

## GRASS STANDARDS

The General Seed Certification Standards, as adopted by the Montana Seed Growers Association, are basic and together with the following specific standards constitute standards for certification of grass seed.

**An application must be made for all spring seeded grasses in the establishment year (seedling year) and certification of fall seeded grasses must be applied for the following spring.**

**NOTE: Please notify the MSGA office before planting Newhy R/S hybrid wheatgrass. A preplant inspection is required for this variety.**

### I. Land Requirements

- A. **Foundation Seed Production** - Plant Breeder seed on land that has not grown or been seeded to the species during the previous five years.
- B. **Registered Seed Production** - Plant Breeder or Foundation seed to produce Certified class seed on land which has not grown or been seeded to the species during the previous two years.
- C. **Certified Seed Production** - Plant Breeder, Foundation and Registered class seed to produce Certified class on land that has not grown or been seeded to the species during the previous two years, except a certified class of the same variety.

### II. Isolation

A foundation or certified seed field must be isolated (as designated in the following table) from other varieties or strains of the same species in bloom at the same time.

	When border in Certified field is removed <sup>1/</sup> (feet)	Minimum Isolation		
		Fdn	Reg	Cert
			(feet)	
Cross-pollinated species <sup>2/</sup>	--	900	300	165
	9	600	225	100
	15	450	150	75
Strains at least 80% apomictic and highly self-fertile	--	60	30	15
	9	30	15	15

<sup>1/</sup> Isolation can be reduced, if needed, by removing up to one rod (16.5') of border in Certified field nearest source of similar but non-certified species. Border shall not be removed until pollination is completed in certified field. Border removal applies only to fields of 5 acres or more.

<sup>2/</sup> Intermediate wheatgrass (*Agropyron intermedium* = *Thinopyrum inter-medium*) must be isolated from pubescent wheatgrass (*Agropyron trichophorum* = *Thinopyrum intermedium*). "Standard" crested wheatgrass (*Agropyron desertorum*), Siberian wheatgrass (*Agropyron fragile* = *sibiricum*) and Fairway crested wheatgrass types (*Agropyron cristatum*) must be isolated from each other and from hybrids such as "Hycrest".  
Beardless wheatgrass (*Agropyron inerme* = *Pseudoroegneria spicata*), bluebunch wheatgrass (*Agropyron spicatum* = *Pseudoroegneria spicata*), and R/S Hybrid wheatgrass (bluebunch wheatgrass X quackgrass {*Agropyron repens*}) must all be isolated from each other.  
Streambank wheatgrass (*Agropyron riparium* = *Elymus lanceolatus*) must be isolated from thickspike wheatgrass (*Agropyron dasystachyum* = *Elymus lanceolatus*). The variety "Secar" is probably not a true bluebunch wheatgrass and must be isolated from both the bluebunch (beardless) wheatgrass and streambank (thickspike wheatgrass) selections.

### III. AOSCA Isolation Standards for Wheatgrass

Varieties of germplasm selections within each of the following species groups must be isolated from each other. Isolation between groups is not required.

- A. Intermediate and pubescent wheatgrasses
- B. All crested and siberian wheatgrasses
- C. Beardless, bluebunch, R/S Hybrid, northern, Snake River, streambank and Thickspike wheatgrasses and quackgrass; these must also be isolated from slender wheatgrass, squirreltail, and blue and Canada wildryes due to potentially contaminating pollen.

**IV. Field Standards - General**

- A. Field Preparation and Inspection
  - 1. Grass seed should be planted in rows at least 18" (preferably 30-36") apart so that: (a) volunteer plants and weeds may be cultivated out; (b) roguing and inspections can be conducted easily; and (c) seed yields will be maximized.
  - 2. Reseeding new grass plantings is limited to the first two years. Additional fees may be charged for re-inspection. The seed source must be of the same class as the original seed, or the field will be reclassified to the lowest class of seed planted.
  - 3. The field inspection is to be made after heading, but before harvesting.
  - 4. Clean, cultivate or mow at least a five-foot margin around the field to be certified. A portion of a field may be certified if the boundary is well defined (by mowing).
  - 5. Rogue Foundation or Certified field prior to inspection to remove other grasses or off-type plants. Prior to harvest, remove other grasses or weeds, the seeds of which cannot be separated by mechanical means.
  - 6. Pre-seeding inspection is required for planting R/S Hybrid wheatgrass (should be inspected while possible con-taminants are growing), as well as a seedling inspection. MSGA reserves the right to charge for each inspection. If crop is established in the spring, application must be made for certification in the year of seeding.

