

**DEPARTMENT OF AGRICULTURE**  
**PESTICIDE AND PLANT PEST MANAGEMENT DIVISION**  
**REGULATION NO. 715. SEED LAW IMPLEMENTATION**

(By authority conferred on the director of the Department of Agriculture by section 11 of 1965 PAR 329, MCL 286.711.)

**R 285.715.1 Definitions.**

Rule 1. (1) The terms defined in the publication of the association of official seed analysts entitled "Rules for Testing Seed" volume 12, no. 3, 1988 edition, shall have the same meanings when used in Act No. 329 of the Public Acts of 1965, as amended, being S286.701 et seq. of the Michigan Compiled Laws, and these rules, unless otherwise defined in Act No. 329 of 1965, as amended. The definitions in the publication entitled "Rules for Testing Seed" are adopted by reference in these rules. The publication may be obtained from the Illinois Department of Agriculture, State Seed Lab, 801 E. Sangamon Avenue, Springfield, Illinois 62794-9281 or from the Michigan Department of Agriculture, Laboratory Division, 1615 South Harrison Road, East Lansing, Michigan 48823, at a cost of \$30.00.

(2) The terms defined in section 2 of Act No. 329 of the Public Acts of 1965, as amended, being S286.702 of the Michigan Compiled Laws, have the same meanings when used in these rules.

History: 1990 AACCS.

**R 285.715.2 Classification of crop and weed seed; adoption by reference of standards.**

Rule 2. The classification of crop and weed seed shall be pursuant to the provisions of the publication of the association of official seed analysts entitled "Handbook 25, Uniform Classification of Weed and Crop Seeds." The provisions of this publication are adopted by reference in these rules. The publication may be obtained from the Illinois Department of Agriculture, State Seed Lab, 801 E. Sangamon Avenue, Springfield, Illinois 62794-9281 or from the Michigan Department of Agriculture, Laboratory Division, 1615 South Harrison Road, East Lansing, Michigan 48823, at a cost of \$3.00.

History: 1990 AACCS.

**R 285.715.3 Testing procedures and tolerances; adoption by reference of standards.**

Rule 3. The testing procedures and tolerances set forth in the association of official seed analysts publication entitled "Rules for Testing Seed" are adopted by reference in these rules. The publication is available from the Illinois Department of Agriculture, State Seed Lab, 801 E. Sangamon Avenue, Springfield, Illinois 62794-9281 or from the

Michigan Department of Agriculture, Laboratory Division, 1615 South Harrison Road, East Lansing, Michigan 48823, at a cost of \$30.00.

History: 1990 AACCS.

**R 285.715.4 Kinds and commercial classes of agricultural seeds; labeling.**

Rule 4. The following kinds or commercial classes of agricultural seeds are generally labeled as to variety and shall be labeled to show the variety name or the words "Variety Not Stated":

- (a) Alfalfa.
- (b) Bahiagrass.
- (c) Barley.
- (d) Cranberry bean.
- (e) Black bean.
- (f) Small red bean.
- (g) Pink bean.
- (h) Small white bean.
- (i) White pea bean or navy bean.
- (j) Light red kidney bean.
- (k) Dark red kidney bean.
- (l) Great northern bean.
- (m) Yellow eye bean.
- (n) Pinto bean.
- (o) Horticultural bean.
- (p) White kidney bean.
- (q) Field beet.
- (r) Smooth brome.
- (s) Broomcorn.
- (t) Crimson clover.
- (u) Red clover.
- (v) White clover.
- (w) Field corn.
- (x) Popcorn.
- (y) Cotton.
- (z) Cowpea.
- (aa) Crambe.
- (bb) Tall fescue.
- (cc) Flax.
- (dd) Striate lespedeza.
- (ee) Foxtail millet.
- (ff) Pearl millet.
- (gg) Oat.
- (hh) Field pea.
- (ii) Peanut.
- (jj) Rice.
- (kk) Rye.

- (ll) Safflower.
- (mm) Sorghum.
- (nn) Sorghum-sudangrass.
- (oo) Soybean.
- (pp) Sudangrass.
- (qq) Sunflower.
- (rr) Tobacco.
- (ss) Birdsfoot trefoil.
- (tt) Triticale.
- (uu) Hard red winter wheat.
- (vv) Soft red winter wheat.
- (ww) Soft white winter wheat.
- (xx) Hard red spring wheat.
- (yy) Durum wheat.

History: 1990 AACS.

#### **R 285.715.5 Brand names.**

Rule 5. (1) Brand names and terms taken from trademarks may be associated with the kind and variety or mixtures of kinds or varieties or blends of varieties of seed as an indication of source; however, the names and terms shall be clearly indicated as being other than part of the name of the kind and variety, mixture, or blend. Brand names shall not be used in place of variety names or in any manner in which they may be interpreted as being a variety name.

(2) The brand name may incorporate the name of the variety in the complete brand name or be shown separately on the label. When the variety name is shown as being separate from the brand name, the variety name shall be adequately identified by using the term "Variety" preceding or following the variety designation.

History: 1990 AACS.

#### **R 285.715.6 Blend labeling.**

Rule 6. Seed that consists of 2 or more varieties of the same kind shall be designated as a blend. The word "blend" shall be shown as a part of the name of the blend. Blends or mixtures may be assigned brand names but not variety names. The labeling and advertisements of varietal blends shall not create the impression that the seed is a single variety. For example, the soybean blend that consists of 2 varieties could not be named "golden pod soybeans" because "golden pod" could be mistaken for a variety name. The same soybean blend could be labeled and represented in an advertisement as "gold pod brand soybean blend." If the variety names of the components making up the blend are shown on the label, the percentage, by weight, of each named variety shall be shown in the order of predominance.

History: 1990 AACS.

