

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 AACs.

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 AACCS.

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 AACCS.

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 AACCS.

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*.

(c) 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 AACS.

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

Aubrieta - Aubrieta deltoides	45
Baby smilax - Asparagus asparagoides	25
Balloonvine - Cardiospermum halicacebum	50
Balsam - Impatiens balsamina	70
Beach evening primrose - Camissonia cheiranthifolia (Oenothera cheiranthifolia)	50
Begonia - (Begonia fibrous rooted)	60
Begonia - (Begonia tuberous rooted)	50
Bells of Ireland - Molucella laevis	60
Bellflower (Bluebells of Scotland) Campanula rotundifolia	50
Bergamot - Monarda species	50
Black-eyed Susan - Rudbeckia hirta	50
Brachycome (Swan river daisy) - Brachycome iberidifolia.	60
Browallia - Browallia elata and B. speciosa	65
Buphthalmum (sunwheel) - Buphthalmum salicifolium	60
Buttercup - Ranunculus species	50
Butterfly milkweed - Asclepias tuberosa	50
Cactus - Cactaceae	50
Calceolaria - Calceolaria species	60
Calendula - Calendula officinalis	65
Californica poppy - Eschscholtzia californica	60
Calliopsis - Coreopsis bicolor, C. drummondii, C. elegans	65
Camomile, golden - Anthemis tinctoria	50
Camomile, St. John's - Anthemis sancti - johannis	50
Campanula:	
Canterbury bells - Campanula medium	60
Cup and saucer bellflower - Campanula medium calycanthema	60
Carpathian bellflower - Campanula carpatica	50
Peach bellflower - Campanula persicifolia	50
Campion, clammy - Lychnis viscaria	50
Candytuft, annual - Iberis gibraltaria, I. umbellata.	65
Candytuft, perennial - Iberis amara, I. sempervirens.	55
*Castor bean - Ricinus communis	60
Cathedral bells - Cobaea scandens	65
Celosia - Celosia argentea	65
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
Cerastium (snow-in-summer) Cerastium biebersteini and C. tomentosum	65

Chinese forget-me-not - <i>Cynoglossum amabile</i>	55	
Chinese Houses - <i>Collinsia heterophylla</i>	50	
Chrysanthemum, annual - <i>Chrysanthemum carinatum</i> , <i>C. coronarium</i> , <i>C. segetum</i>	40	
Cineraria - <i>Senecio cruentus</i>	60	
Clarkia - <i>Clarkia elegans</i>	65	
Cleome - <i>Cleome gigantea</i>	65	
Coleus - <i>Coleus blumei</i>	65	
Columbine - <i>Aquilegia</i> species	50	
Coral bells - <i>Heuchera sanguinea</i>	55	
Coreopsis, perennial - <i>Coreopsis lanceolata</i>	40	
Corn, ornamental - <i>Zea mays</i>	75	
Cosmos:		
Sensation, mammoth, and crested types - <i>Cosmos</i> <i>bipinnatus</i>		
Klondyke type - <i>C. sulphureus</i>	65	
Crossandra - <i>Crossandra infundibuliformis</i>	50	
Cyclamen - <i>Cyclamen africanum</i>	50	
Dahlia - <i>Dahlia</i> species	55	
Dames rocket - <i>Hesperis matronalis</i>	50	
Daylily - <i>Hemerocallis</i> species	45	
Delphinium, perennial:		
Belladonna and bellamosum types		
Cardinal larkspur - <i>Delphinium cardinale</i>		
Chinensis types		
Pacific giant, gold medal and other hybrids of <i>D. elatum</i>		55
Devils claws - <i>Proboscidea louisianica</i>	50	
Dianthus:		
Carnation - <i>Dianthus caryophyllus</i>	60	
China pinks - <i>Dianthus chinensis</i> , <i>heddewigi</i> , <i>heddensis</i> .	70	
Grass pinks - <i>Dianthus plumarius</i>	60	
Maiden pinks - <i>Dianthus deltoides</i>	60	
Sweet William - <i>Dianthus barbatus</i>	70	
Sweet Wivelsfield - <i>Dianthus allwoodi</i>	60	
Didiscus - (blue lace flower) - <i>Didiscus coerulea</i> . . .	65	
Dittany - <i>Dictamus albus</i>	50	
Doronicum (leopard's bane) - <i>Doronicum caucasicum</i> . . .	60	
Dracaena - <i>Dracaena indivisa</i>	55	
Dragon tree - <i>Dracaena draco</i>	40	
Edelweiss - <i>Leontopodium alpinum</i>	50	
English daisy - <i>Bellis perennis</i>	55	
Euphorbia, painted - <i>Euphorbia heterophylla</i>	50	
Evening primrose - <i>Oenothera biennis</i> , <i>O. argillicola</i> . .	50	
Everlasting pea - <i>Lathyrus latifolius</i>	50	
Flame violet - <i>Episcia</i> species	50	

