalis coerulea*, *Anagalis grandiflora*), 60 percent;
- (8) Anemone, *Anemone coronaria*, *A. pulsatilla*, 55 percent;
- (9) Angel's Trumpet, *Datura arborea*, 60 percent;
- (10) Arabis, *Arabis alpina*, 60 percent;
- (11) Arctotis (African lilac daisy), (*Arctotis grandis*), 45 percent;
- (12) Armeria, (*Armeria formosa*), 55 percent;
- (13) Asparagus, fern, (*Asparagus plumosus*), 50 percent;
- (14) Asparagus, sprenger, (*Asparagus sprengeri*), 55 percent;
- (15) Aster, China, *Callistephus chinensis*, except Pompon, Powderpuff, and Princess types, 55 percent
- (16) Aster, China, *Callistephus chinensis*, Pompon, Powderpuff, and Princess types, 50 percent;
- (17) Aubretia, *Aubretia deltoidea*, 45 percent;

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- (18) Balsam, *Impatiens balsamina*, 70 percent;
- (19) Begonia, (*Begonia fibrous rooted*), 60 percent;
- (20) Begonia, (*Begonia tuberous rooted*), 50 percent;
- (21) Bells of Ireland, (*Molucella laevis*), 60 percent;
- (22) Brachycome (swan river daisy), (*Brachycome iberidifolia*), 60 percent;
- (23) Browallia, (*Browallia elata* and *B. speciosa*), 65 percent;
- (24) Bupthalmum (sunwheel), (*Bupthalmum salicifolium*), 60 percent;
- (25) Calceolaria, (*Calceolaria* spp.), 60 percent;
- (26) Calendula, *Calendula officinalis*, 65 percent;
- (27) California Poppy, *Eschscholtzia californica*, 60 percent;
- (28) Calliopsis, *Coreopsis bicolor*, *C. drummondii*, *C. elegans*, 65 percent;
- (29) Campanula:
  - (a) Canterbury Bells, *Campanula medium*, 60 percent;
  - (b) Cup and Saucer Bellflower, *Campanula medium calycanthema*, 60 percent;
  - (c) Carpathian Bellflower, *Campanula carpatica*, 50 percent;
  - (d) Peach Bellflower, *Campanula persicifolia*, 50 percent;
- (30) Candytuft, Annual, *Iberis amara*, *I. umbellata*, 65 percent;
- (31) Candytuft, Perennial, *Iberis gibraltarica*, *I. sempervirens*, 55 percent;
- (32) Castor Bean, *Ricinus communis*, 60 percent;
- (33) Cathedral Bells, *Cobaea scandens*, 65 percent;
- (34) Celosia, *Celosia argentea*, 65 percent;
- (35) Centaurea (Basket Flower), *Centaurea americana*, Cornflower, *C. cyanus*, Dusty Miller, *C. candidissima*, Royal Centaurea, *C. imperialis*, Sweet Sultan, *C. moschata*, Velvet Centaurea, *C. gymnocarpa*, 60 percent;
- (36) Chinese Forget-me-not, *Cynoglossum amabile*, 55 percent;
- (37) Chrysanthemum, Annual, *Chrysanthemum carinatum*, *C. coronarium*, *C. segetum*, 40 percent;
- (38) Clarkia, *Clarkia elegans*, 65 percent;
- (39) Cleome, *Cleome gigantea*, 65 percent;
- (40) Columbine, *Aquilegia* spp., 50 percent;
- (41) Coral Bells, *Heuchera sanguinea*, 55 percent;
- (42) Coreopsis, Perennial, *Coreopsis lanceolata*, 40 percent;
- (43) Cosmos, Sensation, Mammoth, and Crested types, *Cosmos bipinnatus*, Klondyke type, *C. sulfureus*, 65 percent;
- (44) Dahlia, *Dahlis* spp., 55 percent;
- (45) Delphinium, Perennial, Belladonna and Bellamosum types, Cardinal Larkspur, *Delphinium cardinale*, Chinensis types, Pacific Giant, Gold Medal, and other hybrids of *D. elatum*, 55 percent;
- (46) Dianthus, Carnation, *Dianthus caryophyllus*, 60 percent;
- (47) Dianthus, China Pinks, *Dianthus chinensis*, *heddewigi*, *heddensis*, 70 percent;
- (48) Grass Pinks, *Dianthus plumarius*, 60 percent;
- (49) Maiden Pinks, *Dianthus deltoides*, 60 percent;
- (50) Sweet William, *Dianthus barbatus*, 70 percent;
- (51) Sweet Wivelsfield, *Dianthus allwood*, 60 percent;
- (52) Dracaena, *Dracaena indivisa*, 55 percent;
- (53) English Daisy, *Bellis perennis*, 55 percent;
- (54) Foxglove, *Digitalis* spp., 60 percent;

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- (55) Gaillardia, Annual, *Gaillardia pulchella*, *G. picta*, Perennial, *G. grandiflora*, 45 percent;
- (56) Geum, *Geum* spp., 55 percent;
- (57) Gilia, *Gilia* spp., 65 percent;
- (58) Godetia, *Godetia amoena*, *G. grandiflora*, 65 percent;
- (59) Gourds: Yellow Flowered, *Cucurbita pepo*; White Flowered, *Lagenaria siceraria*; Dishcloth, *Luffa cylindrica*, 70 percent;
- (60) Gypsophila: Annual Baby's Breath, *Gypsophila elegans*; Perennial Baby's Breath, *G. paniculata*, *G. pacifica*, *G. repens*, 70 percent;
- (61) Helenium, (*Helenium autumnale*), 40 percent;
- (62) Helichrysum, *Helichrysum monstrosum*, 60 percent;
- (63) Heliopsis, (*Heliopsis scabra*), 55 percent;
- (64) Helipterum (*Acroclinium*), (*Helipterum roseum*), 60 percent;
- (65) Hesperis (sweet rocket), (*Hesperis matronalis*), 65 percent;
- (66) \*Hollyhock, *Althea rosea*, 65 percent;
- (67) Hunnemanina (mexican tulip poppy), (*Hunnemanina fumariaefolia*), 60 percent;
- (68) \*Hyacinth bean, (*Dolichos lablab*), 70 percent;
- (69) Impatiens, (*Impatiens holstii*, *I. sultani*), 55 percent;
- (70) \*Ipomea, Cypress Vine, *Ipomea quamoclit*; Moonflower, *I. noctiflora*; Morning Glories, Cardinal Climber, Hearts and Honey Vine, *Ipomea* spp., 75 percent;
- (71) Jerusalem cross (maltese cross), (*Lychnis chalconica*), 70 percent;
- (72) Job's Tears, *Coix lacrymajobi*, 70 percent;
- (73) Kochia, *Kochia childsii*, 55 percent;
- (74) Larkspur, Annual, *Delphinium ajacis*, 60 percent;
- (75) Lantana, *Lantana camara*, *L. hybrida*, 35 percent;
- (76) Liliium (regal lily), (*Lilium regale*), 50 percent;
- (77) Linaria, *Linaria* spp., 65 percent;
- (78) Lobelia, Annual, *Lobelia erinus*, 65 percent;
- (79) Lunaria, Annual, *Lunaria annua*, 65 percent;
- (80) \*Lupine, *Lupinus* spp., 65 percent;
- (81) Marigold, *Tagetes* spp., 65 percent;
- (82) Marvel of Peru, *Mirabilis jalapa*, 60 percent;
- (83) Matricaria (feverfew), (*Matricaria* spp.), 60 percent;
- (84) Mignonette, *Reseda odorata*, 55 percent;
- (85) Myosotis, *Myosotis alpestris*, *M. oblongata*, *M. palustris*, 50 percent;
- (86) Nasturtium, *Tropaeolum* spp., 60 percent;
- (87) Nemesia, *Nemesia* spp., 65 percent;
- (88) Nemophila, *Nemophila insignis*, 70 percent;
- (89) Nemophila, Spotted, (*Nemophila maculata*), 60 percent;
- (90) Nicotiana, *Nicotiana affinis*, *N. sanderae*, *N. sylvestris*, 65 percent;
- (91) Nierembergia, *Nierembergia* spp., 55 percent;
- (92) Nigella, *Nigella damascena*, 55 percent;
- (93) Pansy, *Viola tricolor*, 60 percent;
- (94) Penstemon, *Penstemon barbatus*, *P. grandiflorus*, *P. laevigatus*, *P. pubescens*, 60 percent;
- (95) Petunia, *Petunia* spp., 45 percent;
- (96) Phacelia, *Phacelia campanularia*, *P. minor*, *P. tanacetifolia*, 65 percent;
- (97) Phlox, Annual, *Phlox drummondii* all types and varieties, 55 percent;

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- (98) *Physalis*, *Physalis*, spp., 60 percent;
- (99) Platycodon (balloon flower), (*Platycodon grandiflorum*), 60 percent;
- (100) Plumbago, cape, (*Plumbago capensis*), 50 percent;
- (101) Poppy: Shirley Poppy, *Papaver rhoeas*; Iceland Poppy, *P. nudicaule*;  
Oriental Poppy, *P. orientale*; Tulip Poppy, *P. glaucum*, 60 percent;
- (102) Portulacae, *Portulaca grandiflora*, 55 percent;
- (103) Primula (primrose), (*Primula* spp.), 50 percent;
- (104) Pyrethrum (painted daisy), (*Pyrethrum coccineum*), 60 percent;
- (105) Salpiglossis, *Salpiglossis gloxinaeflora*, *S. sinuata*, 60 percent;
- (106) *Salvia*, Scarlet Sage, *Salvia splendens*; Mealycup Sage (blue bedder),  
*Salvia farinacea*, 50 percent;
- (107) Saponaria, *Saponaria ocymoides*, *S. vaccaria*, 60 percent;
- (108) Scabiosa, Annual, *Scabiosa atropurpurea*, 50 percent;
- (109) Scabiosa, Perennial, *Scabiosa caucasica*, 40 percent;
- (110) Schizanthus, *Schizanthus* spp., 60 percent;
- (111) \*Sensitive plant (mimosa), (*Mimosa pudica*), 65 percent;
- (112) Shasta Daisy, *Chrysanthemum maximum*, *C. leucanthemum*, 65  
percent;
- (113) Snapdragon, *Antirrhinum* spp., 55 percent;
- (114) Solanum, *Solanum* spp., 60 percent;
- (115) Statice, (*Statice sinuata*, *S. suworonii*) (flower heads), 50 percent;
- (116) Stocks: Common, *Mathiola incana*; Evening Scented, *Mathiola  
bicornis*, 65 percent;
- (117) Sunflower, *Helianthus* spp., 65 percent;
- (118) \*Sweet Pea, Annual and Perennial other than dwarf bush, *Lathyrus  
odoratus*, *L. latifolius*, 75 percent;
- (119) \*Sweet Pea, dwarf bush, *Lathyrus odoratus*, 65 percent;
- (120) Tahoka daisy, (*Machaeanthera tanacetifolia*), 60 percent;
- (121) Thunbergia, *Thunbergia alata*, 60 percent;
- (122) Torch flower, *Tithonia speciosa*, 70 percent;
- (123) Torenia (wishbone flower), (*Torenia fournieri*), 70 percent;
- (124) Tritoma, *Kniphofia* spp., 65 percent;
- (125) Verbena, Annual, *Verbena hybrida*, 35 percent;
- (126) Vinca, *Vinca rosea*, 60 percent;
- (127) Viola, *Viola cornuta*, 55 percent;
- (128) Virginian stocks, (*Malcolmia maritima*), 65 percent;
- (129) Wallflower, *Cheiranthus allioni*, 65 percent;
- (130) Yucca (Adam's needle), (*Yucca filamentosa*), 50 percent;
- (131) Zinnia (except Linearis and Creeping), *Zinnia angustifolia*, *Z.  
elegans*, *Z. grandiflora*, *Z. gracillima*, *Z. haegeana*, *Z. multiflora*, *Z. pumila*, 65 percent;  
and
- (132) Zinnia, Linearis and Creeping, *Zinnia linearis*, *Sanvitalia procum-  
bens*, 50 percent.

B. A mixture of kinds of flower seeds is below standard if the germination of any kind or combination of kinds constituting 25 percent or more of the mixture by number is below standard for the kind or kinds involved.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

**1510.0240** [Repealed, 9 SR 693]

**1510.0241 STANDARDIZED GERMINATION TESTING PROCEDURES AVAILABLE.**

A. In accordance with Minnesota Statutes, section 21.83, subdivision 2, paragraph (h), item B lists the kinds of tree and shrub seed that have standardized germination testing procedures available for them.