**V. Field Standards - Specific**

Factor	Ratio of Plants - Maximum Permitted		
	Fdn	Reg	Cert
Other varieties and off-type plants	1: 1,000	1: 1,000	1: 200
Other inseparable grass species	1:50,000	1:25,000	1:10,000

**VI. Eligibility**

- A. Breeder class seed must be planted to produce the Foundation class. Foundation seed for the production of certified seed is allotted through the Foundation Seed Program, Plant Sciences Department, Montana State University. Requests can be made through the Foundation Seed Program, Dr. Bill Grey (406) 994-5687.
- B. Pedigree production of grass seed will be limited to the Foundation and Certified classes, for varieties recommended by the Montana Agricultural Experiment Station and accepted for certification by the certifying agency. See eligible varieties list sheet.
- C. There will be no limitation as to the number of years of production by class unless designated by the plant breeder, or unless the genetic purity appears to be altered.
- D. Certified seed is not eligible for planting to produce a second generation of certified seed.

**VII. Preparation of Seed For Final Certification**

- A. Cleaning
  - 1. Clean all seed at a commercial plant authorized by the MSGA. A list of authorized cleaning plants is available through the MSGA office.
  - 2. Seed delivered to the cleaning plant by grower must be identified by variety and certification number. A copy of the grower’s Application for Certification or field inspection form will suffice.

- B. Seed Sample for Grade Determination  
Submit a cleaned, one-half pound seed sample bearing positive identification to the Montana Seed Growers Association office for "Certified Grade Determination". Use official MSGA seed sample bags. If multiple lots from the same fields are harvested and cleaned separately, a sample for purity and germination must be submitted for each clean lot.
- C. Label orders should be noted on the "Conditioner's Report". Labels will be issued upon receipt of production fees.

### VIII. Limitation of Generation

Limitation on years of production for classes of certified seed is as follows:

#### GRASS SEED CERTIFICATION SYSTEM (Limitation of Generation) and MAXIMUM YEARS OF PRODUCTION BY VARIETIES

Crop and Variety	Certification System <sup>1</sup>	Maximum No. of Years of Production by Class <sup>2</sup>		
		Fdn	Reg	Cert
Bluegrass, Big - Sherman	II	NL	NL	NL
Bluegrass, Kentucky - Midnight <sup>3</sup>	I	NL	--	NL
SR2000 <sup>3</sup>	II	NL	NL	NL
Troy	I	NL	--	NL
Limousine <sup>3</sup>	I	NL	--	NL
Odyssey <sup>3</sup>	I	NL	--	NL
Bromegrass, Meadow - Regar	II	NL	NL	NL
MacBeth	I	NL	--	NL
Bromegrass, Smooth - Lincoln	I	NL	--	NL
Manchar	II	NL	NL	NL
Fescue, Hard - Durer	I	NL	--	NL
Fescue, Sheep - Covar <sup>4</sup>	II	NL	NL	NL
Fescue, Tall - Kenmont	I	NL	--	NL
Foxtail, Creeping - Garrison	I	NL	--	NL
Indian Ricegrass - Nezpar	II	NL	NL	NL
Rimrock	II	NL	NL	NL
Needlegrass, Green - Lodorm	I	NL	--	NL
Orchardgrass - Chinook	I	3	--	4
Latar	II	NL	NL	NL
Paiute	II	NL	NL	NL
Prairie Sandreed - Goshen	I	NL	--	NL
Wheatgrass, Bluebunch - Goldar	II	NL	NL	NL
Wheatgrass, Crested - CD II	I	NL	--	NL
Ephraim	II	NL	NL	NL
Hycrest	II	NL	NL	NL
Nordan	II	NL	NL	NL
Wheatgrass, Intermediate - Oahe	I	5	--	NL
Reliant	I	NL	--	NL
Wheatgrass, Pubescent - Greenleaf	I	3	--	4
Luna	II	NL	NL	NL
Mandan 759	I	NL	--	NL
Manska	I	NL	--	NL
Wheatgrass, R/S Hybrid - Newhy	I	NL	--	NL
Wheatgrass, Siberian - Vavilov <sup>3,4</sup>	I	NL	--	NL
Wheatgrass, Slender - Pryor	II	NL	NL	NL
Wheatgrass, Snake River - Secar	I	NL	--	NL
Wheatgrass, Streambank - Sodar	II	NL	NL	NL