**R 285.715.7 Prohibited and restricted noxious weeds.**

Rule 7. (1) All of the following are prohibited noxious weeds:

- (a) Field bindweed, *Convolvulus arvensis*.
- (b) Hedge bindweed, *Convolvulus sepium*.
- (c) Canada thistle, *Cirsium arvense*.
- (d) Morning glory, *Ipomoea* species.
- (e) Puncturevine, *Tribulus terrestris*.
- (f) Plumeless thistle, *Carduus acanthoides*.
- (g) Musk thistle, *Carduus nutans*.
- (h) Bull thistle, *Cirsium vulgare*.
- (i) Perennial sowthistle, *Sonchus arvensis*.
- (j) Whitetop = hoary cress = perennial peppergrass, *Cardaria draba*.
- (k) Russian knapweed, *Centaurea picris*.
- (l) Spotted knapweed, *Centaurea maculosa*.
- (m) Leafy spurge, *Euphorbia esula*.
- (n) Quackgrass, *Agropyron repens* = *Elytrigia repens*.
- (o) Johnsongrass, *Sorghum halapense*, including *sorghum alnum* and seed which cannot be readily distinguished from Johnsongrass.

(p) Dodder, *Cuscuta* species.

(q) Horsenettle, *Solanum carolinense*.

(r) Yellow nutsedge, *Cyperus esculentus*, both seed and tubers.

(s) Serrated tussock, *Nasella trichotoma*.

(2) All of the following are restricted noxious weeds:

(a) Black mustard, *Brassica nigra*.

(b) Charlock, *Sinapis arvensis*.

(e) Indian mustard, *Brassica juncea*.

(d) Wild radish, *Raphanus raphanistrum*.

(e) Hoary alyssum, *Berteroa incana*.

(f) Buckhorn plantain, *Plantago lanceolata*.

(g) Wild carrot, *Daucus carota*.

(h) Wild onion, *Allium canadense*.

(i) Wild garlic, *Allium vineale*.

(j) Giant foxtail, *Setaria faberii*.

(k) Yellow rocket, *Barbarea vulgaris*.

(l) Curled dock, *Rumex crispus*.

(m) Velvetleaf, *Abutilon theophrasti*.

(n) Wild oat, *Avena fatua*.

(o) Jimsonweed, *Datura stramonium*.

(p) Cocklebur, *Xanthium strumarium*.

(q) Nightshade complex, including all of the following

*Solanum* species and any other species with indistinguishable seed:

(i) Bitter nightshade, *Solanum dulcamara*.

(ii) Black nightshade, *Solanum nigrum*.

(iii) Eastern black nightshade, *Solanum ptycanthum*.

(iv) Silverleaf nightshade = purple nightshade, *Solanum eleagnifolium*.

(v) Hairy nightshade, *Solanum sarrachoides*.

(3) The limit for restricted noxious weed seed is 1 seed of any or all of the restricted noxious weed seeds to 2,000 seeds of the seed sold, offered, exposed, or transported for sale, except that for buckhorn and yellow rocket, the limit is 1 seed to 1,000 seeds of the seed sold, offered, exposed, or transported for sale. If present in a lesser ratio, the restricted noxious weeds shall be named on the tag with the number per pound also shown on the tag, except that buckhorn and yellow rocket need not be shown on the tag unless they exceed 90 seeds per pound.

History: 1990 AACCS; 2015 AACCS.

**R 285.715.8 Agricultural and vegetable seed; labeling of hybrid seed percentages.**

Rule 8. When agricultural and vegetable seed consists of less than 95% hybrid seed, the percent which is hybrid shall be labeled parenthetically in direct association following the named variety, for example, Comet (85% hybrid). Varieties for which the pure seed consists of less than 75% hybrid seed shall not be labeled hybrids.

History: 1990 AACCS.

**R 285.715.9 Vegetable and herb seed; germination standards.**

Rule 9. (1) The minimum germination standards set forth in the following table, including hard seeds, shall apply for vegetable and herb seed:

**TABLE 1**  
**VEGETABLE AND HERB SEED MINIMUM GERMINATION STANDARDS**

Seed Name	Percent
Anise	50
Artichoke	60
Asparagus	70
Asparagus bean	75
Basil, sweet	70
Bean, garden (all varieties)	70
Bean, lima	70
Bean, runner	75
Beet, garden	65
Broadbean	75
Broccoli	75
Brussels sprouts	70
Cabbage	75
Cabbage, Chinese	75
Cabbage, tronchuda	75
Cantaloupe (see muskmelon)	
Caraway	55
Carrot	55
Catnip	40

Cauliflower	75
Celeriac	55
Celery	55
Chard, Swiss	65
Chervil, salad	65
Chicory	65
Chives	50
Citron	65
Collards	80
Coriander	70
Corn, popcorn	75
Corn, sweet	75
Cornsalad	70
Cowpea	75
Cress, garden	75
Cress, upland	60
Cress, watercress	40
Cucumber	80
Dandelion	60
Dill	60
Eggplant	60
Endive	70
Fennel, Florence	60
Fennel, sweet	50
Kale, all varieties	75
Kohlrabi	75
Lavender	40
Lettuce	80
Marjoram, sweet	50
Muskmelon	75
Mustard, India	75
Mustard, spinach	75
Okra	50
Onion	70
Onion, Welsh	70
Oregano	60
Pak-choi	75
Parsley	60
Parsnip	60
Pea	80
Peanut	60
Pepper	55
Pumpkin	75
Radish	75
Rhubarb	60
Roquette	60

Rosemary	30
Rutabaga	75
Sage	60
Salsify	75
Savory, summer	55
Sorrel	65
Soybean	75
Spinach	60
Spinach, New Zealand	40
Squash	75
Thyme	50
Tomato	75
Tomato, husk	50
Turnip	80
Watermelon	70

(2) The germination standard for all other vegetable and herb seed for which a standard has not been established shall be 50%.

History: 1990 AACCS.

**R 285.715.10 Flower seeds; labeling kind and variety or type and performance characteristics.**

Rule 10. (1) The requirements of section 5 of Act No. 329 of the Public Acts of 1965, as amended, being S286.705 of the Michigan Compiled Laws, which specify that flower seeds shall be labeled with the name of the kind and variety or a statement of type and performance characteristics as prescribed in these rules shall be met as follows:

(a) For seeds of plants grown primarily for their blooms, the following provisions apply:

(i) If the seeds are of a single named variety, the kind and variety shall be stated, for example, "Marigold, Butterball."