B. Tree and shrub seeds with standardized germination testing procedures available for them are as follows:

- (1) *Abies amabilis* (Dougl.) Forbes, Pacific Silver Fir;
- (2) *Abies balsamea* (L.) Mill., Balsam Fir;
- (3) *Abies concolor* (Gord. and Glend.) Lindl., White Fir;
- (4) *Abies fraseri* (Pursh.) Poir, Fraser Fir;
- (5) *Abies grandis* (Dougl.) Lindl., Grand Fir;
- (6) *Abies homolepis* Sieb. and Zucc., Nikko Fir;
- (7) *Abies lasiocarpa* (Hook.) Nutt., Subalpine Fir;
- (8) *Abies magnifica* A. Murr., California Red Fir;
- (9) *Abies magnifica* var. *shastensis* Lemm., Shasta Red Fir;
- (10) *Abies procera* Rehd., Nobel Fir;
- (11) *Abies veitchii* (Lindl.), Veitch Fir;
- (12) *Acer ginnala* Maxim., Amur Maple;
- (13) *Acer macrophyllum* Pursh., Bigleaf Maple;
- (14) *Acer negundo* L., Box Elder;
- (15) *Acer pensylvanicum* L., Striped Maple;
- (16) *Acer platanoides* L., Norway Maple;
- (17) *Acer pseudoplatanus* L., Sycamore Maple;
- (18) *Acer rubrum* L., Red Maple;
- (19) *Acer saccharinum* L., Silver Maple;
- (20) *Acer saccharum* Marsh., Sugar Maple;
- (21) *Acer spicatum* Lam., Mountain Maple;
- (22) *Aesculus pavia* L., Red Buckeye;
- (23) *Ailanthus altissima* (Mill.) Swingle, Tree of Heaven, Ailanthus;
- (24) *Berberis thunbergii* DC., Japanese Barberry;
- (25) *Berberis vulgaris* L., European Barberry;
- (26) *Betula lenta* L., Sweet Birch;
- (27) *Betula alleghaniensis* Britton, Yellow Birch;
- (28) *Betula nigra* L., River Birch;
- (29) *Betula papyrifera* Marsh., Paper Birch;
- (30) *Betula pendula* Roth., European White Birch;
- (31) *Betula populifolia* Marsh., Gray Birch;
- (32) *Carya illinoensis* (Wang.) K. Koch, Pecan;
- (33) *Carya ovata* (Mill) K. Koch, Shagbark Hickory;
- (34) *Casuarina* spp., Beefwood;
- (35) *Catalpa bignonioides* Walt., Southern Catalpa;
- (36) *Catalpa speciosa* Warder., Northern Catalpa;
- (37) *Cedrus atlantica* Manetti, Atlas Cedar;
- (38) *Cedrus deodara* (Roxb.) Loud., Deodar Cedar;
- (39) *Cedrus libani* (Loud.), Cedar of Lebanon;
- (40) *Celastrus scandens* L., American Bittersweet;
- (41) *Celastrus orbiculata* Thunb., Oriental Bittersweet;
- (42) *Chamaecyparis lawsoniana* (A. Murr.) Parl, Port Orford Cedar;

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- (43) *Chamaecyparis nootkatensis* (D. Don.) Spach., Alaska Cedar;
- (44) *Cornus florida* L., Flowering Dogwood;
- (45) *Cornus Stolonifera* Michx., Red osier Dogwood;
- (46) *Crataegus mollis*, Downy Hawthorn;
- (47) *Cupressus arizonica* Greene, Arizona Cypress;
- (48) *Eucalyptus deglupta*;
- (49) *Eucalyptus grandis*;
- (50) *Fraxinus americana* L., White Ash;
- (51) *Fraxinus excelsior* L., European Ash;
- (52) *Fraxinus latifolia* Benth., Oregon Ash;
- (53) *Fraxinus nigra* Marsh., Black Ash;
- (54) *Fraxinus pennsylvanica* Marsh., Green Ash;
- (55) *Fraxinus pennsylvanica* var. *lanceolata* (Borkh.) Sarg., Green Ash;
- (56) *Gleditsia triacanthos* L., Honey Locust;
- (57) *Grevillea robusta*, Silk-oak;
- (58) *Larix decidua* Mill., European Larch;
- (59) *Larix eurolepis* Henry, Dunkfeld Larch;
- (60) *Larix leptolepis* (Sieb. and Zucc.) Gord., Japanese Larch;
- (61) *Larix occidentalis* Nutt., Western Larch;
- (62) *Larix sibirica* Ledeb., Siberian Larch;
- (63) *Libocedrus decurrens*, incense-cedar;
- (64) *Liquidambar styraciflua* L., Sweetgum;
- (65) *Liriodendron tulipifera* L., yellow-poplar;
- (66) *Magnolia grandiflora*, Southern magnolia;
- (67) *Malus* spp., Apple;
- (68) *Malus* spp., Crabapple;
- (69) *Nyssa aquatica* L., Water tupelo;
- (70) *Nyssa sylvatica* var. *sylvatica*, Black tupelo;
- (71) *Picea abies* (L.) Karst., Norway Spruce;
- (72) *Picea engelmanni* Parry, Engelmann Spruce;
- (73) *Picea glauca* (Moench.) Voss, White Spruce;
- (74) *Picea glauca* var. *albertiana* (S. Brown) Sarg., Western White Spruce,  
Alberta White Spruce;
- (75) *Picea glehnii* (Fr. Schmidt) Mast., Sakhalin Spruce;
- (76) *Picea jezoensis* (Sieb. and Zucc.) Carr, Yeddo Spruce;
- (77) *Picea Koyamai* Shiras, Koyama Spruce;
- (78) *Picea mariana* (Mill.) B.S.P., Black Spruce;
- (79) *Picea omorika* (Pancic.) Purkyne, Serbian Spruce;
- (80) *Picea orientalis* (L.) Link., Oriental Spruce;
- (81) *Picea polita* (Sieb. and Zucc.) Carr, Tigertail Spruce;
- (82) *Picea pungens* Engelm., Blue Spruce, Colorado Spruce;
- (83) *Picea pungens* var. *glauca* Reg., Colorado Blue Spruce;
- (84) *Picea rubens* Sar., Red Spruce;
- (85) *Picea sitchensis* (Bong.) Carr, Sitka Spruce;
- (86) *Pinus albicaulis* Engelm., Whitebark Pine;
- (87) *Pinus aristata* Engelm., Bristlecone Pine;
- (88) *Pinus banksiana* Lamb., Jack Pine;
- (89) *Pinus canariensis* C. Smith, Canary Pine;
- (90) *Pinus caribaea*, Caribbean Pine;

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- (91) *Pinus cembroides* Zucc., Mexican Pinyon Pine;
- (92) *Pinus clausa*, Sand Pine;
- (93) *Pinus contorta* Dougl., Lodgepole Pine;
- (94) *Pinus contorta* var. *latifolia* Engelm., Lodgepole Pine;
- (95) *Pinus coulteri* D. Don., Coulter Pine, Bigcone Pine;
- (96) *Pinus densiflora* Sieb. and Zucc., Japanese Red Pine;
- (97) *Pinus echinata* Mill., Shortleaf Pine;
- (98) *Pinus elliotii* Engelm., Slash Pine;
- (99) *Pinus flexilis* James, Limber Pine;
- (100) *Pinus glabra* Walt., Spruce Pine;
- (101) *Pinus griffithii* McClelland, Himalayan Pine;
- (102) *Pinus halepensis* Mill., Aleppo Pine;
- (103) *Pinus jeffreyi* Grev. and Balf., Jeffrey Pine;
- (104) *Pinus khasya* Royle, Khasia Pine;
- (105) *Pinus lambertiana* Dougl., Sugar Pine;
- (106) *Pinus heldreichii* var. *leucodermis* (Ant.) Markgraf ex Fitschen,  
Balkan Pine, Bosnian Pine;
- (107) *Pinus markusii* DeVriese, Markus Pine;
- (108) *Pinus monticola* Dougl., Western White Pine;
- (109) *Pinus mugo* Turra., Mountain Pine;
- (110) *Pinus mugo* var. *mughus* (Scop.) Zenari, Mugo Swiss Mountain  
Pine;
- (111) *Pinus muricata* D. Don., Bishop Pine;
- (112) *Pinus nigra* Arnold, Austrian Pine;
- (113) *Pinus nigra poiretiana* (Ant.) Aschers and Graebn., Corsican Pine;
- (114) *Pinus palustris* Mill., Longleaf Pine;
- (115) *Pinus parviflora* Sieb. and Zucc., Japanese White Pine;
- (116) *Pinus patula* Schl. and Cham., Jelecote Pine;
- (117) *Pinus pinaster* Sol., Cluster Pine;
- (118) *Pinus pinea* L., Italian Stone Pine;
- (119) *Pinus ponderosa* Laws., Ponderosa Pine, Western Yellow Pine;
- (120) *Pinus radiata* D. Don., Monterey Pine;
- (121) *Pinus resinosa* Ait., Red Pine, Norway Pine;
- (122) *Pinus rigida* Mill., Pitch Pine;
- (123) *Pinus serotina* Michx., Pond Pine;
- (124) *Pinus strobus* L., Eastern White Pine;
- (125) *Pinus sylvestris* L., Scotch Pine;
- (126) *Pinus taeda* L., Loblolly Pine;
- (127) *Pinus taiwanensis* Hayata, Formosa pine;
- (128) *Pinus thunbergii* Parl., Japanese Black pine;
- (129) *Pinus virginiana* Mill., Virginia Pine, Scrub Pine;
- (130) *Plantanus occidentalis* L., American Sycamore;
- (131) *Populus* spp., Poplars;
- (132) *Prunus armeriaca* L., Apricot;
- (133) *Prunus avium* (L.) L., Cherry;
- (134) *Prunus domestica* L., Plum, Prune;
- (135) *Prunus persica* Batsch., Peach;
- (136) *Pseudotsuga menziesii* var. *glauca* (Beissn.) Franco, Blue Douglas  
Fir;

- Fir;
- (137) *Pseudotsuga menziesii* var. *caesia* (Beissn.) Franco, Gray Douglas
  - (138) *Pseudotsuga menziesii* var. *viridis*, Green Douglas Fir;
  - (139) *Pyrus communis* L., Pear;
  - (140) *Quercus* spp., (Red or black oak group);
  - (141) *Quercus alba* L., White Oak;
  - (142) *Quercus muehlenbergii* Engelm., Chinkapin Oak;
  - (143) *Quercus virginiana* Mill., Live Oak;
  - (144) *Rhododendron* spp., Rhododendron;
  - (145) *Robinia pseudoacacia* L., Black Locust;
  - (146) *Rosa multiflora* Thunb., Japanese Rose;
  - (147) *Sequoia gigantea* (Lindl.) Decne., Giant Sequoia;
  - (148) *Sequoia sempervirens* (D. Don.) Engl., Redwood;
  - (149) *Syringa vulgaris* L., Common lilac;
  - (150) *Thuja occidentalis* L., Northern White Cedar, Eastern Arborvitae;
  - (151) *Thuja orientalis* L., Oriental Arborvitae, Chinese Arborvitae;
  - (152) *Thuja plicata* Donn., Western Red Cedar, Giant Arborvitae;
  - (153) *Tsuga canadensis* (L.) Carr., Eastern Hemlock, Canada Hemlock;
  - (154) *Tsuga heterophylla* (Raf.) Sarg., Western Hemlock, Pacific Hemlock;
  - (155) *Ulmus americana* L., American Elm;
  - (156) *Ulmus parvifolia* Jacq., Chinese Elm;
  - (157) *Ulmus pumila* L., Siberian Elm;
  - (158) *Vitis vulpina* L., Riverbank Grape.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

1510.0250 [Repealed, 9 SR 693]

**1510.0251 KIND AND VARIETY OR TYPE AND PERFORMANCE CHARACTERISTICS OF FLOWER SEEDS.**

In accordance with Minnesota Statutes, section 21.82, subdivision 8, paragraph (a), clause (1), this part contains the requirements for labeling the kind and variety or a statement of type and performance characteristics for flower seeds prepared for use by home gardeners.

A. For seeds of plants grown primarily for their blooms;

(1) if the seeds are of a single named variety, the kind and variety must be stated, for example, "Marigold, Butterball";

(2) if the seeds are of a single type and color for which there is no specific variety name, the type of plant, if it is significant, and the type and color of bloom must be indicated, for example, "Scabiosa, Tall, Large Flowered, Double, Pink";

(3) if the seeds consist of a mixture of colors or a blend of varieties of a single kind, the kind name, the type of plant, if it is significant, and the type of bloom must be indicated, and it must be clearly indicated that the seed is mixed or blended, for example, "Marigold, Dwarf Double French, Mixed Colors" or "Marigold Blend, Dwarf Double French, Mixed Colors";

(4) if the seeds consist of a mixture of kinds, it must be clearly indicated that the seed is mixed and the specific use of the mixture must be indicated, for example, "Cut Flower Mixture" or "Rock Garden Mixture." Statements like "Wild Flower Mixture," "General Purpose Mixture," "Wonder Mixture," or any other statement which fails to indicate the specific use of the seed is not permitted unless the specific use of the mixture is also stated.

B. For seeds of plants grown for ornamental purposes other than their blooms, the kind and variety must be stated, or the kind must be stated together with a descriptive statement concerning the ornamental part of the plant, for example, "Ornamental Gourds, Small Fruited, Mixed."

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

**1510.0260** [Repealed, 9 SR 693]

**1510.0261 REQUIREMENTS FOR COMPLETE RECORD.**

The initial labeler of agricultural, vegetable, flower, tree, or shrub seeds subject to Minnesota Statutes, sections 21.82 and 21.83, must have the following information as part of the complete record for each seed lot sold:

- A. lot number or other lot identification;
- B. a copy of the genuine grower's declaration or tree seed collector's declaration or similar documents containing the same information;
- C. copies of invoices showing the sale of each seed lot, including the name of the person the seed was sold to, the amount sold, the date of sale, the name of the kind or kind and variety, and the lot number;
- D. a copy of the label that was attached to or accompanied the seed lot;
- E. a copy of the field and final certification documents, if applicable;
- F. a copy of each report concerning the testing of the seed for labeling purposes; and
- G. a file sample of the seed lot which is representative of the seed lot and of sufficient size to constitute an official sample as prescribed in section 201.43 of the Federal Seed Act regulations. The prescribed official sample sizes are as follows:
  - (1) two ounces of grass seed not otherwise mentioned, white or alsike clover, or seeds not larger than these;
  - (2) five ounces of red or crimson clover, alfalfa, lespedeza, ryegrass, brome grass, millet, flax, rape, or seeds of similar size;
  - (3) one pound of sudan grass, sorghum, proso, or seeds of similar size;
  - (4) two pounds of cereals, vetch, or seeds of similar or larger size; and
  - (5) at least 400 vegetable seeds.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

**1510.0270** [Repealed, 9 SR 693]

**1510.0271 PROHIBITED WEED SEEDS.**

The following are weed seeds which are prohibited from being present in agricultural, vegetable, flower, tree, and shrub seeds sold in Minnesota in accordance with Minnesota Statutes, section 21.86, subdivision 1, paragraph (d):

- A. bull thistle (*Cirsium vulgare L.*);
- B. Canada thistle (*Cirsium arvense Scop.*);
- C. musk thistle (*Carduus nutans L.*);
- D. perennial sow thistle (*Sonchus arvensis L.*);
- E. plumeless thistle (*Carduus acanthoides L.*);
- F. field bindweed (*Convolvulus arvensis L.*);
- G. hemp (*Cannabis sativa L.*);
- H. leafy spurge (*Euphorbia esula L.*);
- I. perennial peppergrass (*Lepidium draba L.*); and

J. Russian knapweed (*Centaurea repens* L.).

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

**1510.0280** [Repealed, 9 SR 693]

**1510.0281** Subpart 1. [Repealed, L 2003 c 128 art 7 s 1]

Subp. 2. [Repealed, L 2003 c 128 art 7 s 1]

Subp. 3. [Repealed, L 2003 c 128 art 7 s 1]

Subp. 4. [Repealed, L 2003 c 128 art 7 s 1]

Subp. 5. [Repealed, 26 SR 77; L 2003 c 128 art 7 s 1]

**1510.0290** [Repealed, 9 SR 693]

**1510.0300** [Repealed, 9 SR 693]

**1510.0310 RETESTING AND RELABELING SEEDS.**

No seed label shall contain any purity, germination, or identification data which is not obtained by testing a sample of seed drawn from the specific containers, sacks, or bins of seed which are to be relabeled. Containers of seed which have been stored under different conditions which might affect the germination or purity of the seed differently should be sampled and tested separately.

