

GRASS STANDARDS

I. Application and Amplification of General Certification Standards

- A. The General Seed Certification Standards, as adopted by the Colorado Seed Growers Association, are basic, and together with the following specific standards, constitute the standards for the certification of grasses.
- B. All classes of Certified seed may be produced from vegetatively propagated planting stock in accordance with the procedure specified by the originator, but in such cases, the standards for vegetatively propagated grasses shall apply.

II. Establishing the Source

- A. Evidence, such as certification tag, sales record, Certified seed site identification log, etc., must be submitted to the certifying agency to establish source of seed or plant materials.
- B. The exact source of the parent plants by legal description and the stand history must be known and will be shown (geographic, elevation, etc.) on the certification tag or label.

III. Land Requirements

- A. The production of Foundation seed shall be on land that has not grown or been seeded to the same species during the previous five crop years.
- B. The production of the Registered or Certified classes shall be on land that has not grown or been seeded to the same species during the previous crop year, except a Certified class of the same variety equal or superior to that of the crop seeded.
- C. Application to establish pedigree must be made within one year of seeding. The crop will remain under supervision of the certifying agency as long as the field is eligible for certification.

IV. Eligibility Requirements for Certification of Grass Varieties and Species

- A. Only those varieties and species that are accepted by the Colorado Agricultural Experiment Station and/or the Colorado Seed Growers Association will be eligible for certification. Application forms for acceptance of privately developed varieties are available from Colorado Seed Growers Association.
- B. For the Tested, Selected and Source-Identified classes, the applicant shall submit to the certifying agency, prior to the start of collections, an identification log (provided by CSGA) as follows:
 1. Collector's name, address and telephone number.
 2. Permit number, contract number, private land designation, etc.
 3. Species and common name.
 4. Location (State, County and elevation). It is strongly recommended additional information, such as soil type, aspect and associated species, be given, as this information would be extremely useful to the end user.
 5. Date(s) collected.
 6. Amount collected.
 7. Lot designation (must be indicated on bag or container, also).
 8. Signature of collector that the information is correct.
 9. Signature of seed broker that to his knowledge the information is correct.
 10. Description of plant with picture or drawing, if possible, or a document from an identification authority verifying the identity of the species.
- C. Source-identified seed, or plants, cannot be collected from irrigated areas, unless predetermined to be of proven genetic origin.

V. Unit of Certification

- A. The field shall be considered the unit for certification; a field cannot be divided unless adequately marked.

- B. Six classes of certification shall be recognized: Foundation, Registered, Certified, Tested, Selected and Source-Identified.
1. Foundation (white tag). Foundation seed or plant material shall be so handled to most nearly maintain specific genetic identity and purity, and which may be produced by an Agricultural Experiment Station, or originator. Foundation stock shall be the source of Registered and/or Certified stock.
 2. Registered (purple tag). Registered seed or plant materials shall be the progeny of Foundation seed or plant material. Registered stock is the parent stock for the production of Certified stock.
 3. Certified (blue tag). Certified seed or plant materials shall be the progeny of Foundation or Registered seed or plant materials and should have been so handled as to maintain genetic identity and purity.
 4. Tested (blue tag). Tested propagating materials shall be the progeny of plants whose parentage has been tested and has proven genetic superiority or possesses distinctive traits for which the heritability is stable, as defined by the certifying agency, but for which a variety has not been named or released. This seed must be produced so as to assure genetic purity and identity from either:
 - a. Rigidly controlled and isolated natural stands or individual plants.
 - b. Seed fields.
 5. Selected (green tag). Selected propagating materials shall be the progeny of phenotypically selected plants of untested parentage that have promise but not proof of genetic superiority or distinctive traits, produced so as to ensure genetic purity and identity from either:
 - a. Natural stands or seed production areas.
 - b. Seed fields.
 6. Source-Identified (yellow tag). Source-Identified propagating materials are seed, seedlings or other propagating materials collected from natural stands, seed production areas or seed fields where no selection or testing of the parent population has been made.

VI. Handling of Crop Prior to Inspection

A field must be rogued prior to blooming to remove off-type plants and prior to harvest to remove other grasses and weeds, the seed of which cannot be separated mechanically.

VII. Field Inspection

- A. A seedling inspection shall be during the seeding year to check for volunteer plants, isolation distance and potential noxious weed problems, and a field inspection shall be made each year that a Foundation, Registered, Certified, Tested, Selected or Source-Identified class is to be harvested.
- B. Inspection of stands, designated sites, collection areas, etc., for Tested, Selected and Source-Identified classes shall be sufficient to determine geographic source, location and elevation in increments of 500 feet, for each species being collected.
- C. Established fields which have not been field inspected for two or more consecutive years shall be considered ineligible for certification unless prior approval has been given.
- D. Conditioning and warehouse inspections shall be made to assure proper identity and compliance with field standards.
- E. All conditioning records involved in receiving, conditioning, storage, labeling, and shipping shall be available for inspection by the certifying agency.
- F. The certifying agency reserves the right to reject from certification any lot of seed that has not been properly protected from contamination or is not properly identified.