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

(iii) If the seeds consist of an assortment or mixture of colors or varieties of a single kind, the kind name, the type of plant, if significant, and the type or types of bloom shall be indicated. In addition, it shall be clearly indicated that the seed is mixed or assorted. An example of labeling such a mixture or assortment is, "Marigold, Dwarf Double French, Mixed Colors."

(b) If the seeds consist of an assortment or mixture of kinds or kinds and varieties, it shall be clearly indicated that the seed is assorted or mixed and the specific use of the assortment or mixture shall be indicated, for example, "Cut Flower Mixture," or "Rock Garden Mixture." Such statements as "General Purpose Mixture" or "Wonder Mixture" or any other statement which fails to indicate the specific use of the seed shall not be considered as meeting the requirements of this provision. Containers that have more than 3 grams of seed shall list the kind or kind and variety names of each component that is more than 5.0% of the total content by weight in the order of its predominance and

shall list the percentage by weight of each component. Components of 5.0% or less shall be listed, but need not be in order of predominance. A single percentage, by weight, shall be given for these components. If no component of a mixture is more than 5% of the total content, the statement "No component in excess of 5%" may be used. Containers that have 3 grams of seed or less shall list the components without giving the percentage by weight. Such listing need not be in order of predominance.

(2) The kinds of flower seeds listed in table 2 are those for which standard testing procedures have been prescribed and which are therefore required to be labeled in accordance with the germination labeling provisions of section 5 of Act No. 329 of the Public Acts of 1965, as amended, being S286.705 of the Michigan Compiled Laws.

TABLE 2  
FLOWER SEED GERMINATION STANDARDS

The percentage listed opposite each kind of flower seed is the germination standard for that kind. For the kinds of seed marked with an asterisk, the percentage is the total of percentage germination and percentage hard or dormant seed.

Seed Name	Percentage
Achillea (The Pearl) - Achillea ptarmica . . . . .	50
Adam's needle - Yucca filamentosa . . . . .	50
African daisy - Dimorphoteca aurantiaca . . . . .	55
African lilac daisy - Arctotis stoechadifolia. . . . .	50
African violet - Saintpaulia species . . . . .	30
Ageratum - Ageratum mexicanum . . . . .	60
Agrostemma (rose campion) - Agrostemma coronaria . .	65
Alyssum - Alyssum compactum, A. maritimum, A. procumbens, A. saxatile . . . . .	60
Amaranthus - Amaranthus species. . . . .	65
Anagalis (pimpernel) - Anagalis arvensis, Anagalis coerulea, Anagalis grandiflora . . . . .	60
Anchusa - Two genera species: Cape bugloss - Anchusa capensis Italian bugloss - Anchusa azura	
Forget-me-not - Brunnera macrophylla . . . . .	.50
Anemone - Anemone coronaria, A. pulsatilla . . . . .	.55
Angel's trumpet - Datura arborea . . . . .	.60
Arabis - Arabis alpina . . . . .	.60
Arctotis (African lilac daisy) - Arctotis grandis . . . .	45
Armeria - Armeria formosa . . . . .	55
Asparagus, fern - Asparagus plumosus . . . . .	50
Asparagus, sprenger - Asparagus sprengerigeri . . . .	55
Aster, China - Callistephus chinensis; except Pompom, Powderpuff, and Princess types . . . . .	55
Aubrieta - Aubrieta deltoides . . . . .	45
Baby smilax - Asparagus asparagoides . . . . .	25

Balloonvine - <i>Cardiospermum halicacebum</i> . . .	50
Balsam - <i>Impatiens balsamina</i> . . . . .	70
Beach evening primrose - <i>Camissonia cheiranthifolia</i> ( <i>Oenothera cheiranthifolia</i> ) . . . . .	50
Begonia - ( <i>Begonia fibrous rooted</i> ) . . . . .	60
Begonia - ( <i>Begonia tuberous rooted</i> ) . . . . .	50
Bells of Ireland - <i>Molucella laevis</i> . . . . .	60
Bellflower (Bluebells of Scotland) <i>Campanula</i> <i>rotundifolia</i> . . . . .	50
Bergamot - <i>Monarda species</i> . . . . .	50
Black-eyed Susan - <i>Rudbeckia hirta</i> . . . . .	50
Brachycome (Swan river daisy) - <i>Brachycome iberidifolia</i> .	60
Browallia - <i>Browallia elata</i> and <i>B. speciosa</i> . . . .	65
Buphthalmum (sunwheel) - <i>Buphthalmum salicifolium</i> . . . .	60
Buttercup - <i>Ranunculus species</i> . . . . .	50
Butterfly milkweed - <i>Asclepias tuberosa</i> . . . . .	50
Cactus - <i>Cactaceae</i> . . . . .	50
Calceolaria - <i>Calceolaria species</i> . . . . .	60
Calendula - <i>Calendula officinalis</i> . . . . .	65
Californica poppy - <i>Eschscholtzia californica</i> . . . .	60
Calliopsis - <i>Coreopsis bicolor</i> , <i>C. drummondii</i> , <i>C. elegans</i>	65
Camomile, golden - <i>Anthemis tinctoria</i> . . . . .	50
Camomile, St. John's - <i>Anthemis sancti-johannis</i>	50
Campanula:	
Canterbury bells - <i>Campanula medium</i> . . . . .	60
Cup and saucer bellflower - <i>Campanula medium</i> <i>calycanthema</i> . . . . .	60
Carpathian bellflower - <i>Campanula carpatica</i> . . . .	50
Peach bellflower - <i>Campanula persicifolia</i> . . . . .	50
Campion, clammy - <i>Lychnis viscaria</i> . . . . .	50
Candytuft, annual - <i>Iberis gibraltaria</i> , <i>I. umbellata</i> .	65
Candytuft, perennial - <i>Iberis amara</i> , <i>I. sempervirens</i> .	55
*Castor bean - <i>Ricinus communis</i> . . . . .	60
Cathedral bells - <i>Cobaea scandens</i> . . . . .	65
Celosia - <i>Celosia argentea</i> . . . . .	65
Centaurea:	
Basket flower - <i>Centaurea americana</i>	
Cornflower - <i>C. cyanus</i>	
Dusty Miller - <i>C. Candidissima</i>	
Royal centaurea - <i>C. imperialis</i>	
Sweet sultan - <i>C. moschata</i>	
Velvet centaurea - <i>C. gymnocarpa</i> . . . . .	60
Cerastium (snow-in-summer) <i>Cerastium biebersteini</i> and <i>C. tomentosum</i> . . . . .	65
Chinese forget-me-not - <i>Cynoglossum amabile</i> . . . . .	55
Chinese Houses - <i>Collinsia heterophylla</i> . . . . .	50