**Statutory Authority:** *MS s 21.85 subd 11*

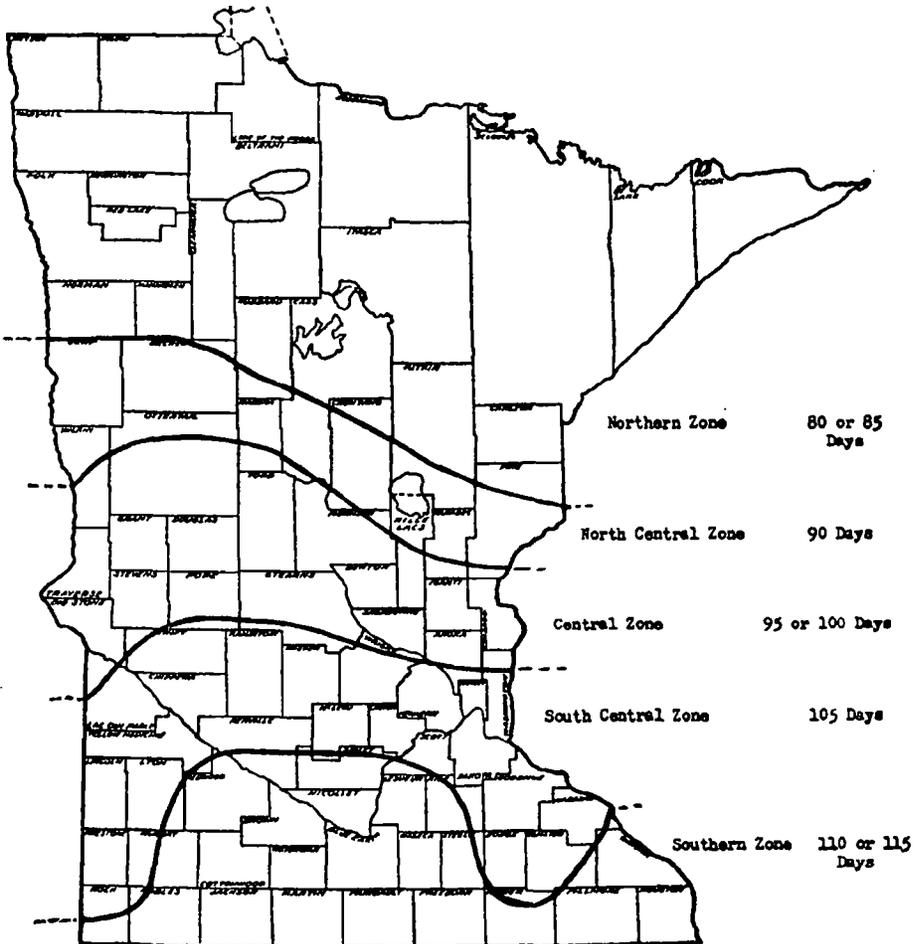
**1510.0320 RESTRICTED WEED SEEDS.**

“Restricted weed seeds” are those weed seeds which, if present in agricultural, vegetable, flower, tree, and shrub seed, must be named on the label together with the number per ounce or pound of seed specified and which may not exceed the legal limit. They are seeds of weeds which are objectionable in fields, lawns, and gardens of this state, and which can be controlled by good cultural practice and use of herbicides. Restricted weed seeds are seeds of buckhorn plantain (*Plantago lanceolata* L.), dodder (*Cuscuta* spp.), Frenchweed (*Thlaspi arvense* L.), hoary alyssum (*Berteroa incana* D.C.), horse nettle (*Solanum carolinense* L.), wild mustard (*Brassica arvensis* L.), quack grass (*Agropyron repens* L.), wild radish (*Raphanus raphanistrum*), giant foxtail (*Seteria faberii*), and Eastern black nightshade (*Solanum ptycanthum* Dun).

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

1510.0330 CORN ZONES.



Corn zones indicate the approximate number of days growing season that may be expected from emergence of corn plants after planting to maturity, the stage of being well dented before a killing frost.

**Statutory Authority:** *MS s 21.85 subd 11*

1510.0340 SAMPLE LABELS FOR AGRICULTURAL SEED.

The labels shown in parts 1510.0350 and 1510.0360 are suggestive of suitable arrangement of required labeling data. Any arrangement is legal as long as data is complete and may be read and understood readily by the buyer of the seed. Misleading and confusing statements and data must be avoided.

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** 9 SR 693

1510.0350 SUGGESTED LABEL FOR SINGLE AGRICULTURAL SEED.

This label may be used for hybrid corn, or a special label may be used. The hybrid corn part may be omitted if not wanted. If known, the origin of the seed must be stated for all agricultural seeds or that the origin is unknown if the origin cannot be determined.

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1510.0350 SEEDS, FERTILIZERS, FEEDS

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KIND \_\_\_\_\_ VARIETY \_\_\_\_\_ LOT NO \_\_\_\_\_

PURE SEED % \_\_\_\_\_ GERM % \_\_\_\_\_ HARD SEED % \_\_\_\_\_ GERM. DATE \_\_\_\_\_

WEED SEED % \_\_\_\_\_ INERT MATTER % \_\_\_\_\_ OTHER CROP % \_\_\_\_\_

NOXIOUS WEED SEEDS \_\_\_\_\_ NO. PER POUND \_\_\_\_\_  
(Name)

ORIGIN \_\_\_\_\_  
(State or Foreign Country)

FOR HYBRID MINNESOTA RELATIVE MATURITY \_\_\_\_\_ DAYS

CORN:

LABELER'S NAME AND ADDRESS \_\_\_\_\_

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** *9 SR 693*

## 1510.0360 SUGGESTED LABEL FOR MIXTURES AND BLENDS OF AGRICULTURAL SEED.

KIND \_\_\_\_\_ LOT NO. \_\_\_\_\_  
VARIETY \_\_\_\_\_  
PURE SEED % \_\_\_\_\_  
GERMINATION % \_\_\_\_\_  
HARD SEED % \_\_\_\_\_  
ORIGIN \_\_\_\_\_

WEED SEED % \_\_\_\_\_ INERT MATTER % \_\_\_\_\_ OTHER CROP % \_\_\_\_\_

NOXIOUS WEED SEEDS \_\_\_\_\_ NO. PER POUND \_\_\_\_\_ GERM. DATE \_\_\_\_\_  
(Name)

LABELER'S NAME AND ADDRESS \_\_\_\_\_

**Statutory Authority:** *MS s 21.85 subd 11*

**History:** *9 SR 693*

## LIQUID COMMERCIAL FERTILIZERS

### 1510.0370 AUTHORITY AND PURPOSE.

Parts 1510.0370 to 1510.0380 are adopted by the commissioner pursuant to Minnesota Statutes, section 17.725, to govern the storage and handling of liquid commercial fertilizer used for agricultural purposes.

**Statutory Authority:** *MS s 17.725*

### 1510.0371 DEFINITIONS.

Subpart 1. **Scope.** For the purposes of parts 1510.0370 to 1510.0380, the terms defined in this part have the meanings given them, and "commercial fertilizer,"

“commissioner,” “grade,” “guaranteed analysis,” and “person” have the meanings given in Minnesota Statutes, section 17.713.

Subp. 2. **Appurtenances.** “Appurtenances” means valves, pumps, fittings, and metering or dispensing devices.

Subp. 3. **Department.** “Department” means the Department of Agriculture.

Subp. 4. **Facility.** “Facility” means a place where liquid commercial fertilizer is stored, mixed, blended, weighed, or handled.

Subp. 5. **Incident.** “Incident” means a flood, fire, tornado, transportation accident, storage container rupture or leak, or other release of liquid commercial fertilizer, whether accidental or not, which is likely to cause a hazard to people’s lives, adjoining property, or the environment.

Subp. 6. **Incident notification sign.** “Incident notification sign” means a sign issued by the department displaying the emergency telephone numbers to be called in case of an incident.

Subp. 7. **Liquid commercial fertilizer.** “Liquid commercial fertilizer” means either mixed fertilizer or fertilizer materials distributed in a fluid, nonpackaged form.

Subp. 8. **Responsible party.** “Responsible party” means the person who has direct custody or control of liquid commercial fertilizer at the time of an incident.

Subp. 9. **Safeguard.** “Safeguard” means a device, structure, or system or a combination of these designed to prevent the escape or movement of a liquid commercial fertilizer from the place it is stored which might result in the pollution of any surface or ground waters.

Subp. 10. **Storage container.** “Storage container” means a tank in which liquid commercial fertilizer is stored. This does not include delivery equipment unless the delivery equipment is used for storage.

Subp. 11. **Substantially altering.** “Substantially altering” means modifying a facility by adding additional safeguards or storage containers, or changing existing storage containers, safeguards, appurtenances, or piping. This does not include routine maintenance of existing safeguards, storage containers, appurtenances, and piping or of existing mixing, blending, weighing, and handling equipment.

**Statutory Authority:** *MS s 17.725*

#### **1510.0372 APPROVAL OF FACILITY AND EQUIPMENT.**

Subpart 1. **Commissioner approval.** A person beginning construction of a new facility or substantially altering an existing facility shall first obtain the approval of the commissioner.

Subp. 2. **Application.** The application for approval must be made on forms provided by the commissioner and must contain the following information:

- A. the name, address, and phone number of the firm making application;
- B. the name, address, and phone number of the firm that will operate the facility;
- C. the name, address, and phone number of the firm that will construct, install, or modify the site;
- D. a statement as to whether the facility is new or existing and whether the alterations will be substantial;
- E. the location of the site, including its legal description;
- F. copies of any permits required for the construction, installation, or modification of the facility;
- G. the size of the lot owned or leased;
- H. a statement of the approximate distance to nearby lakes, streams, or drainage ditches, or a storm drain into which liquid could flow;

I. a statement of the general soil type found at the site and the type, depth, and proximity of wells on or near the site;

J. the nature of the terrain at the site;

K. the number and capacity of storage containers;

L. a description of the type of storage containers;

M. a description of the type of safeguards, including drawings or pictures, if available;

N. at least three scale drawings of the facility, including other storage containers and buildings;

O. a plumbing diagram showing the location and type of pumps and valves used to control all transfers of liquid commercial fertilizer;

P. a description of the contingency plan filed with local fire and law enforcement personnel for emergency situations; and

Q. any other information required by the commissioner reasonably related to the construction, installation, or modification of a liquid commercial fertilizer facility in order to prevent hazards to people's lives, adjoining property, and the environment.

Subp. 3. **Criteria.** The commissioner shall approve the application when inspection of the facility and review of the application demonstrate that the proposed facility satisfies the requirements of parts 1510.0370 to 1510.0380 and provides safeguards to prevent hazards to people's lives, adjoining property, and the environment.

Subp. 4. **Review of approval.** The commissioner shall review approved facilities if the commissioner has reason to believe that existing safeguards are not sufficient to prevent hazards to people's lives, adjoining property, or the environment. Upon determination by the commissioner that hazards to people's lives, adjoining property, or the environment do exist, the commissioner shall proceed in accordance with Minnesota Statutes, section 17.728.

**Statutory Authority:** *MS s 17.725*

#### 1510.0373 PREVIOUSLY ESTABLISHED FACILITIES.

The person who operates a facility which was established prior to July 11, 1983, including persons who were granted a permit by the Pollution Control Agency, must obtain the commissioner's approval of the facility and equipment according to the following schedule:

A. The person who operates a facility established prior to January 1, 1965, must seek the approval of the commissioner by July 11, 1984.

B. The person who operates a facility established from January 1, 1965, to December 31, 1973, must seek the approval of the commissioner by July 11, 1985.

C. The person who operates a facility established from January 1, 1974, to May 31, 1975, must seek the approval of the commissioner by July 11, 1986.

D. The person who operates a facility established from June 1, 1975, to December 31, 1977, must seek the approval of the commissioner by July 11, 1987.

E. The person who operates a facility established from January 1, 1978, to December 31, 1979, must seek the approval of the commissioner by July 11, 1988.

F. The person who operates a facility established from January 1, 1980, to July 11, 1983, must seek the approval of the commissioner by July 11, 1989.

**Statutory Authority:** *MS s 17.725*

#### 1510.0374 VARIANCES.

Upon receipt of a written request, the department shall grant a variance from this rule when the request shows that compliance with this rule would cause unreasonable economic hardship to the requester and that the requested use would not constitute a hazard to people's lives, adjoining property, or the environment. The department shall

set forth in writing its reasons for granting or denying a requested variance within 60 days of the request.

**Statutory Authority:** *MS s 17.725*

#### **1510.0375 MAINTENANCE AND OPERATIONS.**

Safeguards, storage containers, and mixing, blending, weighing, and handling equipment must be maintained and operated in a manner which will prevent the escape of any liquid commercial fertilizer from the facility.

Adequate provisions must be made to protect all above-ground piping from physical damage that might result from moving machinery, equipment, and vehicles.

Main valves must be located as near to the storage container as possible and must be either closed and made inoperative when the facility is unattended or protected against tampering by adequate fencing.

Appurtenances and storage containers must be properly maintained, protected against rust, and painted to prevent corrosion and leakage.

Storage container areas must be kept free of clutter and ignitable materials including weeds and long dry grass.

**Statutory Authority:** *MS s 17.725*

#### **1510.0376 SAFEGUARDS.**

Persons storing liquid commercial fertilizers in storage containers shall provide safeguards for containment at least equal to the holding capacity of the largest single storage container.

**Statutory Authority:** *MS s 17.725*

#### **1510.0377 MARKINGS.**

Each storage container must be labeled in a clearly legible and conspicuous manner with the appropriate grade or guaranteed analysis of the contents of the storage container.

An identification sign must be displayed in a clearly legible and conspicuous manner stating the name, address, and telephone number of the nearest agent, representative, owner, or person who operates the facility.

An incident notification sign must be posted in a conspicuous place within the facility.

**Statutory Authority:** *MS s 17.725*

#### **1510.0378 INCIDENTS.**

A person involved in or responsible for an incident shall report the incident to the department. The department shall immediately notify other state agencies with jurisdiction regarding the incident. The responsible party shall take appropriate action to contain or clean up the results of the incident. The department shall be the lead state agency for making decisions involving the cleanup or containment operations and shall initiate those operations necessary to prevent hazards to people's lives, adjoining property, or the environment. By initiating cleanup or containment operations, the department does not assume any liability for costs in addition to that prescribed or imposed by law.

**Statutory Authority:** *MS s 17.725*

#### **1510.0379 EXEMPT FACILITIES.**

Parts 1510.0370 to 1510.0380 do not apply to anhydrous ammonia facilities, or to portable or nonstationary tanks.