**GRASS SEED CERTIFICATION SYSTEM (Limitation of Generation) and  
MAXIMUM YEARS OF PRODUCTION BY VARIETIES**

Crop and Variety	Certification System <sup>1</sup>	Maximum No. of Years of Production by Class <sup>2</sup>		
		Fdn	Reg	Cert
Wheatgrass, Tall - Alkar	I	NL	--	NL
Jose	II	NL	NL	NL
Wheatgrass, Thickspike - Bannock <sup>3,4</sup>	II	NL	NL	NL
Critana	I	NL	--	NL
Wheatgrass, Western - Rosana	II	NL	NL	NL
Rodan	I	NL	--	NL
Wildrye, Basin - Magnar	II	NL	NL	NL
Trailhead	II	NL	NL	NL
Wildrye, Beardless - Shoshone	II	NL	NL	NL
Wildrye, Russian - Bozoisky "Select"	II	NL	NL	NL
Monkota I	I	NL	--	NL
Vinal	I	NL	--	NL

- <sup>1</sup> I Under generation increase without the Registered Class
- II Four Classes -- Breeder, Foundation, Registered and Certified
- <sup>2</sup> NL No limitation unless otherwise stated, but genetic purity must be maintained
- <sup>3</sup> PVP U.S. Variety Protection - Unauthorized Propagation Prohibited
- <sup>4</sup> Title V U.S. Variety Protection - Unauthorized Propagation Prohibited (can only be sold as a class of certified seed (Fdn, Reg, Cert))

**IX. Seed Standards - General**

	Maximum Permitted in Each Class		
	Fdn	Reg	Cert
Other crops including other species	0.10	0.10	0.50
Prohibited noxious weeds <sup>1</sup>	0/lb	0/lb	0/lb
Restricted Weeds <sup>2,3</sup>	0/lb <sup>2</sup>	0/lb <sup>2</sup>	0/lb <sup>2</sup>
Other Varieties and Off-Types <sup>4</sup>	0.10%	0.50%	1.00%

- <sup>1</sup> No Prohibited Noxious weeds listed in the General Standards allowed.
- <sup>2</sup> No Restricted weeds allowed, except Buckhorn Plantain and Curly Dock (9/lb maximum each species) and Wild Oats (18/lb maximum each species for **certified class only**).
- <sup>3</sup> No Restricted weed seeds means none found during the normal inspection procedures. None is not a guarantee to mean the lot inspected is free of the factor.
- <sup>4</sup> Tall Wheatgrass - Maximum other varieties and off-types equal to 0.2% Fdn; 1.0% Reg; and, 2.0% Cert