Chrysanthemum, annual - Chrysanthemum carinatum, C. coronarium, C. segetum . . . . .	40	
Cineraria - Senecio cruentus . . . . .	60	
Clarkia - Clarkia elegans . . . . .	65	
Cleome - Cleome gigantea . . . . .	65	
Coleus - Coleus blumei . . . . .	65	
Columbine - Aquilegia species . . . . .	50	
Coral bells - Heuchera sanguinea . . . . .	55	
Coreopsis, perennial - Coreopsis lanceolata . . . . .	40	
Corn, ornamental - Zea mays . . . . .	75	
Cosmos:		
Sensation, mammoth, and crested types - Cosmos bipinnatus		
Klondyke type - C. sulphureus . . . . .	65	
Crossandra - Crossandra infundibuliformis . . . . .	50	
Cyclamen - Cyclamen africanum . . . . .	50	
Dahlia - Dahlia species . . . . .	55	
Dames rocket - Hesperis matronalis . . . . .	50	
Daylily - Hemerocallis species . . . . .	45	
Delphinium, perennial:		
Belladonna and bellamosum types		
Cardinal larkspur - Delphinium cardinale		
Chinensis types		
Pacific giant, gold medal and other hybrids of D. elatum . . . . .		55
Devils claws - Proboscidea louisianica . . . . .	50	
Dianthus:		
Carnation - Dianthus caryophyllus . . . . .	60	
China pinks - Dianthus chinensis, heddewigi, heddensis .	70	
Grass pinks - Dianthus plumarius . . . . .	60	
Maiden pinks - Dianthus deltoides . . . . .	60	
Sweet William - Dianthus barbatus . . . . .	70	
Sweet Wivelsfield - Dianthus allwoodi . . . . .	60	
Didiscus - (blue lace flower) - Didiscus coerulea . . .	65	
Dittany - Dictamus albus . . . . .	50	
Doronicum (leopard's bane) - Doronicum caucasicum . . .	60	
Dracaena - Dracaena indivisa . . . . .	55	
Dragon tree - Dracaena draco . . . . .	40	
Edelweiss - Leontopodium alpinum . . . . .	50	
English daisy - Bellis perennis . . . . .	55	
Euphorbia, painted - Euphorbia heterophylla . . . . .	50	
Evening primrose - Oenothera biennis, O. argillicola . .	50	
Everlasting pea - Lathyrus latifolius . . . . .	50	
Flame violet - Episcia species . . . . .	50	
Flax:		
Golden flax, Linum flavum		

Flowering flax, <i>L. grandiflorum</i>	
Perennial flax, <i>L. perenne</i> . . . . .	60
Fleece flower - <i>Polygonum capitatum</i> . . . . .	50
Flowering maple - <i>Abutilon</i> species . . . . .	35
Foxglove - <i>Digitalis</i> species . . . . .	60
Fuschia - <i>Fuschia</i> species . . . . .	50
Gaillardia:	
Annual - <i>Gaillardia pulchella</i> , <i>G. picta</i>	
Perennial - <i>G. grandiflora</i> . . . . .	45
Gasplant - <i>Distamus albus</i> . . . . .	50
Gayfeather (blazing star) - <i>Liatris</i> species . . . . .	50
Gazania, pied - <i>Gazania rigens</i> . . . . .	50
Geranium - <i>Geranium</i> species . . . . .	50
Gerbera (transvaal daisy) - <i>Gerbera jamesoni</i> . . . . .	60
German violet - <i>Exacum affine</i> . . . . .	50
Geum - <i>Geum</i> species . . . . .	55
Gilia - <i>Gilia</i> species . . . . .	65
Gladiolus - <i>Gladiolus</i> species . . . . .	50
Globe amaranth - <i>Gomphrena globosa</i> . . . . .	50
Globethistle, small - <i>Echinops ritro</i> . . . . .	50
Gloriosa daisy (rudbeckia) - <i>Echinacea purpurea</i> and <i>Rudbeckia hirta</i> . . . . .	60
Gloxinia - <i>Sinningia speciosa</i> . . . . .	40
Godetia - <i>Godetia amoena</i> , <i>G. grandiflora</i> . . . . .	65
Goldmoss sedum - <i>Sedum acre</i> . . . . .	50
Gourds:	
Yellow flowered - <i>Cucurbita pepo</i>	
White flowered - <i>Lagenaria sisceraria</i>	
Dishcloth - <i>Luffa cylindrica</i> . . . . .	70
Gypsophila:	
Annual baby's breath - <i>Gypsophila elegans</i>	
Perennial baby's breath - <i>G. paniculata</i> , <i>G. pacifica</i> , <i>G. repens</i> . . . . .	70
Helenium - <i>Helenium autumnale</i> . . . . .	40
Helichrysum (strawflower) - <i>Helichrysum bracteatum</i> . . .	60
Heliopsis - <i>Heliopsis scabra</i> . . . . .	55
Heliotrope - <i>Heliotropium</i> species . . . . .	35
Helipterum (acroclinium) - <i>Helipterum roseum</i> . . . . .	60
Hens and chickens - <i>Sempervivum</i> species . . . . .	50
Herb treemallow - <i>Lavatera trimestris</i> . . . . .	50
Hesperis (sweet rocket) - <i>Hesperis matronalis</i> . . . . .	65
Hibiscus - <i>Hibiscus</i> species . . . . .	60
*Hollyhock - <i>Althea rosea</i> . . . . .	65
Hunnemania (mexican tulip poppy) - <i>Hunnemania fumariaefolia</i> . . . . .	60
*Hyacinth bean - <i>Lablab purpureus</i> . . . . .	70