**Statutory Authority:** *MS s 17.725*

**1510.0380 ENFORCEMENT.**

The commissioner shall proceed in accordance with Minnesota Statutes, section 17.728 upon satisfactory evidence that the storage or handling of liquid commercial fertilizer does not meet the provisions in parts 1510.0370 to 1510.0380.

**Statutory Authority:** *MS s 17.725*

**DRY COMMERCIAL FERTILIZERS****1510.0400 AUTHORITY AND PURPOSE.**

Parts 1510.0400 to 1510.0408 are adopted by the commissioner pursuant to Minnesota Statutes, section 17.725, to govern the storage and handling of dry commercial fertilizer used for agricultural purposes.

**Statutory Authority:** *MS s 17.725*

**1510.0401 DEFINITIONS.**

**Subpart 1. Scope.** For the purposes of parts 1510.0401 to 1510.0408, the terms defined in this part have the meanings given them, and "commercial fertilizer," "commissioner," "grade," "guaranteed analysis," and "person" have the meanings given in Minnesota Statutes, section 17.713.

**Subp. 2. Department.** "Department" means the Department of Agriculture.

**Subp. 3. Dry commercial fertilizer.** "Dry commercial fertilizer" means either mixed fertilizer or fertilizer materials distributed in a nonfluid, nonpackaged form.

**Subp. 4. Facility.** "Facility" means a place where dry commercial fertilizer is stored, mixed, blended, weighed, or handled.

**Subp. 5. Incident.** "Incident" means a flood, fire, tornado, transportation accident, or other event causing a release of dry commercial fertilizer, whether accidental or not, which is likely to cause a hazard to people's lives, adjoining property, or the environment.

**Subp. 6. Incident notification sign.** "Incident notification sign" means a sign issued by the department displaying emergency telephone numbers to be called in the case of an incident.

**Subp. 7. Responsible party.** "Responsible party" means the person who has direct custody or control of the dry commercial fertilizer at the time of an incident.

**Subp. 8. Safeguard.** "Safeguard" means a device, structure, or system or a combination of these designed to prevent the escape or movement of a dry commercial fertilizer from the place it is stored which might result in the pollution of any surface or ground waters.

**Subp. 9. Storage container.** "Storage container" means a tank or bin in which dry commercial fertilizer is stored. This does not include delivery equipment unless the delivery equipment is used for storage.

**Subp. 10. Substantially altering.** "Substantially altering" means modifying a facility by adding additional safeguards or storage containers, or by changing existing safeguards or storage containers. This does not include routine maintenance of existing safeguards or storage containers or of existing mixing, blending, weighing, and handling equipment.

**Statutory Authority:** *MS s 17.725*

**1510.0402 APPROVAL OF FACILITY AND EQUIPMENT.**

**Subpart 1. Commissioner approval.** A person beginning construction of a new facility or substantially altering an existing facility shall first obtain the approval of the commissioner.

**Subp. 2. Forms.** The application for approval must be made on forms provided by the commissioner and must contain the following information:

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- A. the name, address, and phone number of the firm making the application;
- B. the name, address, and phone number of the firm that will operate the facility;
- C. the name, address, and phone number of the firm that will construct, install, or modify the site;
- D. a statement as to whether the facility is new or existing and whether the alterations will be substantial;
- E. the location of the site, including its legal description;
- F. copies of any permits required for the construction, installation, or modification of the facility;
- G. the size of the lot owned or leased;
- H. the number and capacity of storage containers;
- I. a description of the type of storage containers;
- J. a description of the type of safeguards, if any;
- K. at least three scale drawings of the facility, including other storage containers and buildings;
- L. a description of the contingency plan filed with local fire and law enforcement personnel for emergency situations; and
- M. any other information required by the commissioner reasonably related to the construction, installation, or modification of a dry commercial fertilizer facility in order to prevent hazards to people's lives, adjoining property, and the environment.

Subp. 3. **Criteria.** The commissioner shall approve the application when inspection of the facility and review of the application demonstrate that the proposed facility satisfies the requirements of parts 1510.0400 to 1510.0408 and provides safeguards to prevent hazards to people's lives, adjoining property, and the environment.

Subp. 4. **Review of approved facilities.** The commissioner shall review approved facilities if the commissioner has reason to believe that existing safeguards are not sufficient to prevent hazards to people's lives, adjoining property, or the environment. Upon determination by the commissioner that hazards to people's lives, adjoining property, or the environment do exist, the commissioner shall proceed in accordance with Minnesota Statutes, section 17.728.

**Statutory Authority:** *MS s 17.725*

## 1510.0403 VARIANCES.

Upon receipt of a written request, the department shall grant a variance from these parts when the request shows that compliance with this rule would cause unreasonable economic hardship to the requester and that the requested use would not constitute a hazard to people's lives, adjoining property, or the environment. The department shall set forth in writing its reasons for granting or denying a requested variance within 60 days of the request.

**Statutory Authority:** *MS s 17.725*

## 1510.0404 MAINTENANCE AND OPERATIONS.

Safeguards, storage containers, and mixing, blending, weighing, and handling equipment must be maintained and operated in a manner which will prevent avoidable amounts of particulate matter from leaving the facility. This requirement does not apply to facilities governed by this rule which were established prior to the date of its adoption unless the existing facility, without modification, would result in a hazard to people's lives, adjoining property, or the environment.

Storage containers must be maintained to prevent cross contamination of various dry commercial fertilizers.

Storage container areas must be kept free of clutter and ignitable materials including weeds and long dry grass.

**Statutory Authority:** *MS s 17.725*

#### 1510.0405 MARKINGS.

Each storage container must be labeled in a clearly legible and conspicuous manner with the appropriate grade or guaranteed analysis of the contents of the storage container.

An incident notification sign must be posted in a conspicuous place within the facility.

**Statutory Authority:** *MS s 17.725*

#### 1510.0406 OUTSIDE STORAGE.

Outside dry commercial fertilizer storage piles may not be located in areas where surface water runoff could enter storm sewers, sanitary sewers, or other surface or ground waters.

**Statutory Authority:** *MS s 17.725*

#### 1510.0407 INCIDENTS.

A person involved in or responsible for an incident shall report the incident to the department. The department shall immediately notify other state agencies with jurisdiction regarding the incident. The responsible party shall take appropriate action to contain or clean up the results of the incident. The department shall be the lead state agency for making decisions involving cleanup or containment operations and shall initiate those operations necessary to prevent hazards to people's lives, adjoining property, or the environment. By initiating cleanup or containment operations, the department does not assume any liability for costs in addition to that prescribed or imposed by law.

**Statutory Authority:** *MS s 17.725*

#### 1510.0408 ENFORCEMENT.

The commissioner shall proceed in accordance with Minnesota Statutes, section 17.728 upon satisfactory evidence that the storage or handling of dry commercial fertilizer does not meet the provisions in parts 1510.0401 to 1510.0408.

**Statutory Authority:** *MS s 17.725*

### FERTILIZER LABELS

#### 1510.0410 AUTHORITY AND PURPOSE.

Parts 1510.0410 to 1510.0422 are adopted by the commissioner pursuant to Minnesota Statutes, section 18C.121, to prescribe conditions for labels and procedures for labeling fertilizers.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

#### 1510.0411 DEFINITIONS.

Subpart 1. **Scope.** For the purposes of parts 1510.0410 to 1510.0422, the terms defined in this part have the meanings given them, and "brand," "commissioner," "compost," "fertilizer," "grade," "guarantor," "label," "labeling," "organic," "plant food," "sewage sludge," and "specialty fertilizer," have the meanings given in Minnesota Statutes, section 18C.005.

Subp. 1a. **Animal manure.** "Animal manure" means the excreta of animals together with whatever bedding materials are needed to follow good dairy barn, feedlot, and poultry house practices to maintain proper sanitary conditions.

Subp. 1b. **Continuous liquid feed.** "Continuous liquid feed" means the external application of water soluble nutrients in the irrigation water every time the plant requires water.

Subp. 2. **Department.** "Department" means the Department of Agriculture.

Subp. 3. **Filler.** "Filler" means a substance added to fertilizer to provide bulk, prevent caking, or serve some purpose other than providing essential plant nutrients.

Subp. 4. **Hydroponic.** "Hydroponic" means a system in which water soluble nutrients are placed in intimate contact with the plant's root system, being grown in an inert supportive medium which supplies physical support for the roots but which does not add or subtract plant nutrients.

Subp. 5. **Nitrogen stabilizer.** "Nitrogen stabilizer" means a substance added to a fertilizer that extends the time the nitrogen component of the fertilizer remains in the soil in the ammoniacal form.

Subp. 6. **Organic fertilizer.** "Organic fertilizer" means a material containing carbon and one or more elements other than hydrogen and oxygen essential for plant growth.

Subp. 7. **Peat.** "Peat" means the partly decayed vegetable matter of natural occurrence. It is composed chiefly of organic matter that may contain some nitrogen of low activity.

Subp. 8. **Physical manipulation.** "Physical manipulation" means fertilizers that are manufactured, blended, or mixed, or animal manures or compost that have been changed from their initial physical state by manipulations such as drying, cooking, chopping, grinding, shredding, ashing, or pelleting.

Subp. 9. **Plant nutrient.** "Plant nutrient" has the meaning given to "plant food" in Minnesota Statutes, section 18C.005, subdivision 26.

Subp. 10. **Potting soil.** "Potting soil" means a material suitable for holding and growing potted plants and made primarily from natural materials. It may include fertilizers, pesticides, and soil or plant amendments.

Subp. 11. **Primary plant nutrients.** "Primary plant nutrients" includes total nitrogen (N), available phosphate ( $P_2O_5$ ), and soluble potash ( $K_2O$ ).

Subp. 12. **Secondary and micro plant nutrients.** "Secondary and micro plant nutrients" includes those other than the primary nutrients that are essential for the normal growth of plants and that may need to be added to the growth medium. "Secondary plant nutrients" include calcium, magnesium, and sulfur. "Micro plant nutrients" include boron, chlorine, cobalt, copper, iron, manganese, molybdenum, sodium, and zinc.

Subp. 13. **Synthetic.** "Synthetic" means any substance generated from another material or materials by means of a chemical reaction.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

#### 1510.0412 LABEL INFORMATION REQUIREMENTS.

Subpart 1. **Information and format.** Specialty fertilizers offered for sale, sold, or distributed in this state, in bags or other containers, must have placed on or affixed to the container the following information in the following format except as provided in part 1510.0413:

A. net weight;

B. brand and grade, provided that:

(1) the grade is not required if no primary nutrients are claimed;

(2) the grade on the label is optional if the fertilizer is used only for agricultural purposes and the guaranteed analysis statement is shown in the complete form as in Minnesota Statutes, section 18C.211 or 18C.215, subdivision 2, paragraph (a);

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(3) no numerals that misrepresent the plant food or product composition of the fertilizer may be used in the brand name of a fertilizer; and

(4) if the name of a fertilizer material is used as part of its brand name, such as blood, bone, or fish, the nutrients guaranteed must be derived or supplied entirely by the material named;

C. guaranteed analysis, which is the minimum percentage of plant nutrients claimed in the following form:

Total Nitrogen (N)	_____%
_____% Ammoniacal Nitrogen	
_____% Nitrate Nitrogen	
_____% Water Insoluble Nitrogen	
_____% Urea Nitrogen	
_____% Other approved and determinable forms of Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	_____%
Soluble Potash (K <sub>2</sub> O)	_____%
 Secondary and Micro plant nutrients (elemental basis)	 _____%

D. a derivative statement indicating the sources of plant nutrients, listing the common or usual English name of all ingredients used in manufacturing or blending the fertilizer must be placed immediately below the guaranteed analysis statement;

E. name and address of guarantor;

F. a direction for use statement.

Subp. 2. **Secondary and micro plant nutrients permitted.** The commissioner shall accept guarantees only for the additional secondary and micro plant nutrients listed in this subpart. These additional plant nutrients in a particular fertilizer may be guaranteed if they meet the following minimum content requirements:

Plant Nutrient	Minimum Percent Allowed
Calcium (Ca)	1.00
Magnesium (Mg)	0.50
Sulfur (S)	1.00
Boron (B)	0.02
Chlorine (Cl)	0.10
Cobalt (Co)	0.0005
Copper (Cu)	0.05
Iron (Fe)	0.10
Manganese (Mn)	0.05
Molybdenum (Mo)	0.0005
Sodium (Na)	0.10
Zinc (Zn)	0.05

Subp. 3. **Procedures.** If any of the plant nutrients in subpart 2 are guaranteed, the procedures in items A to F must be followed for labels and labeling.

A. The plant nutrients must be listed immediately following nitrogen, phosphorus, and potassium.

B. The plant nutrients must appear in the format listed in subpart 2.

C. The plant nutrients must appear in the order listed in subpart 2.

D. The plant nutrients must be stated on the elemental basis.

E. The percentages of each of the plant nutrients contained in the fertilizer must be stated.

F. Water soluble nutrients labeled for hydroponic or continuous feeding programs and guarantees for potting soils are exempt from the minimum guarantee requirement.

Subp. 4. **Prohibition.** If the minimum requirement stated in subpart 2 is not met for a particular plant nutrient, labels and labeling for the fertilizer may not contain any statement regarding that particular plant nutrient.

Subp. 5. **Breakdown of plant food elements within the guaranteed analysis.** When a plant nutrient guarantee is broken down into the component forms, the percentage for each component must be shown before the name of the form. Descriptive terms may be used to identify both the total nutrient and its components. Zero guarantees are not acceptable as noted in part 1510.0413, however, they are allowed in the nutrient breakdown guarantees.

Total Nitrogen (N)	_____%
_____% Ammoniacal Nitrogen	
_____% Nitrate Nitrogen	
Magnesium (Mg)	_____%
_____% Water Soluble Magnesium (Mg)	
Sulfur (S)	_____%
_____% Free Sulfur (S)	
_____% Combined Sulfur (S)	
Iron (Fe)	_____%
_____% Chelated Iron (Fe)	

Subp. 6. **Mentioned plant nutrients.** Plant nutrients, when mentioned in any form or manner on any label or labeling, must be listed and guaranteed.

Subp. 7. **Additional nonplant food materials.** Additional information that is not listed in subparts 1, item C; 2; and 5 may not appear in the guaranteed analysis statement, but may appear on the label if placed below and separate from the guaranteed analysis statement.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

#### 1510.0413 EXCEPTIONS TO LABEL INFORMATION REQUIREMENTS.

Subpart 1. **Zero percentages.** If the percentage of any plant nutrient in specialty fertilizer is zero, the plant nutrient must be omitted from the guaranteed analysis statement.