Flax:

Golden flax, *Linum flavum*
Flowering flax, *L. grandiflorum*
Perennial flax, *L. perenne* 60
Fleece flower - *Polygonum capitatum* 50
Flowering maple - *Abutilon* species 35
Foxglove - *Digitalis* species 60
Fuschia - *Fuschia* species 50

Gaillardia:

Annual - *Gaillardia pulchella*, *G. picta*
Perennial - *G. grandiflora* 45
Gasplant - *Distamus albus* 50
Gayfeather (blazing star) - *Liatris* species 50
Gazania, pied - *Gazania rigens* 50
Geranium - *Geranium* species 50
Gerbera (transvaal daisy) - *Gerbera jamesoni* 60
German violet - *Exacum affine* 50
Geum - *Geum* species 55
Gilia - *Gilia* species 65
Gladiolus - *Gladiolus* species 50
Globe amaranth - *Gomphrena globosa* 50
Globethistle, small - *Echinops ritro* 50
Gloriosa daisy (rudbeckia) - *Echinacea purpurea* and
Rudbeckia hirta 60
Gloxinia - *Sinningia speciosa* 40
Godetia - *Godetia amoena*, *G. grandiflora* 65
Goldmoss sedum - *Sedum acre* 50

Gourds:

Yellow flowered - *Cucurbita pepo*
White flowered - *Lagenaria sisceraria*
Dishcloth - *Luffa cylindrica* 70

Gypsophila:

Annual baby's breath - *Gypsophila elegans*
Perennial baby's breath - *G. paniculata*, *G. pacifica*,
G. repens 70
Helenium - *Helenium autumnale* 40
Helichrysum (strawflower) - *Helichrysum bracteatum* . . . 60
Heliopsis - *Heliopsis scabra* 55
Heliotrope - *Heliotropium* species 35
Helipterum (acroclinium) - *Helipterum roseum* 60
Hens and chickens - *Sempervivum* species 50
Herb tremallow - *Lavatera trimestris* 50
Hesperis (sweet rocket) - *Hesperis matronalis* 65
Hibiscus - *Hibiscus* species 60
*Hollyhock - *Althea rosea* 65
Hunnemania (mexican tulip poppy) - *Hunnemania*

fumariaefolia	60
*Hyacinth bean - Lablab purpureus	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 childsii	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. glauca	65
Nierembergia - Nierembergia species	55
Nigella - Nigella damascena	55
Oregon fleabane - Erigeron speciosus	50
Ozark sundrops - Oenothera macrocarpa, (Oenothera missouriensis)	50

Pansy - <i>Viola tricolor</i>	60
Pearlwort - <i>Sagina sabulata</i>	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>	
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
Woolly 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
Zinnia, <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 AACCS.

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. H₂O/24 hr./100 sq. in./100°F./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 AACCS.

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.