Impatiens - Impatiens holstii, I. sultani . . . . .	55
*Ipomea:	
Cypress vine - Ipomea quamoclit	
Moonflower - I. noctiflora	
Morning glories, cardinal climber, hearts and honey vine - Ipomea species . . . . .	75
Japanese Iris - Iris kaempferi . . . . .	50
Jasmine primrose - Oenothera pallida . . . . .	50
Jerusalem cross (maltese cross) - Lychnis chalconica .	70
Job's tears - Coix lacrymajobi . . . . .	70
Jupiter's beard - Centranthus ruber . . . . .	50
Kalanchoe - Kalanchoe blossfeldiana . . . . .	50
Kochia - Kochia childsi . . . . .	55
Larkspur, annual - Delphinium ajacis . . . . .	60
Lamb's ear - Stachys byzantina . . . . .	50
Lantana - Lantana camara, L. hybrida . . . . .	35
Lemon mint - Monarda citriodora . . . . .	50
Lilium (regal lily) - Lilium regale . . . . .	50
Linaria - Linaria species . . . . .	65
Livingstone daisy (iceplant) - Dorotheanthus belliformis	50
Lobelia, annual - Lobelia erinus . . . . .	65
Lunaria, annual - Lunaria annua . . . . .	65
*Lupine - Lupinus species . . . . .	65
Maltese cross - Lychnis coronaria . . . . .	50
Marigold - Tagetes species . . . . .	65
Marvel of Peru (four o'clock) - Mirabilis jalapa . . . .	60
Matricaria (feverfew) - Matricaria species . . . . .	60
Mignonette - Reseda odorata . . . . .	55
Monarch daisy - Venidium fastuosum . . . . .	50
Mullein pink - Lychnis coronaria . . . . .	50
Myosotis - Myosotis alpestris, M. oblongata, M. palustris . . . . .	50
Nasturtium - Tropaeolum species . . . . .	60
Nemesia - Nemesia species . . . . .	65
Nemophila - Nemophila insignis . . . . .	70
Nemophila, spotted - Nemophila maculata . . . . .	60
New England aster - Aster novae-angliae . . . . .	50
Nicotiana - Nicotiana affinis, N. sanderae, N. sylvestris . . . . .	65
Nierembergia - Nierembergia species . . . . .	55
Nigella - Nigella damascena . . . . .	55
Oregon fleabane - Erigeron speciosus . . . . .	50
Ozark sundrops - Oenothera macrocarpa, (Oenothera missouriensis) . . . . .	50
Pansy - Viola tricolor . . . . .	60
Pearlwort - Sagina sabulata . . . . .	50

Pearly everlasting - <i>Anaphalis margaritacea</i> . . . . .	50
Penstemon - <i>Penstemon barbatus</i> , <i>P. grandiflorus</i> , <i>P. laevigatus</i> , <i>P. pubescens</i> . . . . .	60
Peppermint - <i>Mentha piperita</i> . . . . .	50
Periwinkle - <i>Catharanthus roseus</i> . . . . .	50
Petunia - <i>Petunia</i> species . . . . .	45
Phacelia - <i>Phacelia campanularia</i> , <i>P. minor</i> , <i>P. tanacetifolia</i> . . . . .	65
Phlox, annual - <i>Phlox drummondii</i> all types and varieties	55
Physalis - <i>Physalis</i> species . . . . .	60
Platycodon (balloon flower) - <i>Platycodon grandiflorum</i>	60
Plumbago, cape - <i>Plumbago capensis</i> . . . . .	50
Polka-dot plant - <i>Hypoestes phyllostachya</i> . . . . .	50
Ponytail - <i>Beaucarnea recurvata</i> . . . . .	40
Poppy:	
Shirley poppy - <i>Papaver rhoeas</i>	
Iceland poppy - <i>P. nudicaule</i>	
Oriental poppy - <i>P. orientale</i>	
Tulip poppy - <i>P. glaucum</i> . . . . .	60
Portulaca - <i>Portulaca grandiflora</i> . . . . .	55
Prairie coneflower - <i>Ratibida columnifera</i> . . . . .	50
Prairie gentian - <i>Eustoma grandiflorum</i> . . . . .	50
Primula (primrose) - <i>Primula</i> species . . . . .	50
Purple coneflower - <i>Echinacea purpurea</i> . . . . .	50
Purple loosetrife - <i>Lythrum salicaria</i> . . . . .	50
Pyrethrum (painted daisy) - <i>Pyrethrum coccineum</i> . . . .	60
Rock rose - <i>Helianthemum nummularium</i> . . . . .	50
Rose campion - <i>Lynchnis coronaria</i> . . . . .	50
Salpiglossis - <i>Salpiglossis gloxinaeflora</i> , <i>S. sinuata</i> .	60
Salvia:	
Scarlet sage - <i>Salvia splendens</i>	
Mealycup sage (blue bedder) - <i>Salvia farinacea</i> . . . .	50
Saponaria - <i>Saponaria ocymoides</i> , <i>S. vaccaria</i> . . . . .	60
Scabiosa, annual - <i>Scabiosa atropurpurea</i> . . . . .	50
Scabiosa, perennial - <i>Scabiosa caucasica</i> . . . . .	40
Schizanthus - <i>Schizanthus</i> species . . . . .	60
*Sensitive plant (mimosa) - <i>Mimosa pudica</i> . . . . .	65
Shasta daisy - <i>Chrysanthemum maximum</i> , <i>C. leucanthemum</i> .	65
Silk oak - <i>Grevillea robusta</i> . . . . .	25
Snapdragon - <i>Antirrhinum</i> species . . . . .	55
Snow-on-the-mountain - <i>Euphorbia marginata</i> . . . . .	50
Solanum - <i>Solanum</i> species . . . . .	60
Speedwell, Hungarian - <i>Veronica austriaca</i> . . . . .	50
Speedwell, spike - <i>Veronica spicata</i> . . . . .	50
Spiderflower - <i>Cleome hasslerana</i> . . . . .	50
Statice - <i>Statice sinuata</i> , <i>S. suworonii</i> (flower heads) .	50

Stocks:

Common - <i>Mathiola incana</i>	
Evening scented, <i>Mathiola bicornis</i> . . . . .	65
Sunflower - <i>Helianthus</i> species . . . . .	70
Sunflower, <i>Inula</i> - <i>Inula grandiflora</i> . . . . .	50
Sunrose - <i>Helianthemum</i> species . . . . .	30
Swan river daisy - <i>Brachycome iberidifolia</i> . . . . .	50
*Sweet pea, annual and perennial other than dwarf bush <i>Lathyrus odoratus</i> , <i>L. latifolius</i> . . . . .	75
*Sweet pea, dwarf bush - <i>Lathyrus odoratus</i> . . . . .	65
Sweet sultan - <i>Amberboa moschata</i> . . . . .	50
Sweet William catchfly - <i>Silene armeria</i> . . . . .	50
Tahoka daisy - <i>Machaeantha tanacetifolia</i> . . . . .	60
Tansy - <i>Tanacetum vulgare</i> . . . . .	50
Texas bluebonnet - <i>Lupinus subcarnosus</i> . . . . .	50
Thunbergia - <i>Thunbergia alata</i> . . . . .	60
Tidy tips daisy - <i>Layia platyglossa</i> . . . . .	50
Tiger monkeyflower - <i>Mimulus</i> hybrids . . . . .	50
Torch flower - <i>Tithonia speciosa</i> . . . . .	70
Torenia (wishbone flower) - <i>Torenia fournieri</i> . . . . .	70
Transvaal daisy - <i>Gerbera jamesoni</i> . . . . .	50
Tritoma (torch lily) - <i>Kniphofia</i> species . . . . .	65
Unicorn plant - <i>Proboscidea louisianica</i> . . . . .	50
Verbena, annual - <i>Verbena hybrida</i> . . . . .	35
Vinca - <i>Vinca rosea</i> . . . . .	60
Viola - <i>Viola cornuta</i> . . . . .	55
Virginian stocks - <i>Malcolmia maritime</i> . . . . .	65
Wallflower - <i>Cheiranthus allioni</i> ; <i>Erysimum x allionii</i> . . . . .	65
Willowleaf oxeye - <i>Buphthalmum salicifolium</i> . . . . .	50
Wooly marigold - <i>Baileya multiradiata</i> . . . . .	50
Yarrow - <i>Achillea millefolium</i> . . . . .	50
Yucca (Adam's needle) - <i>Yucca filamentosa</i> . . . . .	50
Zinnia (except <i>Linearis</i> and creeping) - <i>Zinnia</i> <i>angustifolia</i> , <i>Z. elegans</i> , <i>Z. grandiflora</i> , <i>Z. gracillima</i> , <i>Z. haegeana</i> , <i>Z. multiflora</i> , <i>Z. pumila</i> . . . . .	65
<i>Zinnia</i> , <i>Linearis</i> and creeping - <i>Zinnia linearis</i> , <i>Sanvitalia procumbens</i> . . . . .	50
All other kinds . . . . .	50

(3) A mixture of kinds of flower seeds will be considered to be below standard if the germination of any kind or combination of kinds that constitutes 25% or more of the mixture, by number, is below standard for the kind or kinds involved.

History: 1990 AACS.

**R 285.715.11 Tree seed germination standards.**

Rule 11. The germination labeling provisions of section 6 of Act No. 329 of the Public Acts of 1965, as amended, being S286.706 of the Michigan Compiled Laws, apply to the tree and shrub species listed in table 3. The minimum germination standard for species of *Pinus* and *Picea* shall be 60%.

TABLE 3.  
TREE SEED GERMINATION STANDARDS

*Abies amabilis* (Dougl.) Forbes - Pacific silver fir  
*Abies balsamea* (L.) Mill, - balsam fir  
*Abies concolor* (Gord. & Glend.) Lindl. - white fir  
*Abies fraseri* (Pursh) Poir - Fraser fir  
*Abies grandis* (Dougl.) Lindl. - grand fir  
*Abies homolepis* Sieb. & Zucc. - Nikko fir  
*Abies lasiocarpa* (Hook.) Nutt. - subalpine fir  
*Abies magnifica* A. Murr. - California red fir  
*Abies magnifica* var. *shastensis* Lemm. - shasta red fir  
*Abies procera* Rehd. - nobel fir  
*Abies veitchii* (Lindl.) - veitch fir  
*Acer ginnala* Maxim. - amur maple  
*Acer macrophyllum* Pursh. - bigleaf maple  
*Acer negundo* L. - boxelder  
*Acer pensylvanicum* L. - striped maple  
*Acer platanoides* L. - sycamore maple  
*Acer rubrum* L. - red maple  
*Acer saccharinum* L. - silver maple  
*Acer saccharum* Marsh, - sugar maple  
*Acer spicatum* Lam. - mountain maple  
*Aesculus pavia* L. - red buckeye  
*Ailanthus altissima* (Mill.) swingle - tree of heaven, ailan thus  
*Berberis thunbergii* DC. - Japanese barberry  
*Berberis vulgaris* L. - European barberry  
*Betula lenta* L. - sweet birch  
*Betula nigra* L. - river birch  
*Betula papyrifera* Marsh. - paper birch  
*Betula pendula* Roth. - European white birch  
*Betula populifolia* Marsh. - gray birch  
*Carya illinoensis* (Wang.) K. Koch - pecan  
*Carya ovata* (Mill) K. Koch - shagbark hickory  
*Casuarina* species - beefwood  
*Catalpa bignonioides* Walt. - southern catalpa  
*Cedrus atlantica* Manetti - atlas cedar  
*Cedrus libani* (Loud.) - cedar of Lebanon  
*Celastrus scandens* L. - American bittersweet  
*Celastrus orbiculata* Thunb. - oriental bittersweet  
*Chamaecyparis lawsoniana* (A. Murr.) Parl - Port Orford cedar