Subp. 2. **Chemical forms of nitrogen.** Chemical forms of nitrogen must be listed, without limitation, when the nitrogen is organic or slowly released. Whenever the chemical forms of nitrogen are claimed, they must be claimed in the form indicated in part 1510.0412, item C, and add up to the total nitrogen guarantee.

Subp. 3. **Custom orders; bulk sales.** A distributor who blends or mixes a fertilizer to a customer's order without a guaranteed analysis of the final mixture or distributes a fertilizer in bulk must furnish each purchaser with an invoice or delivery ticket in written or printed form showing the net weight and guaranteed analysis of each fertilizer sold or used in the mixture and the name and address of the guarantor. Other information in part 1510.0412 is not required for blended, bulk, or mixed fertilizers.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

#### 1510.0414 LOCATION OF LABEL INFORMATION.

For packaged fertilizers, the information required in part 1510.0412 must be in a readable and conspicuous form and must appear:

- A. on the front or back side of the container;
- B. on the upper one-third of the side of a container;
- C. on the upper end of the container; or
- D. printed on a tag affixed to the upper end of the container.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

1510.0415 [Repealed, 19 SR 2485]

#### 1510.0416 CONTROLLED RELEASE PLANT NUTRIENTS.

Subpart 1. **Prohibited statement on label.** A fertilizer label may not bear a statement that connotes or implies that certain plant nutrients contained in the fertilizer are released slowly over a period of time, unless the controlled release components are identified and guaranteed at a level of at least 15 percent of the total guarantee for that nutrient.

Subp. 2. **Permitted labels.** The following types of plant nutrients may be labeled as controlled release plant nutrients:

A. water insoluble nitrogen products, such as natural organics, ureaform materials, urea formaldehyde products, isobutylidene diurea, and oxamide;

B. coated controlled release plant nutrients such as sulfur coated urea and other encapsulated soluble fertilizers;

C. occluded controlled release plant nutrients, such as fertilizers mixed with waxes, resins or other inert materials and formed into particles; and

D. products containing water soluble nitrogen such as ureaform materials, urea formaldehyde products, methylenediurea (MDU), dimethylenetriurea (DMTU), and dicyanodiamide (DCD).

Subp. 3. **Descriptive terms.** "Controlled release" is the preferred term, however the terms "water insoluble," "coated slow release," "slow release," "controlled release," "slowly available water soluble," and "occluded slow release" are accepted as descriptive of these products, provided that the manufacturer can show a testing program approved by the department substantiating the claim.

Subp. 4. [Repealed, 19 SR 2485]

Subp. 5. [Repealed, 19 SR 2485]

Subp. 6. **Methods.** Until more appropriate methods are developed, Association of Official Analytical Chemists (AOAC) International method number 970.04 (15th Edition), or the appropriate AOAC International method in a subsequent edition, must be used to confirm the coated controlled release and occluded controlled release plant nutrients and others whose slow release characteristics depend on particle size. AOAC International method number 945.01 (15th Edition), or the appropriate AOAC International method in a subsequent edition, must be used to determine the water insoluble nitrogen of organic materials.

Subp. 7. [Repealed, 19 SR 2485]

Subp. 8. [Repealed, 19 SR 2485]

Subp. 9. **Acceptable guaranteed analysis breakdown for coated controlled release or occluded controlled release nutrients.** When nutrients in a fertilizer are coated, or occluded to obtain controlled release properties, then the guarantees for those components must be shown as footnotes rather than as a component following each nutrient as indicated in items A to C.

- A. A fertilizer with one coated material.

Fertkote 10-15-20  
Guaranteed Analysis

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Total Nitrogen (N)	10%
2.5% Ammoniacal Nitrogen	
2.5% Nitrate Nitrogen	
5.0% Urea Nitrogen*	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	15%
Soluble Potash (K <sub>2</sub> O)	20%
Sulfur (S)	14%
Plant nutrients derived from: _____	
* ____% Controlled release urea nitrogen from _____	

**B. A fertilizer with all materials of one nutrient coated.**

Fertkote 10-15-20  
Guaranteed Analysis

Total Nitrogen (N)*	10%
2.5% Ammoniacal Nitrogen	
2.5% Nitrate Nitrogen	
5.0% Urea Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	15%
Soluble Potash (K <sub>2</sub> O)	20%
Sulfur (S)	14%
Plant nutrients derived from: _____	
* ____% Controlled release nitrogen from _____	

**C. A fertilizer with two or more nutrients from coated materials.**

Fertkote 10-15-20  
Guaranteed Analysis

Total Nitrogen (N)*	10%
2.5% Ammoniacal Nitrogen	
2.5% Nitrate Nitrogen	
5.0% Urea Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )*	15%
Soluble Potash (K <sub>2</sub> O)*	20%
Sulfur (S)	14%
Plant nutrients derived from: _____	

\* The nitrogen, phosphate, and potash materials in this product have been coated to provide 9.0 percent coated controlled release nitrogen (N), 13 percent coated controlled release available phosphate (P<sub>2</sub>O<sub>5</sub>), and 18 percent coated controlled release soluble potash (K<sub>2</sub>O).

Subp. 10. **Acceptable guaranteed analysis breakdown for slowly available water soluble nitrogen.** If a fertilizer material or fertilizer mixture contains recognized and determinable forms of water soluble nitrogen with controlled release properties, the guarantees for those components, if claimed, must be shown as footnotes rather than as a component in the nitrogen breakdown, as indicated in items A and B.

**A.**

Slow Fertilizer 20-0-0  
Guaranteed Analysis

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Total Nitrogen (N) 20%

8.0% Urea Nitrogen  
2.0% Other Water Soluble Nitrogen  
2.9% Slowly Available Water Soluble Nitrogen\*  
7.1% Water Insoluble Nitrogen

Plant nutrients derived from: \_\_\_\_\_

\* Controlled release nitrogen from \_\_\_\_\_

OR

B.

Slow Fertilizer 20-0-0  
Guaranteed Analysis

Total Nitrogen (N) 20%

8.0% Urea Nitrogen  
4.9% Other Water Soluble Nitrogen\*  
7.1% Water Insoluble Nitrogen

Plant nutrients derived from: \_\_\_\_\_

\* \_\_\_% Controlled release nitrogen from \_\_\_\_\_

Note: If other recognized forms of water soluble nitrogens are listed in the nitrogen breakdown, the term "other" must precede the "water soluble nitrogen\*" footnoted breakdown. The word "organic" may be used in the nitrogen breakdown where appropriate.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

## 1510.0417 FISH EMULSIONS.

The following is an example of an acceptable breakdown of nitrogen for a fish emulsion fertilizer:

Total Nitrogen (N) 5%

0.0% Nitrate Nitrogen  
0.0% Urea Nitrogen  
0.5% Ammoniacal Nitrogen  
0.5% Water Insoluble Nitrogen  
4.0% Other Water Soluble Nitrogen

In the example given above, water insoluble nitrogen is guaranteed but no claims or statements, such as slow acting or slow release, can be used since it is less than 15 percent of the total nitrogen.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

## 1510.0418 [Repealed, 19 SR 2485]

## 1510.0419 LABELING AND LABELS.

Subpart 1. **Labeling and labels.** Proposed labeling and labels with directions for use of the fertilizer must be furnished with the application for registration of a fertilizer.

Subp. 2. **Foliar fertilizers.** Any product labeled or advertised for foliar fertilization must be prominently labeled either with directions for use showing only the rates and

conditions for use that have been scientifically documented as benefiting crops or other intended plants, or with the following statement: "Foliar fertilization is intended as a supplement to a regular fertilization program and may not, by itself, provide all the nutrients normally required by crops or other intended plants."

Subp. 3. **Animal manures.** If ingredients are added to animal manure, the ingredients must be specified on the principal label of the container. If the added ingredient exceeds the amount of manure, it must be the first ingredient listed on the principal label and the words, "manure," "cattle manure," "sheep manure," and similar terms must be in type noticeably smaller than that used for the added ingredient. If the packaging of a product features the picture of a designated animal, manure of that species of animal must comprise more than 50 percent of the material in the container.

Subp. 4. **Labeling standards.** The descriptive terms listed in items A to G may be used on a fertilizer label or labeling only if the fertilizer conforms to the following standards.

A. "Natural base fertilizer" is a mixed fertilizer in which more than one-half of the fertilizer material is natural and more than one-half of the sum of the guaranteed primary nutrient percentages is derived from natural fertilizers.

B. "Natural fertilizer" is a substance composed only of natural organic or natural inorganic fertilizers and natural fillers.

C. "Natural inorganic fertilizer" is a mineral fertilizer source that exists in or is produced by nature and may be altered from its original state only by physical manipulation.

D. "Natural organic fertilizer" is composed of fertilizer materials derived from either plant or animal products containing one or more elements, other than carbon, hydrogen, and oxygen that 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/aerobic bacterial action, or combination of these. These materials may not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis, or pelleting.

E. "Organic base fertilizer" is a mixed fertilizer in which more than one-half of the fertilizer material is organic and more than one-half of the sum of the guaranteed primary nutrient percentages is derived from organic fertilizers.

F. "Sphagnum peat moss" is a peat source from a sphagnum moss peat deposit (bog) of which an oven-dried sample would contain a minimum of 66-2/3 percent sphagnum moss fiber by weight. The fibers must be stems and leaves of sphagnum that have recognizable fibrous and cellular structure.

G. "Stabilized nitrogen fertilizer" is a fertilizer to which a nitrogen stabilizer has been added.

Subp. 5. **Environmentally beneficial.** A claim that a product is "environmentally beneficial" or a similar claim must be accompanied by a statement of explanation of the rationale for the claim and a list of all ingredients in order to allow the consumer to determine the validity of the statement.

Subp. 6. **Safety.** Statements suggesting that a product is completely safe and nontoxic to humans, animals, or the environment are considered misbranding and must not appear on the label.

Subp. 7. **Potting soils.** If plant nutrients are mentioned in any form or manner on any label or labeling, they must be listed and guaranteed and the potting soil must be registered as a specialty fertilizer.

Subp. 8. **Organic nitrogen.** Only nitrogen derived from natural organic or synthetic organic fertilizers with slow release properties may be designated as organic.

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A. If an amount of nitrogen is designated as organic, the water insoluble nitrogen or controlled release nitrogen guarantee or any combination of the two must not be less than 60 percent of the nitrogen so designated.

B. If a fertilizer product is designated as organic and no amount of nitrogen is specifically designated as organic, all of the nitrogen guaranteed must be derived from organic fertilizer materials and the water insoluble nitrogen or controlled release nitrogen guarantee or any combination of the two must not be less than 60 percent of the total nitrogen guarantee.

C. Coated urea may not be included in meeting the 60 percent controlled release nitrogen requirements.

D. If a fertilizer contains organic nitrogen derived from synthetic organic fertilizer materials and the term "organic" is used on the label or labeling, the label must bear a statement that the product contains synthetic organic nitrogen, followed by a list of the synthetic ingredients. For example: "This fertilizer contains synthetic organic nitrogen derived from . . . . . ." The statement must be printed following the derivative statement and be in type no smaller than that of the type of the derivative statement.

For example:

(1) Green Season Organic Fertilizer 10-1-1

Total Nitrogen (N)	10%
3.6% Water Soluble Nitrogen	
6.4% Water Insoluble Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	1%
Soluble Potash (K <sub>2</sub> O)	1%
Derived from: manure, blood meal, ureaform, and bone meal	

This fertilizer contains synthetic organic nitrogen derived from ureaform.

(2) Organic Based Plant Food 15-2-4

Total Nitrogen (N)	15%
1.5% Urea Nitrogen	
1.0% Other Water Soluble Nitrogen	
6.5% Slowly Available Water Soluble Nitrogen*	
6.0% Water Insoluble Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	2%
Soluble Potash (K <sub>2</sub> O)	4%
Derived from: manure, bone meal, methylene urea, and potassium chloride	
* — Controlled release nitrogen from methylene urea	

This fertilizer contains synthetic organic nitrogen derived from methylene urea.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

## 1510.0420 MR 1993 [Renumbered 1510.0421]

### 1510.0420 INVESTIGATIONAL ALLOWANCES.

Subpart 1. **Primary plant nutrients.** A commercial fertilizer is deficient if the analysis of any plant nutrient is below the guarantee by an amount exceeding the values in the following schedule, or if the overall index value of the fertilizer is below 97 percent.

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Guaranteed percent	Nitrogen percent	Available Phosphate percent	Potash percent
04	0.49	0.67	0.41
05	0.51	0.67	0.43
06	0.52	0.67	0.47
07	0.54	0.68	0.53
08	0.55	0.68	0.60
09	0.57	0.68	0.65
10	0.58	0.69	0.70
12	0.61	0.69	0.79
14	0.63	0.70	0.87
16	0.67	0.70	0.94
18	0.70	0.71	1.01
20	0.73	0.72	1.08
22	0.75	0.72	1.15
24	0.78	0.73	1.21
26	0.81	0.73	1.27
28	0.83	0.74	1.33
30	0.86	0.75	1.39
32 or more	0.88	0.76	1.44

For guarantees not listed, calculate the appropriate value by interpolation.

The overall index value is calculated by comparing the commercial value guaranteed with the commercial value found. For example, when using a 2:2:1 ratio, assuming that the nitrogen and phosphorus are valued at twice the amount of potash:

10.0 units N	x	2	=	20.0	
10.0 units P <sub>2</sub> O <sub>5</sub>	x	2	=	20.0	
10.0 units K <sub>2</sub> O	x	1	=	10.0	
Commercial Value Guaranteed					= 50.0
10.1 units N	x	2	=	20.2	
10.2 units P <sub>2</sub> O <sub>5</sub>	x	2	=	20.4	
10.1 units K <sub>2</sub> O	x	1	=	10.1	
Commercial Value Found					= 50.7
Overall Index Value = 100(50.7/50.0) = 101.4%					

Subp. 2. **Secondary and micro plant nutrients.** Secondary and micro plant nutrients are deficient if any plant nutrient is below the guarantee by an amount exceeding the values in the following schedule:

Plant Nutrient	Allowable Deficiency
Calcium (Ca)	0.2 unit + 5% of guarantee
Magnesium (Mg)	0.2 unit + 5% of guarantee
Sulfur (S)	0.2 unit + 5% of guarantee
Boron (B)	0.003 unit + 15% of guarantee
Cobalt (Co)	0.0001 unit + 30% of guarantee
Molybdenum (Mo)	0.0001 unit + 30% of guarantee
Chlorine (Cl)	0.005 unit + 10% of guarantee
Copper (Cu)	0.005 unit + 10% of guarantee
Iron (Fe)	0.005 unit + 10% of guarantee

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Manganese (Mn)	0.005 unit + 10% of guarantee
Sodium (Na)	0.005 unit + 10% of guarantee
Zinc (Zn)	0.005 unit + 10% of guarantee

The maximum allowance when calculated under this subpart is one unit (one percent).