X. Seed Standards - Specific

Variety	Symbol for Type of Reproduction <sup>1</sup>	Pure Seed Minimum		Inert Maximum		Other Grass Species Maximum		Weed Seeds Maximum <sup>2,3</sup>		Germination Minimum
		F-R <sup>4</sup> %	C <sup>4</sup> %	F-R %	C %	F-R %	C %	F-R %	C %	F-R-C %
Bluegrass, Big	a	90.00	90.00	10.00	10.00	0.10	0.50	0.30	0.50	70.00
Bluegrass, Kentucky	c & a	95.00	90.00	5.00	10.00	0.10	0.50	0.20	0.30	75.00
Bromegrass, Meadow Smooth	c	95.00	95.00	5.00	5.00	0.10	0.50	0.20	0.30	80.00
	c	85.00	85.00	15.00	15.00	0.10	0.50	0.25	0.50	80.00
Fescue, Sheep Tall	c	95.00	95.00	5.00	5.00	0.10	0.50	0.10	0.25	80.00
	c	95.00	95.00	5.00	5.00	0.10	0.50	0.10	0.25	80.00
Foxtail, Creeping	c	80.00	80.00	20.00	20.00	0.10	0.50	0.25	0.50	80.00
Indian Ricegrass*	c	90.00	90.00	10.00	10.00	0.10	0.25	0.25	0.25	80.00 TZ <sup>5</sup> (Germ: 1.00)
Needlegrass, Green	s	80.00	70.00	20.00	20	0.1	0.5	0.10	0.25	80.00 TZ 15.00 UT <sup>5</sup>
Orchardgrass	c	85.00	85.00	15.00	15.00	0.10	0.50	0.10	0.25	80.00
Prairie Sandreed	c	90.00	90.00	10.00	10.00	0.10	0.50	0.10	0.25	80.00 TZ or 80.00 Germ <sup>6</sup>
Timothy	c	98.00	97.00	2.00	3.00	0.10	0.50	0.10	0.25	80.00
Wheatgrass										
Bluebunch	c	90.00	90.00	10.00	10.00	0.10	0.50	0.30	0.50	80.00
Crested	c	90.00	90.00	10.00	10.00	0.10	0.50	0.10	0.25	80.00
Intermediate	c	95.00	95.00	5.00	5.00	0.10	0.50	0.10	0.25	80.00
Pubescent	c	90.00	90.00	10.00	10.00	0.10	0.50	0.10	0.25	80.00
R/S Hybrid	c	87.50	87.50	12.50	12.50	0.10	0.50	0.10	0.30	80.00
Siberian	c	95.00	95.00	5.00	5.00	0.10	0.50	0.10	0.25	80.00
Slender	s	90.00	90.00	10.00	10.00	0.10	0.50	0.10	0.25	80.00
Snake River	c	90.00	90.00	10.00	10.00	0.10	0.50	0.30	0.50	80.00
Streambank	c	90.00	90.00	10.00	10.00	0.10	0.50	0.20	0.30	80.00
Tall	c	90.00	90.00	10.00	10.00	0.20	1.00	0.30	0.50	80.00
Thickspike	c	90.00	90.00	10.00	10.00	0.10	0.50 <sup>7</sup>	0.20	0.30	80.00
Western	c	90.00	90.00	10.00	10.00	0.10	0.50	0.20	0.30	80.00
Wildrye										
Basin	c	90.00	90.00	10.00	10.00	0.10	0.50	0.30	0.50	80.00
Beardless	c	90.00	90.00	10.00	10.00	0.10	0.50	0.20	0.30	25.00 80.00 TZ
Russian	c	90.00	90.00	10.00	10.00	0.10	0.50	0.10	0.25	80.00

<sup>1</sup> Symbol for type of reproduction: a = Strains at least 80% apomictic; c = All cross-pollinated species; s = Highly self-fertile.

<sup>2</sup> No Restricted weeds allowed, except Buckhorn Plantain and Curly Dock (9/lb maximum each species) and Wild Oats (18/lb maximum each species for **certified class only**).

<sup>3</sup> No Restricted weed seeds means none found during the normal inspection procedures. None is not a guarantee to mean the lot inspected is free of the factor.

<sup>4</sup> Seed Class Abbreviation: F = Foundation; R = Registered; C = Certified.

<sup>5</sup> TZ = Tetrazolium test; UT = Untreated. \* TZ recognized by industry--no germ needed.

<sup>6</sup> By action of MSGA Board of Directors - March 1, 1006.

<sup>7</sup> With the exception of slender wheatgrass in Critana only, 5% allowed.