*Chamaecyparis nootkatensis* (D. Don.) Spach. - Alaska cedar  
*Cornus florida* L. - flowering dogwood  
*Cornus stolonifera* Mich. - red-osier dogwood  
*Crataegus mollis* - downy hawthorn  
*Cupressus arizonica* Greene - Arizona cypress  
*Eucalyptus deglupta*  
*Eucalyptus grandis*  
*Fraxinus americana* L. - white ash  
*Fraxinus excelsior* L. - European ash  
*Fraxinus latifolia* Benth. - Oregon ash  
*Fraxinus nigra* Marsh. - black ash  
*Fraxinus pensylvanica* Marsh. - green ash  
*Fraxinus pensylvanica* var. *lanceolata* (Borkh.) Sarg. - green ash  
*Gleditsia triacanthos* L. - honey locust  
*Grevillea robusta* - silk-oak  
*Larix decidua* Mill. - European larch  
*Larix eurolepis* Henry - Dunkfeld larch  
*Larix leptolepis* - (Sieb. & Zucc.) Gord. - Japanese larch  
*Larix occidentalis* Nutt. - western larch  
*Larix sibirica* Ledeb. - Siberian larch  
*Libocedrus decurrens* - incense-cedar  
*Liquidambar styraciflua* L. - sweetgum  
*Liriodendron tulipifera* L. - yellow-poplar  
*Magnolia grandiflora* - southern magnolia  
*Malus* species - apple  
*Malus* species - crabapple  
*Nyssa aquatica* L. - water tupelo  
*Nyssa sylvatica* var. *sylvatica* - black tupelo  
*Picea abies* (L.) Karst. - Norway spruce  
*Picea engelmanni* Parry - Engelmann spruce  
*Picea glauca* (Moench.) Voss - white spruce  
*Picea glauca* var. *albertiana* (S. Brown) Sarg. - western white spruce,  
 Alberta white spruce  
*Picea glehnii* (Fr. Schmidt) Mast. - Sakhalin spruce  
*Picea jezoensis* (Sieb. & Zucc.) Carr - Yeddo spruce  
*Picea koyamai* Shiras. - Koyama spruce  
*Picea mariana* (Mill.) B.S.P. - black spruce  
*Picea omorika* a(Pancic.) Purkyne - Serbian spruce  
*Picea orientalis* (L.) Link. - oriental spruce  
*Picea polita* (Sieb. & Zucc.) Carr - tigertail spruce  
*Picea pungens* Engelm. - blue spruce, Colorado spruce  
*Picea pungens* var. *glauca* Reg. - Colorado blue spruce  
*Picea rubens* Sarg. - red spruce  
*Picea sitchensis* (Bong.) Carr - Sitka spruce  
*Pinus albicaulis* Engelm. - whitebark pine  
*Pinus aristata* Engelm. - bristlecone pine

Pinus banksiana Lamb. - jack pine  
 Pinus canariensis C. Smith - canary pine  
 Pinus caribaea - Caribbean pine  
 Pinus cembroides Zucc. - Mexican pinyon pine  
 Pinus clausa - sand pine  
 Pinus contorta Dougl. - lodgepole pine  
 Pinus contorta var. latifolia Engelm. - lodgepole pine  
 Pinus coulteri D. Don. - Coulter pine, bigcone pine  
 Pinus densiflora Sieb. & Zucc. - Japanese red pine  
 Pinus echinata Mill. - shortleaf pine  
 Pinus elliottii Engelm. - slash pine  
 Pinus flexilis James - limber pine  
 Pinus glabra Walt. - spruce pine  
 Pinus griffithii McClelland - Himalayan pine  
 Pinus halepensis Mill. - Aleppo pine  
 Pinus jeffreyi Grev. & Balf. - Jeffrey pine  
 Pinus khasya Royle - Khasia pine  
 Pinus lambertiana Dougl. - sugar pine  
 Pinus heldreichii var. leucodermis (Ant.) Markgraf ex Fitschen - Balkans pine, Bosnian pine  
 Pinus markusii DeVriese - Markus pine  
 Pinus monticola Dougl. - western white pine  
 Pinus mugo Turra. - mountain pine  
 Pinus mugo var. mughus (Scop.) Zenari - Mugo Swiss mountain pine  
 Pinus muricata D. Don. - bishop pine  
 Pinus nigra Arnold - Austrian pine  
 Pinus nigra poiretiana (Ant.) Aschers & Graebn. - Corsican pine  
 Pinus palustris Mill. - longleaf pine  
 Pinus parviflora Sieb. & Zucc. - Japanese white pine  
 Pinus patula Schl. & Cham. - Jelecote pine  
 Pinus pinaster Sol. - cluster pine  
 Pinus pinea L. - Italian stone pine  
 Pinus ponderosa Laws. - ponderosa pine, western yellow pine  
 Pinus radiata D. Don. - Monterey pine  
 Pinus resinosa Ait. - red pine, Norway pine  
 Pinus rigida Mill. - pitch pine  
 Pinus serotina Michx. - pond pine  
 Pinus strobus L. - eastern white pine  
 Pinus sylvestris L. - scotch pine  
 Pinus taeda L. - loblolly pine  
 Pinus taiwanensis Hayata - Formosa pine  
 Pinus thunbergii Parl. - Japanese black pine  
 Pinus virginiana Mill. - Virginia pine, scrub pine  
 Platanus occidentalis L. - American sycamore  
 Populus species - poplars  
 Prunus armeriaca L. - apricot

Prunus avium (L.) L. - cherry  
 Prunus domestica L. - plum, prune  
 Prunus persica Batsch. - peach  
 Pseudotsuga menziesii var. glauca (Beissn.) Franco - blue Douglas fir  
 Pseudotsuga menziesii var. caesia (Beissn.) Franco - gray Douglas fir  
 Pseudotsuga menziesii var. viridis - green Douglas fir  
 Pyrus communis L. - pear  
 Quercus species - (red or black oak group)  
 Quercus alba - L. - white oak  
 Quercus muehlenbergii Engelm. - Chinkapin oak  
 Quercus virginiana Mill. - live oak  
 Rhododendron species - rhododendron  
 Robinia pseudoacacia L. - black locust  
 Rosa multiflora Thunb. - Japanese rose  
 Sequoia gigantea (Lindl.) Decne. - giant sequoia  
 Sequoia sempervirens (D. Don.) Engl. - redwood  
 Syringa vulgaris L. - common lilac  
 Thuja occidentalis L. - northern white cedar, eastern arborvitae  
 Thuja orientalis L. - oriental arborvitae, Chinese arborvitae  
 Thuja plicata Donn. - western red cedar - giant arborvitae  
 Tsuga canadensis (L.) Carr. - eastern hemlock, Canada hemlock  
 Tsuga heterophylla (Raf.) Sarg. - western hemlock, Pacific hemlock  
 Ulmus americana L. - American elm  
 Ulmus parvifolia Jacq. - Chinese elm  
 Ulmus pumila L. - Siberian elm  
 Vitis vulpina L. - riverbank grape

History: 1990 AACCS.