Subp. 3. **Analytical procedures.** Sampling equipment, procedures, preparation, and analysis must be those adopted by the Association of Official Analytical Chemists. In cases not covered by those methods, or in cases where methods are available in which improved applicability has been demonstrated, the commissioner may adopt appropriate methods from other sources.

**Statutory Authority:** *MS s 18C.121*

**History:** *19 SR 2485*

1510.0421 MR 1993 [Renumbered 1510.0422]

### 1510.0421 WARNING STATEMENTS.

Warning or caution statements are required on the label for any product which contains 0.03 percent or more of Boron in a water-soluble form or 0.001 percent or more of Molybdenum.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

### 1510.0422 ENFORCEMENT.

The commissioner shall proceed in accordance with Minnesota Statutes, section 18D.305, upon satisfactory evidence that a label or labeling of a fertilizer does not meet the provisions in parts 1510.0410 to 1510.0422.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2485*

## SOIL AND PLANT AMENDMENT LABELS

### 1510.0430 AUTHORITY AND PURPOSE.

Parts 1510.0430 to 1510.0434 are adopted by the commissioner pursuant to Minnesota Statutes, section 18C.121, to prescribe conditions for the labels and procedures for labeling soil and plant amendments.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2269*

### 1510.0431 DEFINITIONS.

Subpart 1. **Scope.** The definitions in this part apply to parts 1510.0430 to 1510.0434. For the purposes of parts 1510.0430 to 1510.0434, the terms "brand," "commissioner," "compost," "fertilizer," "guarantor," "label," "labeling," "plant amendment," "plant food," "sewage sludge," and "soil amendment" have the meanings given them in Minnesota Statutes, section 18C.005.

Subp. 2. **Animal manure.** "Animal manure" means the excreta of animals together with whatever bedding materials are needed to follow good dairy barn, feedlot, and poultry house practices to maintain proper sanitary conditions.

Subp. 3. **Inert ingredients.** "Inert ingredients" means the ingredients present in soil or plant amendments that are not soil or plant amending ingredients.

Subp. 4. **Peat.** "Peat" means partly decayed vegetable matter of natural occurrence. It is composed chiefly of organic matter that may contain some nitrogen of low activity.

Subp. 5. **Sphagnum peat moss.** "Sphagnum peat moss" means a peat source from a sphagnum moss peat deposit (bog) of which an oven-dried sample would contain a minimum of 66-2/3 percent sphagnum moss fiber by weight. These fibers are stems and leaves of sphagnum that have recognizable fibrous and cellular structure.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2269*

#### 1510.0432 LABEL REQUIREMENTS.

Subpart 1. **Information required.** A soil or plant amendment offered for sale or sold in this state in bags or other containers must have placed on or affixed to the container the following information:

- A. net weight;
- B. brand name;
- C. guaranteed analysis, which must be in the following format:

#### GUARANTEED ANALYSIS

##### SOIL OR PLANT AMENDMENT INGREDIENTS

"Name of Ingredient" ... %

(identify and list all)

##### INERT INGREDIENTS

"Name of Ingredient" ... %

(identify and list all)

(1) List the common or usual English name and percentage by weight of each active ingredient, under the heading "SOIL OR PLANT AMENDMENT INGREDIENTS."

(2) List the common or usual English name and percentage by weight of each inert ingredient, listed under the heading "INERT INGREDIENTS." The "INERT INGREDIENTS" statement may be deleted from the guaranteed analysis statement if the percentage of inert ingredients is zero.

(3) If the product is a microbiological product, a statement of active ingredients in the following format must state the number of viable microorganisms per milliliter for a liquid or the number of viable microorganisms per gram for a dry product:

#### ACTIVE INGREDIENTS

(Minimum number) viable (name of organism) per gram or per milliliter.

(List each organism separately);

- D. name and address of guarantor;
- E. directions for the soil or plant amendment's use; and
- F. the soil or plant amendment's purpose or proposed use.

Subp. 2. [Repealed, 19 SR 2269]

Subp. 3. [Repealed, 19 SR 2269]

Subp. 3a. **Sewage sludge without charge.** If sewage sludge is transferred between parties without compensation, a copy of the sewage sludge analysis required by the rules of the Minnesota Pollution Control Agency is sufficient to meet the labeling requirements.

Subp. 4. **Packaged soil or plant amendments.** If packaged soil or plant amendments are offered for sale, the information required in subpart 1 must be in a readable and conspicuous form and must appear:

- A. on the front or back side of the container;
- B. on the upper one-third of the side of a container;
- C. on the upper end of the container; or
- D. printed on a tag affixed to the upper end of the container.

Subp. 5. **Bulk soil or plant amendments.** If bulk soil or plant amendments are offered for sale, the information required in subpart 1, in written or printed form, must be supplied to the purchaser.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2269*

#### 1510.0433 LABELING AND LABELS.

Subpart 1. **Labeling and labels.** Proposed labeling and labels with directions for use of the soil or plant amendment must be furnished with an application for registration of a soil or plant amendment.

Subp. 2. **Animal manures.** If ingredients are added to animal manure, the ingredients must be specified on the principal label of the container. If the added ingredient exceeds the amount of manure, it must be the first ingredient listed on the principal label and "manure," "cattle manure," "sheep manure," or a similar term must be in type noticeably smaller than that used for the added ingredient. If the packaging of a product features the picture of a designated animal, manure of that species of animal must comprise more than 50 percent of the material in the container.

Subp. 3. **Environmentally beneficial.** A claim that a product is "environmentally beneficial" or a similar claim must be accompanied by a statement of explanation of the rationale for the claim and a list of all ingredients in order to allow the consumer to determine the validity of the statement.

Subp. 4. **Safety.** A statement suggesting that a product is completely safe and nontoxic to humans, animals, or the environment is a misbranding of the product and must not appear on the label.

Subp. 5. **Name of a soil or plant amendment material.** If the name of a soil or plant amendment ingredient is used as part of the brand name of a soil or plant amendment, such as animal manure, peat, sphagnum peat moss, or compost, the soil or plant amendment must be composed entirely of the ingredient named.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2269*

#### 1510.0434 ENFORCEMENT.

The commissioner shall proceed in accordance with Minnesota Statutes, section 18D.305, upon satisfactory evidence that a label or labeling of a soil or plant amendment or sewage sludge does not comply with parts 1510.0430 to 1510.0434.

**Statutory Authority:** *MS s 17.725; 18C.121*

**History:** *19 SR 2269*

1510.0480 [Repealed, 21 SR 277]

1510.0490 [Repealed, 21 SR 277]

1510.0500 [Repealed, 21 SR 277]

1510.0510 [Repealed, 21 SR 277]

1510.0520 [Repealed, 21 SR 277]

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- 1510.0530 [Repealed, 21 SR 277]
- 1510.0540 [Repealed, 21 SR 277]
- 1510.0550 [Repealed, 21 SR 277]
- 1510.0560 [Repealed, 21 SR 277]
- 1510.0570 [Repealed, 21 SR 277]
- 1510.0580 [Repealed, 21 SR 277]
- 1510.0590 [Repealed, 21 SR 277]
- 1510.0600 [Repealed, 21 SR 277]
- 1510.0610 [Repealed, 21 SR 277]
- 1510.0620 [Repealed, 21 SR 277]
- 1510.0630 [Repealed, 21 SR 277]
- 1510.0640 [Repealed, 21 SR 277]
- 1510.0650 [Repealed, 21 SR 277]
- 1510.0660 [Repealed, 21 SR 277]
- 1510.0670 [Repealed, 21 SR 277]
- 1510.0680 [Repealed, 21 SR 277]
- 1510.0685 [Repealed, 21 SR 277]
- 1510.0690 [Repealed, 21 SR 277]
- 1510.0700 [Repealed, 21 SR 277]
- 1510.0710 [Repealed, 21 SR 277]
- 1510.0720 [Repealed, 21 SR 277]
- 1510.0730 [Repealed, 21 SR 277]
- 1510.0740 [Repealed, 21 SR 277]
- 1510.0750 [Repealed, 21 SR 277]
- 1510.0760 [Repealed, 21 SR 277]
- 1510.0770 [Repealed, 21 SR 277]
- 1510.0780 [Repealed, 21 SR 277]
- 1510.0790 [Repealed, 21 SR 277]
- 1510.0800 [Repealed, 21 SR 277]
- 1510.0810 [Repealed, 21 SR 277]
- 1510.0820 [Repealed, 21 SR 277]
- 1510.0830 [Repealed, 21 SR 277]
- 1510.0840 [Repealed, 21 SR 277]

1510.0850 [Repealed, 21 SR 277]

1510.0860 [Repealed, 21 SR 277]

1510.0870 [Repealed, 21 SR 277]

1510.0880 [Repealed, 21 SR 277]

#### STORAGE AND HANDLING OF ANHYDROUS AMMONIA

##### 1510.0890 MANIFOLD FLOW RATING.

The manufacturer or supplier of a relief valve manifold must publish complete data showing the flow rating through the combined assembly of the manifold with safety relief valves installed. The manifold flow rating must be determined by testing the manifold with all but one valve discharging. If one or more openings have restrictions not present in the remaining openings, the restricted opening or openings or those having the lowest flow shall be used to establish the flow rate marked on the manifold nameplate. The marking shall be similar to that required in part 1510.0870 for individual valves.

**Statutory Authority:** *MS s 17.725*

##### 1510.0900 PRESSURE RELIEF VALVE.

A relief valve, venting to atmosphere at a safe location, shall be installed between each pair of shutoff valves in an ammonia line where liquid may be trapped. It is recommended that the start-to-discharge pressure of pressure relief valves be not less than 350 psig, and not in excess of 400 psig.

**Statutory Authority:** *MS s 17.725*

##### 1510.0910 DISCHARGE FROM SAFETY RELIEF DEVICES.

Discharge from safety relief devices shall not terminate in or beneath any building.

**Statutory Authority:** *MS s 17.725*

##### 1510.0920 FILLING DENSITIES (SEE PART 1510.0560, SUBPART 8).

Subpart 1. **Nonrefrigerated containers.** The filling densities for nonrefrigerated containers shall not exceed the following:

A. Uninsulated aboveground, 56 percent. This corresponds to 85 percent by volume at five degrees Fahrenheit. At 60 degrees Fahrenheit, it is 90.6 percent by volume.

B. Uninsulated underground, 58 percent.

C. Insulated aboveground, 57 percent.

D. ICC containers shall be filled in accordance with ICC regulations.

Subp. 2. **Refrigerated storage tanks.** The filling density for refrigerated storage tanks shall be such that the tanks will not be liquid full at a liquid temperature corresponding to the vapor pressure at the start-to-discharge pressure setting of the safety relief valve.

Subp. 3. **Thermometers.** If containers are to be filled according to liquid level by any gaging method other than a fixed length dip tube gage, each container should have a thermometer well so that the internal liquid temperature can be easily determined and the amount of liquid and vapor in the container corrected to a 60 degrees Fahrenheit basis.

**Statutory Authority:** *MS s 17.725*

##### 1510.0930 TRANSFER OF LIQUIDS.

Anhydrous ammonia must always be at a temperature suitable for the material of construction and design of the receiving containers. Ordinary steels are not suitable for

refrigerated ammonia. See Appendix R of API Standard 620 for materials for temperature service.

At least one attendant shall supervise the transfer of liquids from the time the connections are first made until they are finally disconnected.

Containers shall be filled or used only upon authorization of owner.

Containers shall be gaged and charged only in the open air or in buildings especially provided for that purpose.

**Statutory Authority:** *MS s 17.725*

#### **1510.0940 PUMPS FOR TRANSFERRING AMMONIA.**

Pumps used for transferring ammonia shall be recommended and labeled for ammonia service by the manufacturer.

Liquid pumps may be of piston, rotary, centrifugal, or regenerative type, designed for 250 psig working pressure.

Positive displacement pumps shall have, installed off the discharge port, a constant differential relief valve discharging through a line of sufficient size to carry the full capacity of the pump at relief valve setting, which setting and installation shall be according to pump manufacturer's recommendation.

On the discharge side of the pump, before the relief valve line, there shall be installed a pressure gage graduated from 0 to 400 psi.

Centrifugal or regenerative pumps do not require a bypass relief valve, but the installation shall incorporate a line from the discharge side of the pump to the vapor space of the supplying container. In this line, at accessible level, must be installed a shutoff valve.

Shutoff valves shall be installed on the inlet and on the discharge of the pump.

**Statutory Authority:** *MS s 17.725*

#### **1510.0950 COMPRESSORS FOR TRANSFERRING OR REFRIGERATING AMMONIA.**

Compressors used for transferring or refrigerating ammonia shall be recommended and labeled for ammonia service by the manufacturer.

Compressors may be of reciprocating or rotary type designed for 250 psig working pressure.

Plant piping shall contain shutoff valves located as close as practical to compressor connections.

A relief valve large enough to discharge the full capacity of the compressor shall be connected to the discharge before any shutoff valve. The discharging pressure of this valve shall not exceed 300 psig.

Compressors shall have pressure gages graduated from 0 to 400 psi at suction and discharge.

Adequate means shall be provided on the compressor suction to minimize the entry of liquid into the compressor. A drainable liquid trap is one means of providing such protection.

**Statutory Authority:** *MS s 17.725*

#### **1510.0960 ADDITIONAL EXCESS FLOW VALVE, BACKFLOW CHECK VALVE, OR REMOTELY OPERATED SHUTOFF VALVE.**

In addition to the excess flow valves in the liquid and vapor connections of the storage container, an excess flow valve or backflow check valve shall be installed in the liquid piping close to the point where the piping and hose are joined at the tank car or tank truck unloading station. Also, each tank car unloading adapter to which the liquid

hose is attached shall be equipped with a properly sized excess flow valve or a remotely operated shutoff valve to stop the flow from the tank in the event of hose rupture.

**Statutory Authority:** *MS s 17.725*

**1510.0970 TANK CAR UNLOADING POINTS AND OPERATIONS.**

Tank car siding shall be substantially level. A sign reading "Stop -- Tank Car Connected," as covered by ICC rules, shall be displayed at the active end or ends of the siding while the tank car is connected for unloading. While tank cars are on siding for unloading, the wheels at both ends shall be blocked on the rails. Tank cars shall be unloaded only through a fixed facility unloading point and into a permanently located bulk storage container. Anhydrous ammonia shall not be unloaded directly from a railroad tank car into a transport truck or other portable container.