VIII. Field Standards

- A. General - Isolation
 1. A strip at least 5 feet wide which is mowed, uncropped, or planted to some crop other than the kind in question shall constitute a field boundary.
 2. The following isolation requirements shall be met when any other strain or strains of the species are in bloom at the same time, except that the minimum isolation for all seed classes of tetraploids shall be 15 feet from diploids of the same species.

Isolation Standards

Type	Border to be removed* (feet)	Minimum isolation (feet)**		
		Foundation	Registered	Certified
Cross-pollinated	0	900	300	165
	9	600	225	100
	15	450	150	75
Strains at least 80% apomictic & highly self-fertile species	0	60	30	15
	9	30	15	15

* Where a border is to be removed, it shall not occur until pollination of the crop to be Certified is completed.

** When different classes of seed of the same variety are being grown on the same or adjacent fields, the isolation requirements may be reduced to 25% of that indicated above.

B. Specific

Factor	Maximum permitted ratio of plants		
	Foundation	Registered	Certified
Inseparable grass species	1:1000	1:200	1:100
Other varieties*	1:1000	1:100	1:50

* Other varieties shall be considered to include plants that can be differentiated from the variety that is being inspected.

C. Length of stand requirement

1. The life of the stand shall be unlimited, as long as 75% of the plants present in the stand are those that were planted originally.
2. Exceptions may be otherwise specified by the originator of the variety or his designee.

IX. Sampling for Laboratory Analysis

A representative one-quart sample shall be submitted to the Colorado Seed Growers Association for analysis. This sample shall represent the seed which will be sold. If lots of different quality are offered for sale, a sample of each lot must be submitted for analysis.

X. Seed Standards

A. General seed standards

Factor	Maximum permitted in each class		
	Foundation	Registered	Certified
Prohibited noxious weeds	None	None	None
Restricted noxious weeds	None	½ State standard	State standard
Total other crop seed	0.20%	1.00%	2.00%
Other varieties	0.10%	1.00%	2.00%
Other inseparable species	0.10%	0.10%	0.25%
In grass for forage use	0.10%	0.10%	0.50%

B. Specific

1. Nonchaffy-seeded species**

Species	Type of reproduction*	% inert matter (maximum)		% weed seed (maximum)		% pure seed (minimum)		% total viability (germination + dormancy) (minimum)
		F&R	C	F&R	C	F&R	C	F, R & C
Alkali Sacaton (<i>Sporobolus airoides</i>)	C	13.00	13.00	0.30	0.50	87.00	87.00	65.00
Bentgrass (<i>Agrostis</i> spp.)	C	4.00	4.00	0.30	0.50	96.00	96.00	80.00
Bluegrass								
Big (<i>Poa secunda</i>)	A	10.00	10.00	0.30	0.50	90.00	90.00	70.00
Kentucky (<i>Poa pratensis</i>)	C & A	10.00	15.00	0.30	0.50	90.00	90.00	75.00
Bromegrass								
Meadow (<i>Bromus biebersteinii</i>)	C	15.00	15.00	0.30	1.00	85.00	85.00	80.00
Mountain (<i>Bromus marginatus</i>)	S	10.00	10.00	0.30	0.50	90.00	90.00	85.00
Smooth (<i>Bromus inermis</i>)	C	15.00	15.00	0.30	1.00	85.00	85.00	80.00
Canarygrass, Reed (<i>Phalaris arundinacea</i>)	C	4.00	4.00	0.30	0.50	96.00	96.00	75.00
Fescue								
Arizona (<i>Festuca arizonica</i>)	C	10.00	10.00	0.05	0.30	90.00	90.00	50.00
Chewings (<i>Festuca rubra</i> , var. <i>commutata</i>)	C	2.00	2.00	0.30	0.50	98.00	98.00	80.00
Meadow (<i>Festuca pratensis</i>)	C	5.00	5.00	0.30	0.50	95.00	95.00	80.00
Red (<i>Festuca rubra</i>)	C	2.00	2.00	0.30	0.50	98.00	98.00	80.00
Sheep (<i>Festuca ovina</i>)	C	5.00	8.00	0.30	0.50	95.00	95.00	80.00
Tall (<i>Festuca arundinacea</i>)	C	5.00	5.00	0.30	0.50	95.00	95.00	80.00
Foxtail, Creeping (<i>Alopecurus arundinaceus</i>)	C	20.00	20.00	0.50	0.50	80.00	80.00	80.00
Galleta, florets (<i>Hilaria jamesii</i>)	C	60.00	60.00	0.50	1.50	40.00	40.00	60.00
caryopsis	C	15.00	15.00	0.50	1.50	85.00	85.00	60.00
Indian Ricegrass (<i>Oryzopsis hymenoides</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	70.00
Lovegrass								
Sand (<i>Eragrostis trichodes</i>)	S	3.00	3.00	0.50	1.50	97.00	97.00	80.00
Weeping (<i>Eragrostis curvula</i>)	S	3.00	3.00	0.30	0.50	97.00	97.00	80.00
Orchardgrass (<i>Dactylis glomerata</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	80.00
Spike Muhly (<i>Muhlenbergia wrightii</i>)	C	15.00	15.00	0.50	0.50	85.00	85.00	85.00
Switchgrass (<i>Panicum virgatum</i>)	C	10.00	10.00	0.50	1.50	90.00	90.00	60.00