**R 285.715.12 Hermetically sealed containers.**

Rule 12. A germination test for seed in hermetically sealed containers shall apply for a period of 36 months if all of the following conditions are met:

- (a) The seed was packaged within 9 months after harvest.
- (b) The container used does not allow water vapor penetration (WVP) through any wall, including the seals, at a rate of more than 0.05 grams of water per 24 hours per 100 square inches of surface at 100 degrees Fahrenheit with a relative humidity (RH) on 1 side of 90% and on the other side of 0%. Water vapor penetration is measured by the standards of the United States bureau of standards as: Gm. H<sub>2</sub>O/24 hr./100 sq. in./100oF./90% RH V.0% RH.
- (c) The seed in the container does not exceed the percentage of moisture, on a wet-weight basis, as listed in the following table:

**TABLE 4**

### Agricultural Seeds

Seeds	Percent
Beet, field	7.5
Beet, sugar	7.5
Bluegrass, Kentucky	6.0
Clover, crimson	8.0
Fescue, red	8.0
Ryegrass, annual	8.0
Ryegrass, perennial	8.0
All others	6.0

### Vegetable Seeds

Seeds	Percent
Bean, garden	7.0
Bean, lima	7.0
Beet	7.5
Broccoli	5.0
Brussels sprouts	5.0
Cabbage	5.0
Carrot	7.0
Cauliflower	5.0
Celeriac	7.0
Celery	7.0
Chard, Swiss	7.5
Chinese cabbage	5.0
Chives	6.5
Collards	5.0
Corn, sweet	8.0
Cucumber	6.0
Eggplant	6.0
Kale	5.0
Kohlrabi	5.0
Leek	6.5
Lettuce	5.5
Muskmelon	6.0
Mustard, India	5.0
Onion	6.5
Onion, Welsh	6.5
Parsley	6.5
Parsnip	6.0
Pea	7.0
Pepper	4.5
Pumpkin	6.0
Radish	5.0
Rutabaga	5.0
Spinach	8.0

Squash	6.0
Tomato	5.5
Turnip	5.0
Watermelon	6.5
All others	6.0

(d) The container is conspicuously labeled in not less than 8-point type to indicate all of the following:

- (i) That the container is hermetically sealed.
- (ii) That the seed has been preconditioned as to moisture content.
- (iii) The calendar month and year in which the germination test was completed.
- (e) The percentage of germination of vegetable seed at the time of packaging was equal to or above the standards specified in R 285.715.9.

History: 1990 AACCS.

**R 285.715.13 Laboratory seed testing fees.**

Rule 13. (1) The fees of \$6.00 for purity testing, \$5.00 for germination testing, and \$10.00 for purity and germination testing are the fees for general crops which include all of the following:

- (a) Corn.
- (b) Cereals.
- (c) Soybeans.
- (d) Field beans.
- (e) Field peas.
- (f) Buckwheat.
- (g) Millet.
- (h) Rape.
- (i) Flax.
- (j) Sunflower.
- (k) Vetch.
- (l) Clovers.
- (m) Trefoil.
- (n) Alfalfa.
- (o) Lespedeza.
- (p) Timothy.
- (q) Sorghum.
- (r) Vegetables and similar kinds of crops.

(2) The fees of \$8.00 for purity testing, \$7.00 for germination testing, and \$14.00 for purity and germination testing are the fees for grasses, which include all of the following:

- (a) Bromes.
- (b) Fescues.
- (c) Orchardgrass.
- (d) Reed canarygrass.
- (e) Wheatgrasses.
- (f) Bluegrasses.

- (g) Bentgrass.
  - (h) Red top.
  - (i) Ryegrass.
  - (j) Green needlegrass.
  - (k) Prairie sandreed.
  - (l) Sand dropseed.
  - (m) Switchgrass.
  - (n) Similar kinds of grasses.
- (3) The fees of \$16.00 for purity testing, \$8.00 for germination testing, and \$22.00 for purity and germination testing are the fees for chaffy rangegrasses, which include all of the following:
- (a) Big bluestem.
  - (b) Little bluestem.
  - (c) Buffalograss.
  - (d) Indiangrass.
  - (e) Side oats grama.
  - (f) Similar kinds of chaffy rangegrasses.
- (4) The following are fees for testing flower and tree seed:
- (a) Purity . . . . . \$ 8.00.
  - (b) Germination . . . . . \$ 6.00.
  - (c) Purity and germination . . . . . \$12.00.
- (5) The following are fees for testing mixtures of lawn, pasture, or flower seed:
- (a) Purity - \$8.00 for the first component, plus \$5.00 for each additional component.
  - (b) Germination - \$7.00 for the first component, plus \$4.00 for each additional component.
  - (c) Purity and germination - combine the prices of subdivisions (a) and (b) of this subrule.
- (6) The fee for an all states noxious weed examination is \$4.00, in addition to a standard purity charge.
- (7) The fee for a tetrazolium test is \$12.00.
- (8) The fee for a sod grower's analysis is \$40.00.
- (9) The fee for a cold test for soybeans, field beans or corn is \$8.00.
- (10) The fee for tests that are not listed, for special procedures, extra time, is \$20.00 per hour.
- (11) The fee for a moisture test is \$3.00.
- (12) The fees for testing for bacterial blight of a field bean are as follows:
- (a) October 1 through December 15 - \$15.00.
  - (b) December 16 through March 30 - \$25.00. Blight tests are not conducted from April 1 through September 30.
- (13) The fee for testing for bean common mosaic virus, from October 1 through January 15 only, is \$10.00.
- (14) Seed will not be tested for persons who do not reside in Michigan without the prior approval of the state seed analyst.

History: 1990 AACs.

**R 285.715.14 Rescission.**

Rule 14. R 285.714.1 to R 285.714.21 of the Michigan Administrative Code, appearing on pages 1313 to 1324 of the 1979 Michigan Administrative Code, are rescinded.

History: 1990 AACCS.