**Statutory Authority:** *MS s 17.725*

**1510.0980 CONVERTING ANHYDROUS AMMONIA TO AQUEOUS AMMONIA.**

The transfer of anhydrous ammonia from a tank car to any other unit for the purpose of converting anhydrous ammonia to aqueous ammonia shall only be done at such location whereby the railroad tank car can be retained for an indefinite period and where an aqueous converter is located at a site approved by the Minnesota Department of Agriculture for this purpose, and then only when the converter is in operation to safely consume the discharged gas or fumes so that they will not be released into the atmosphere. The requirements of part 1510.0685 must be met before such site and facility will be approved by the department.

**Statutory Authority:** *MS s 17.725*

**1510.0990 LIQUID LEVEL GAGING DEVICES.**

Each container, except containers filled by weight, shall be equipped with a liquid level gaging device of approved design. All gaging devices shall be arranged so that the maximum liquid level to which the container may be filled is readily determinable (see parts 1510.0660, item F and 1510.0920, subpart 1).

Gaging devices that require bleeding of the product to the atmosphere, such as the rotary tube, fixed tube, and slip tube, shall be so designed that the bleed valve maximum opening is not larger than a No. 54 drill size, unless provided with an excess flow valve. Note: This does not apply to parts 1510.1650 to 1510.1710.

Gaging devices shall have a design pressure at least equal to the design pressure of the storage container on which they are installed.

**Statutory Authority:** *MS s 17.725*

**1510.1000 FIXED LIQUID LEVEL GAGES.**

Fixed liquid level gages shall be so designed that the maximum volume of the container filled by liquid shall not exceed 85 percent of its water capacity. The coupling into which the fixed liquid level gage is threaded must be placed at the 85 percent level of the container. If located elsewhere, the dip tube of this gage must be installed in such a manner that it cannot be readily removed. Note: This does not apply to refrigerated storage.

**Statutory Authority:** *MS s 17.725*

**1510.1010 GAGE GLASSES OF COLUMNAR TYPE.**

Gage glasses of the columnar type shall be restricted to bulk storage installations. They shall be equipped with valves having metallic handwheels, with excess flow valves, and with extra heavy glass adequately protected with a metal housing applied by the gage manufacturer. They shall be shielded against the direct rays of the sun.

**Statutory Authority:** *MS s 17.725*

**1510.1020 PAINTING.**

White is the recommended color for all aboveground containers with other light-reflecting colors accepted.

**Statutory Authority:** *MS s 17.725*

**1510.1030 CYLINDER SYSTEMS.**

Parts 1510.1030 to 1510.1080 apply specifically to systems utilizing containers of 1,000 pounds water capacity or less, constructed in accordance with Interstate Commerce Commission specifications. All basic rules of parts 1510.0590 to 1510.1020 apply to parts 1510.1030 to 1510.1080, unless otherwise noted.

**Statutory Authority:** *MS s 17.725*

**1510.1040 MARKING OF CONTAINERS.**

All containers shall be marked in accordance with Interstate Commerce Commission regulations. Additional markings not in conflict with Interstate Commerce Commission regulations may be used.

**Statutory Authority:** *MS s 17.725*

**1510.1050 LOCATION OF CONTAINERS.**

Containers shall not be buried below ground. Containers shall be set upon firm foundations or otherwise firmly secured. The possible effect of settling on the outlet piping shall be guarded against by a flexible connection or special fitting.

**Statutory Authority:** *MS s 17.725*

**1510.1060 CONTAINER VALVES AND REGULATING EQUIPMENT.**

Container valves and pressure-regulating equipment shall be protected against tampering when installed for use. Container valves and pressure-regulating equipment shall be protected while in transit, in storage, and while being moved into final utilizations, as follows: by setting them into a recess of the container, or by ventilated cap or collar, fastened to the container, capable of withstanding a blow from any direction equivalent to that of a 30-pound weight dropped four feet. Construction must be such that a blow will not be transmitted to the valves or other connections.

When containers are not connected for service, the outlet valves shall be kept tightly closed or plugged, even though containers are considered empty.

**Statutory Authority:** *MS s 17.725*

**1510.1070 SAFETY DEVICES.**

Containers shall be provided with safety devices as required by Interstate Commerce Commission regulation.

**Statutory Authority:** *MS s 17.725*

**1510.1080 REINSTALLATION OF CONTAINERS.**

Containers shall not be reinstalled if due to be retested unless they have been retested in accordance with currently effective regulations of the Interstate Commerce Commission.

**Statutory Authority:** *MS s 17.725*

**1510.1090 SYSTEM UTILIZING CONTAINERS OTHER THAN ICC CYLINDERS.**

Parts 1510.1090 to 1510.1270 apply to stationary, nonrefrigerated storage installations utilizing containers other than those constructed in accordance with Interstate Commerce Commission specifications. All basic rules of parts 1510.0590 to 1510.1020 apply to parts 1510.1090 to 1510.1270 unless otherwise noted.

**Statutory Authority:** *MS s 17.725*

**1510.1100** [Repealed, 21 SR 277]

**1510.1110** [Repealed, 21 SR 277]

**1510.1120** [Repealed, 21 SR 277]

**1510.1130** [Repealed, 21 SR 277]

**1510.1140** [Repealed, 21 SR 277]

**1510.1150** [Repealed, 21 SR 277]

**1510.1160** [Repealed, 21 SR 277]

**1510.1170** [Repealed, 21 SR 277]

**1510.1180** [Repealed, 21 SR 277]

**1510.1190** [Repealed, 21 SR 277]

**1510.1200** [Repealed, 21 SR 277]

**1510.1210** [Repealed, 21 SR 277]

**1510.1220** [Repealed, 21 SR 277]

**1510.1230** [Repealed, 21 SR 277]

**1510.1240** [Repealed, 21 SR 277]

**1510.1250** [Repealed, 21 SR 277]

**1510.1260** [Repealed, 21 SR 277]

**1510.1270** [Repealed, 21 SR 277]

**1510.1280** [Repealed, 21 SR 277]

**1510.1290** [Repealed, 21 SR 277]

**1510.1300** [Repealed, 21 SR 277]

**1510.1310** [Repealed, 21 SR 277]

**1510.1320** [Repealed, 21 SR 277]

**1510.1330** [Repealed, 21 SR 277]

**1510.1340** [Repealed, 21 SR 277]

**1510.1350** [Repealed, 21 SR 277]

**1510.1360** [Repealed, 21 SR 277]

**1510.1370** [Repealed, 21 SR 277]

**1510.1380** [Repealed, 21 SR 277]

**1510.1390** [Repealed, 21 SR 277]

**1510.1400** [Repealed, 21 SR 277]

**1510.1410** [Repealed, 21 SR 277]

**1510.1420** [Repealed, 21 SR 277]

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SEEDS, FERTILIZERS, FEEDS

- 1510.1430 [Repealed, 21 SR 277]
- 1510.1440 [Repealed, 21 SR 277]
- 1510.1450 [Repealed, 21 SR 277]
- 1510.1460 [Repealed, 21 SR 277]
- 1510.1470 [Repealed, 21 SR 277]
- 1510.1480 [Repealed, 21 SR 277]
- 1510.1490 [Repealed, 21 SR 277]
- 1510.1500 [Repealed, 21 SR 277]
- 1510.1510 [Repealed, 21 SR 277]
- 1510.1520 [Repealed, 21 SR 277]
- 1510.1530 [Repealed, 21 SR 277]
- 1510.1540 [Repealed, 21 SR 277]
- 1510.1550 [Repealed, 21 SR 277]
- 1510.1560 [Repealed, 21 SR 277]
- 1510.1570 [Repealed, 21 SR 277]
- 1510.1580 [Repealed, 21 SR 277]
- 1510.1590 [Repealed, 21 SR 277]
- 1510.1600 [Repealed, 21 SR 277]
- 1510.1610 [Repealed, 21 SR 277]
- 1510.1620 [Repealed, 21 SR 277]
- 1510.1630 [Repealed, 21 SR 277]
- 1510.1640 [Repealed, 21 SR 277]
- 1510.1650 [Repealed, 21 SR 277]
- 1510.1660 [Repealed, 21 SR 277]
- 1510.1670 [Repealed, 21 SR 277]
- 1510.1680 [Repealed, 21 SR 277]
- 1510.1690 [Repealed, 21 SR 277]
- 1510.1700 [Repealed, 21 SR 277]
- 1510.1710 [Repealed, 21 SR 277]
- 1510.1720 [Repealed, 21 SR 277]
- 1510.1730 [Repealed, 21 SR 277]
- 1510.1740 [Repealed, 21 SR 277]
- 1510.1750 [Repealed, 21 SR 277]

# MINNESOTA RULES 2003

## 1510.1930 SEEDS, FERTILIZERS, FEEDS

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1510.1760 [Repealed, 21 SR 277]

1510.1770 [Repealed, 21 SR 277]

1510.1780 [Repealed, 21 SR 277]

1510.1790 [Repealed, 21 SR 277]

1510.1800 [Repealed, 21 SR 277]

1510.1810 [Repealed, 21 SR 277]

1510.1820 [Repealed, 21 SR 277]

1510.1830 [Repealed, 21 SR 277]

1510.1840 [Repealed, 21 SR 277]

1510.1850 [Repealed, 21 SR 277]

1510.1860 [Repealed, 21 SR 277]

1510.1870 [Repealed, 21 SR 277]

1510.1880 [Repealed, 21 SR 277]

1510.1890 [Repealed, 21 SR 277]

1510.1900 [Repealed, 21 SR 277]

1510.1910 [Repealed, 21 SR 277]

1510.1920 [Repealed, 21 SR 277]

## COMMERCIAL FEEDS

### 1510.1930 DEFINITIONS AND TERMS.

The names and definitions for commercial feeds shall be the Official Definition of Feed Ingredients adopted by the Association of American Feed Control Officials, except as the commissioner designates otherwise in specific cases.

The terms used in reference to commercial feeds shall be the Official Feed Terms adopted by the Association of American Feed Control Officials, except as the commissioner designates otherwise in specific cases.

**Statutory Authority:** *MS s 25.40*

### 1510.1935 COMMODITIES EXEMPT FROM DEFINITION OF COMMERCIAL FEED.

The following commodities are hereby declared exempt from the definition of commercial feed, under the provisions of Minnesota Statutes, section 25.33, subdivision 5: raw meat; and hay, straw, stover, silages, cobs, husks, hulls, and individual chemical compounds or substances when such commodities, compounds, or substances are not intermixed or mixed with other materials; provided that these commodities are not adulterated within the meaning of Minnesota Statutes, section 25.37, clause (A), (B), (C) or (D).

**Statutory Authority:** *MS s 25.40*

### 1510.1940 LABEL FORMAT.

Commercial feeds shall be labeled with the information prescribed in this rule on the principal display panel of the product and in the following general format:

A. Net weight.

B. Product name and brand name, if any.

C. If drugs are used:

(1) the word "medicated" shall appear directly following the product name in type size no smaller than one half the type size of the product name;

(2) the purpose of medication (claim statement);

(3) the required direction for use and precautionary statements or reference to their location if the detailed feeding directions and precautionary statements required by parts 1510.2170 and 1510.2180 appear elsewhere on the label; and

(4) an active drug ingredient statement listing the active drug ingredients by their established name and the amounts in accordance with part 1510.2100.

D. The guaranteed analysis of the feed as required under the provisions of Minnesota Statutes, section 25.35, clause (A), item (3), shall include the following items, unless exempted in item E, and in the order listed:

(1) minimum percentage of crude protein;

(2) the percentage of equivalent protein from nonprotein nitrogen as required in part 1510.2110;

(3) minimum percentage of crude fat;

(4) maximum percentage of crude fiber;

(5) minerals, to include, in the following order: minimum and maximum percentages of calcium (Ca); minimum percentages of phosphorus (P); minimum and maximum percentages of salt (NaCl); and other minerals;

(6) vitamins in such terms as specified in 1510.2090; and

(7) total sugars as invert on dried molasses products or products being sold primarily for their molasses content.

E. Guarantees for minerals are not required when there are no specific label claims and when the commercial feed contains less than 6-1/2 percent of mineral elements. Guarantees for vitamins are not required when the commercial feed is neither formulated for nor represented in any manner as a vitamin supplement. Guarantees for crude protein, crude fat, and crude fiber are not required when the commercial feed is intended for purposes other than to furnish these substances or they are of minor significance relating to the primary purpose of the product, such as drug premixes, mineral or vitamin supplements, and molasses.

F. Feed ingredients, collective terms for the grouping of feed ingredients, or appropriate statements as provided under the provisions of Minnesota Statutes, section 25.35, clause (A), item (4):

(1) The name of each ingredient as defined in the Official Definitions of Feed Ingredients published in the Official Publication of the Association of the American Feed Control Officials, common or usual name, or one approved by the commissioner.

(2) Collective terms for the grouping of feed ingredients as defined in the Official Definitions of Feed Ingredients published in the Official Publication of the Association of American Feed Control Officials in lieu of the individual ingredients; provided that: when a collective term for a group of ingredients is used on the label, individual ingredients within the group shall not be listed on the label; and the manufacturer shall provide the feed control official, upon request, with a listing of individual ingredients, within a defined group, that are or have been used in manufacturing facilities distributing in or into the state. The registrant may affix the statement "Ingredients as registered with the state" in lieu of the ingredient list on the label. The list of ingredients must be on file with the commissioner. This list shall be made available to the feed purchaser upon request.

G. Name and principal mailing address of the manufacturer or person responsible for distributing the feed. The principal mailing address shall include the

street address, city, state, and zip code. However, the street address may be omitted if it is shown in the current city directory or telephone directory.

**Statutory Authority:** *MS s 25.40*

#### **1510.1950 OTHER INFORMATION REQUIRED BY STATUTES.**

The information required in Minnesota Statutes, section 25.35, clause (A), (1) to (5) must appear in its entirety on one side of the label or on one side of the container. The information required by Minnesota Statutes, section 25.35, clause (A), (6) to (7) shall be displayed in a prominent place on the label or container but not necessarily on the same side as the above information. When the information required by Minnesota Statutes, section 25.35, clause (A), (6) to (7) is placed on a different side of the label or container, it must be referenced on the front side with a statement such as "see back of label for directions for use." None of the information required by Minnesota Statutes, section 25.35 shall be subordinated or obscured by other statements or designs.

**Statutory Authority:** *MS s 25.40*

#### **1510.2000 BRAND AND PRODUCT NAMES.**

The brand or product name must be appropriate for the intended use of the feed and must not be misleading. If the name indicates the feed is made for a specific use, the character of the feed must conform therewith. A mixture labeled "Dairy Feed," for example, must be suitable for that purpose. Commercial, registered brand, or trade names are not permitted in guarantees or ingredient listings.