B. Specific (cont.)

1. Nonchaffy-seeded species**

Species	Type of reproduction*	% inert matter (maximum)		% weed seed (maximum)		% pure seed (minimum)		% total viability (germination + dormancy) (minimum)
		F&R	C	F&R	C	F&R	C	F, R & C
Tall Oatgrass (<i>Arrhenatherum elatius</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	70.00
Timothy (<i>Phleum pratense</i>)	C	3.00	3.00	0.30	0.50	97.00	97.00	80.00
Wheatgrass								
Beardless (<i>Pseudoroegneria spicata</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	80.00
Crested (<i>Agropyron cristatum, desertorum</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00
Intermediate(<i>Elytrigia intermedia subsp. Int.</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00
Newhy (<i>Elymus hoffmannii</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	80.00
Pubescent (<i>Elytrigia intermedia subsp. Int.</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00
Slender (<i>Elymus trachycaulus subsp. trachy.</i>)	S	15.00	15.00	0.30	0.50	85.00	85.00	80.00
Streambank (<i>Elymus lanceolatus subsp. lance.</i>)	C	10.00	10.00	0.20	0.30	90.00	90.00	80.00
Tall (<i>Elytrigia elongata</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00
Thickspike(<i>Elymus lanceolatus, subsp. lanceolatus</i>)	C	10.00	10.00	0.20	0.30	90.00	90.00	80.00
Western (<i>Pascopyrum smithii</i>)	C	15.00	15.00	0.30	0.50	85.00	85.00	60.00
Wildrye								
Basin (<i>Leymus cinereus</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00
Canada (<i>Elymus canadensis</i>)	S	15.00	15.00	0.30	0.50	85.00	85.00	70.00
Mammoth (<i>Lymus racemosus, subsp. racemosus</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	70.00
Russian (<i>Psathyrostachys juncea</i>)	C	10.00	10.00	0.30	0.50	90.00	90.00	80.00

2. Chaffy-seeded species **

Species	Type of reproduction*	% weed seed (maximum)		Pure live seed index***
		F & R	C	F, R & C
Bluestem				
Big (<i>Andropogon gerardii</i>)	C	1.00	2.00	25
Caucasian (<i>Bothriochloa bladii</i>)	A or S	0.30	0.50	12
Little (<i>Schizachyrium scoparium</i>)	C	1.00	2.00	12
Sand (<i>Andropogon hallii</i>)	C	1.00	2.00	20
Yellow-Turkestan(<i>Bothriochloa ischaemum</i>)	A or S	0.30	0.50	12
Buffalograss [burs](<i>Buchloe dactyloides</i>)	C	0.30	0.50	8
Buffalograss [treated or dehulled] (<i>Buchloe dactyloides</i>)	C	0.30	0.50	60
Gramma, Blue (<i>Bouteloua gracilis</i>)	C	0.30	0.50	24
Gramma, Side-oats (<i>B. curtipendula</i>)	C & A	1.00	2.00	30
Indiangrass (<i>Sorghastrum nutans</i>)	C	1.00	2.00	25

* C = cross-pollinated species; A = apomictic species; S = self-pollinated species.

** In determining purity and germination for these species, the seed unit shall be defined by AOSA (Association of Official Seed Analysts) rules.

*** When pure live seed index is used as a basis for certification, label shall bear percent germination, dormant seed and purity. Pure live seed equals percent purity times percent total viability divided by 100.

IX. Seed Standards for Sod Quality

Kind	Pure seed (min.)	Germination (min.)	Other crop (max.)*	Weed seed (max)***
Kentucky bluegrass (Merion)	96%	80%	0.1%**	0.02%
Kentucky bluegrass (other varieties)	97%	80%	0.1%**	0.02%
Chewings fescue	98%	90%	0.1%	0.02%
Red fescue	98%	90%	0.1%	0.02%
Tall fescue	98.5%	80%	0.1%****	0.02%

* Must be free of alfalfa, ryegrass, orchardgrass, timothy, bentgrass, big bluegrass, rough bluegrass, smooth brome, reed canarygrass, tall fescue, clover and meadow foxtail.

** Other Kentucky bluegrass: 2% maximum allowable.

*** None of the prohibited noxious weeds listed in the General Standards, nor any dock, chickweed, crabgrass, plantain, short-awn foxtail, black medic, annual bluegrass, velvetgrass or rattail fescue allowed in any class of seed. A minimum of 50 grams will be tested for the noxious weed exam.

**** Orchardgrass seed in tall fescue seed shall not exceed 20/lb based on analysis of a 5 gram sample.

Grass varieties eligible for this special sod quality program shall follow the regular certification specific standards as listed in the above table. Also, a distinct sod quality tag will be attached to the container along with the regular certification tag on eligible seed meeting the added requirements of this high quality program. Growers are to note on the application any fields intended for sod quality certification.