**Statutory Authority:** *MS s 25.40*

#### **1510.2010 NAME DERIVED FROM ONE OR MORE INGREDIENTS OF MIXTURE.**

The name of a commercial feed shall not be derived from one or more ingredients of a mixture to the exclusion of other ingredients and shall not be one representing any components of a mixture unless all components are included in the name; provided, that if any ingredient or combination of ingredients is intended to impart a distinctive characteristic to the product which is of significance to the purchaser, the name of that ingredient or combination of ingredients may be used as a part of the brand name or product name if the ingredient or combination of ingredients is quantitatively guaranteed in the guaranteed analysis, and the brand or product name is not otherwise false or misleading. The word "protein" shall not be permitted in the product name of a feed that contains added nonprotein nitrogen.

**Statutory Authority:** *MS s 25.40*

#### **1510.2020 PERCENTAGE VALUE OR FIGURE USED IN BRAND NAME.**

When the name carries a percentage value, it shall be understood to signify protein and/or equivalent protein content only, even though it may not explicitly modify the percentage with the word "protein"; provided, that other percentage values may be permitted if they are followed by the proper description and conform to good labeling practice. When a figure is used in the brand name, except in mineral, vitamin, or other products where the protein guarantee is nil or unimportant, it shall be preceded by the word "number" or some other suitable designation.

**Statutory Authority:** *MS s 25.40*

#### **1510.2030 SINGLE-INGREDIENT FEEDS.**

Single-ingredient feeds shall have a product name in accordance with the designated definition of feed ingredients as recognized by the Association of American Feed Control Officials unless the commissioner designates otherwise.

**Statutory Authority:** *MS s 25.40*

**1510.2040 USE OF WORD "VITAMIN."**

The word "vitamin," or a contraction thereof, or any word suggesting vitamin can be used only in the name of a feed which is represented to be a vitamin supplement, and which is labeled with the minimum content of each vitamin declared, as specified in part 1510.2090.

**Statutory Authority:** *MS s 25.40*

**1510.2050 USE OF TERM "MINERALIZED."**

The term "mineralized" shall not be used in the name of a feed, except for "TRACE MINERALIZED SALT." When so used, the product must contain significant amounts of trace minerals which are recognized as essential for animal nutrition.

**Statutory Authority:** *MS s 25.40*

**1510.2060 TERMS "MEAT" AND "MEAT BY-PRODUCTS."**

The terms "meat" and "meat by-products" shall be qualified to designate the animal from which the meat and meat by-products is derived unless the meat and meat by-products are from cattle, swine, sheep, and goats.

**Statutory Authority:** *MS s 25.40*

**1510.2070 EXPRESSION OF GUARANTEES.**

The guarantees for crude protein, equivalent protein from nonprotein nitrogen, crude fat, crude fiber, and mineral guarantees (when required) will be in terms of percentage by weight.

**Statutory Authority:** *MS s 25.40*

**1510.2080 COMMERCIAL FEEDS CONTAINING MINERAL ELEMENTS.**

Commercial feeds containing 6-1/2 percent or more mineral elements shall include in the guaranteed analysis the minimum and maximum percentages of calcium (Ca), the minimum percentage of phosphorus (P), and if salt is added, the minimum and maximum percentage of salt (NaCl). Minerals, except salt (NaCl), shall be guaranteed in terms of percentage of the element. When calcium and/or salt guarantees are given in the guaranteed analysis, such shall be stated and conform to the following:

A. When the minimum is five percent or less, the maximum shall not exceed the minimum by more than one percentage point.

B. When the minimum is above five percent, the maximum shall not exceed the minimum by more than 20 percent and in no case shall the maximum exceed the minimum by more than five percentage points.

**Statutory Authority:** *MS s 25.40*

**1510.2090 GUARANTEES FOR MINIMUM VITAMIN CONTENT OF COMMERCIAL FEEDS AND FEED SUPPLEMENTS.**

Guarantees for minimum vitamin content of commercial feeds and feed supplements, when made, shall be stated on the label in milligrams per pound of feed except that: vitamin A, other than precursors of vitamin A, shall be stated in International or USP units per pound; vitamin D, in products offered for poultry feeding, shall be stated in International Chick Units per pound; vitamin D for other uses shall be stated in International or USP units per pound; vitamin E shall be stated in International or USP units per pound; guarantees for vitamin content on the label of a commercial feed shall state the guarantee as true vitamins, not compounds, with exception of the compounds pyridoxin hydrochloride, choline chloride, thiamine, and d-pantothenic acid; oil and premixes containing vitamin A or vitamin D or both may be labeled to show vitamin content in terms of units per gram.

**Statutory Authority:** *MS s 25.40*

**1510.2100 GUARANTEES FOR DRUGS.**

Guarantees for drugs shall be stated in terms of percent by weight, except:

A. antibiotics present at less than 2,000 grams per ton total of commercial feed shall be stated in grams per ton of commercial feed;

B. antibiotics present at 2,000 or more grams per ton total of commercial feed shall be stated in grams per pound of commercial feed;

C. labels for commercial feeds containing growth promotion and/or feed efficiency levels of antibiotics, which are to be fed continuously as the sole ration, are not required to make quantitative guarantees except as specifically noted in the federal food additive regulations for certain antibiotics wherein quantitative guarantees are required regardless of the level or purpose of the antibiotic;

D. the term "milligrams per pound" may be used for drugs or antibiotics in those cases where a dosage is given in "milligrams" in the feeding directions.

**Statutory Authority:** *MS s 25.40*

**1510.2110 COMMERCIAL FEEDS CONTAINING ADDED NONPROTEIN NITROGEN.**

Commercial feeds containing any added nonprotein nitrogen shall be labeled as follows:

A. Complete feeds, supplements, and concentrates containing added nonprotein nitrogen and containing five percent or more protein from natural sources shall be guaranteed as follows: crude protein, minimum, \_\_\_\_\_ percent. This includes not more than \_\_\_\_\_ percent equivalent protein from nonprotein nitrogen.

B. Mixed feed concentrates and supplements containing less than five percent protein from natural sources may be guaranteed as follows: equivalent crude protein from nonprotein nitrogen, minimum, \_\_\_\_\_ percent.

C. Ingredient sources of nonprotein nitrogen such as urea, diammonium phosphate, ammonium polyphosphate solution, ammoniated rice hulls, or other basic nonprotein nitrogen ingredients defined by the Association of American Feed Control Officials shall be guaranteed as follows: nitrogen, minimum, \_\_\_\_\_ percent. Equivalent crude protein from nonprotein nitrogen, minimum, \_\_\_\_\_ percent.

**Statutory Authority:** *MS s 25.40*

**1510.2120 MINERAL PHOSPHATIC MATERIALS FOR FEEDING.**

Mineral phosphatic materials for feeding purposes shall be labeled with the guarantee for minimum and maximum percentage of calcium (when present), the minimum percentage of phosphorus, and the maximum percentage of fluorine.

**Statutory Authority:** *MS s 25.40*

**1510.2130 INGREDIENTS.**

The name of each ingredient or collective term for the grouping of ingredients, when required to be listed, shall be the name as defined in the Official Definitions of Feed Ingredients as published in the Official Publication of the Association of American Feed Control Officials, the common or usual name, or one approved by the commissioner, and must be shown in letters or type of the same size. No reference to quality or grade of an ingredient shall appear in the ingredient statement of a feed. The term "dehydrated" may precede the name of any product that has been artificially dried.

**Statutory Authority:** *MS s 25.40*

**1510.2140 SINGLE-INGREDIENT PRODUCT.**

A single-ingredient product defined by the Association of American Feed Control Officials is not required to have an ingredient statement.

**Statutory Authority:** *MS s 25.40*

**1510.2150 TENTATIVE DEFINITIONS.**

Tentative definitions for ingredients shall not be used until adopted as official, unless no official definition exists or the ingredient has a common accepted name that requires no definition, e.g. sugar.

**Statutory Authority:** *MS s 25.40*

**1510.2160 WORD "IODIZED" IN CONNECTION WITH FEED INGREDIENT.**

When the word "iodized" is used in connection with a feed ingredient, the feed ingredient shall contain not less than 0.007 percent iodine, uniformly distributed.

**Statutory Authority:** *MS s 25.40*

**1510.2170 DIRECTIONS FOR USE AND PRECAUTIONARY STATEMENTS.**

Directions for use and precautionary statements on the labeling of all commercial feeds and customer-formula feeds containing additives (including drugs, special purpose additives, or nonnutritive additives) shall:

A. be adequate to enable safe and effective use for the intended purposes by users with no special knowledge of the purpose and use of such articles; and

B. include, but not be limited to, all information prescribed by all applicable regulations under the federal Food, Drug and Cosmetic Act.

Adequate directions for use and precautionary statements are required for feeds containing nonprotein nitrogen as specified in part 1510.2180.

Adequate directions for use and precautionary statements necessary for safe and effective use are required on commercial feeds distributed to supply particular dietary needs or for supplementing or fortifying the usual diet or ration with any vitamin, mineral, or other dietary nutrient or compound.

**Statutory Authority:** *MS s 25.40*

**1510.2180 NONPROTEIN NITROGEN.**

Nonprotein nitrogen products defined in the Official Publication of the Association of American Feed Control Officials are acceptable ingredients only in commercial feeds for ruminant animals as a source of equivalent crude protein and are not to be used in commercial feeds for other animals and birds. If the commercial feed contains more than 8.75 percent of equivalent crude protein from all forms of nonprotein nitrogen, added as such, or the equivalent crude protein from all forms of nonprotein nitrogen, added as such, exceeds one-third of the total crude protein, the label shall bear adequate directions for the safe use of feeds and a precautionary statement: "CAUTION: USE AS DIRECTED." The directions for use and the precautionary statement shall be in type of such size so placed on the label that they will be read and understood by ordinary persons under customary conditions of purchase and use.

On labels such as those for medicated feeds which bear adequate feeding directions and/or precautionary statements, the presence of added nonprotein nitrogen shall not require a duplication of the feeding directions or the precautionary statements as long as those statements include sufficient information to ensure the safe and effective use of this product due to the presence of nonprotein nitrogen.

**Statutory Authority:** *MS s 25.40*

**1510.2190 DRUG AND FEED ADDITIVES.**

Prior to approval of a registration application and/or approval of a label for commercial feeds which contain additives including drugs, special purpose additives, or nonnutritive additives the distributor may be required to submit evidence to prove the safety and efficacy of the commercial feed when used according to the directions furnished on the label. Satisfactory evidence of safety and efficacy of a commercial feed may be:

A. when the commercial feed contains such additives, the use of which conforms to the requirements of the applicable regulation in the Code of Federal Regulations, title 21, or which are "prior sanctioned" or "generally recognized as safe" for such use; or

B. when the commercial feed is itself a drug as defined in Minnesota Statutes, section 25.33, subdivision 8, and is generally recognized as safe and effective for the labeled use or is marketed subject to an application approved by the Food and Drug Administration under United States Code, title 21, section 360(b).

**Statutory Authority:** *MS s 25.40*

#### 1510.2200 ADULTERANTS.

For the purpose of Minnesota Statutes, section 25.37, clause (A), the terms "poisonous or deleterious substances" include but are not limited to the following:

A. fluorine and any mineral or mineral mixture which is to be used directly for the feeding of domestic animals and in which the fluorine exceeds 0.30 percent for cattle; 0.35 percent for sheep; 0.45 percent for swine; and 0.60 percent for poultry;

B. fluorine-bearing ingredients when used in such amounts that they raise the fluorine content of the total ration above the following amounts: 0.009 percent for cattle; 0.01 percent for sheep; 0.014 percent for swine; and 0.035 percent for poultry;

C. soybean meal, flakes, or pellets or other vegetable meals, flakes, or pellets which have been extracted with trichlorethylene or other chlorinated solvents;

D. sulfur dioxide, sulfurous acid, and salts of sulfurous acid when used in or on feeds or feed ingredients which are considered or reported to be a significant source of vitamin B<sub>1</sub> (Thiamine); and

E. artificial color that has not been cleared for safety for use in feeds. Evidence of safety must include a clearance for use of these color additives under the provisions of the federal Food, Drug and Cosmetic Act. No artificial color material shall be used to enhance the natural color of the feed or feed ingredient whereby inferiority would be concealed.

**Statutory Authority:** *MS s 25.40*

#### 1510.2210 WEED SEEDS.

All screenings or by-products of grains and seeds containing weed seeds, when used in commercial feed or sold as such to the ultimate consumer, shall be ground fine enough or otherwise treated to destroy the viability of such weed seeds so that the level of such viable weed seeds in the finished product shall not exceed the levels specified in Minnesota Statutes, sections 21.71 to 21.78.

**Statutory Authority:** *MS s 25.40*

#### 1510.2220 GOOD MANUFACTURING PRACTICES.

For the purposes of enforcement of Minnesota Statutes, section 25.37, clause (H), the commissioner adopts the following as current good manufacturing practices:

A. the regulations prescribing good manufacturing practices for medicated feeds as published in the Code of Federal Regulations, title 21, part 133, sections 133.100 to 133.110; and

B. the regulations prescribing good manufacturing practices for medicated premixes as published in the Code of Federal Regulations, title 21, part 133, sections 133.200 to 133.210.

**Statutory Authority:** *MS s 25.40*

### SEED POTATO CERTIFICATION

#### 1510.2300 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*

**1510.2305 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*

#### 1510.2310 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:

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*

#### 1510.2315 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 1 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*

#### 1510.2320 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 commis-

sioner shall authorize the planting of Certified class or Generation 5 class seed 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*

#### 1510.2325 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 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*

### 1510.2330 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.

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.

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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
Mycoplasmas	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

Mycoplasmas: 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	C
Severe Mosaic	0	0.1	0.2	0.3	0.3	1.00
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

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Total other viruses (S and X excluded)	0	0.1	0.2	0.3	0.3	0.5
Mycoplasmas	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

Mycoplasmas: 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*

## 1510.2335 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*

## 1510.2340 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*

## 1510.2345 WINTER-TESTING FEES.

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

**Statutory Authority:** *MS s 21.113*

## 1510.2350 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*

## 1510.2355 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.

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A. Condition. The potatoes must be, at the time of final inspection, of one variety, unwashed, fairly well-shaped, free from bacterial ring rot, 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, powdery 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, powdery, 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; and
  - v. late blight tuber rot, 1.0 percent; and
- (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]

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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, 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, powdery 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, powdery, 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; and
    - v. 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

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(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, 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, powdery, 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, powdery, 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; 26 SR 1141*