

## Wheatgrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Broadglumed, Crested, RS Hybrid, Intermediate, Northern, Pubescent, Siberian, Slender, Streambank, Tall and Western Wheatgrass.

### General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in [General Requirements for All Pedigreed Seed Crops](#). In addition, the following standards apply to Wheatgrass.

### Land Requirements\*

Inspected Crop	Must NOT be grown on land which:
<b>Foundation</b>	<p>In any of the 5 years prior to the year of seeding produced:</p> <ul style="list-style-type: none"><li>• a non-pedigreed crop of the same crop kind.</li><li>• a different variety of the same crop kind.</li></ul> <p>In any of the 3 years prior to the year of seeding produced:</p> <ul style="list-style-type: none"><li>• a pedigreed crop of the same variety.</li></ul>
<b>Registered</b>	<p>In any of the 3 years prior to the year of seeding produced:</p> <ul style="list-style-type: none"><li>• a crop of the same crop kind.</li></ul>
<b>Certified</b>	<p>In any of the 2 years prior to the year of seeding produced:</p> <ul style="list-style-type: none"><li>• a crop of the same crop kind.</li></ul>

\*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Wheatgrass.

### Crop Inspection

Wheatgrass crops must be inspected when the crop is headed and before harvest.

### Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Wheatgrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

Inspected crop	When crop is established with:							
	Breeder seed of a variety without a Registered class		Breeder seed of a variety with a Registered class		Foundation seed of a variety without a Registered class*		Foundation seed of a variety with a Registered class	
	Foundation	Certified	Foundation	Registered	Certified	Registered	Certified	
Broadglumed, Slender	3 yrs.	+ 2 yrs.	3 yrs.	+ 2 yrs.	5 yrs.	3 yrs.	+ 2 yrs.	
Crested, Siberian	4 yrs.	+ 4 yrs.	4 yrs.	+ 4 yrs.	8 yrs.	4 yrs.	+ 4 yrs.	
RS Hybrid, Northern, Streambank, Tall, Western	4 yrs.	+ 2 yrs.	4 yrs.	+ 2 yrs.	6 yrs.	4 yrs.	+ 2 yrs.	
Intermediate, Pubescent	3 yrs.	+ 3 yrs.	3 yrs.	+ 3 yrs.	6 yrs.	3 yrs.	+ 3 yrs.	

\*Or when crop is established with Registered seed of a variety with a Registered class.

## Crop Standards

### Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

#### Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind**	Isolation table below
e. Species that may cross pollinate (CP/DTD in contaminant table below)	Isolation table below

\* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

\*\* Varieties of a different ploidy level may not cross pollinate and therefore may not require isolation for varietal purity, but the mechanical purity isolation requirement (below) would still be necessary.

Inspected Crop	Area of Inspected Crop	Minimum Isolation Distance		
		Foundation	Registered	Certified
All kinds except Slender* Wheatgrass (cross-pollinated species)	5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
	More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)
Slender* Wheatgrass (self-pollinated species)	Any size	20 m (65 ft)	10 m (33 ft)	5 m (16 ft)

\* Includes Broadglumed

## 2. Mechanical Purity

- |  | Distance           |
|--|--------------------|
| a. Wheatgrass species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below) | 2 meters (6 feet)  |
| b. Dahurian wildrye (in the case of <i>Elymus</i> spp. only)   | 2 meters (6 feet)  |
| c. Wheatgrass variety of the same kind but a different ploidy level (i.e. diploid vs tetraploid e.g. Fairway vs Kirk Crested Wheatgrass)                                 | 5 meters (16 feet) |

\*Elymus spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid

### Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	Distance to be removed from the inspected seed crop
<b>Foundation</b>	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
<b>Registered</b>	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
<b>Certified</b>	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

## Maximum Impurity Standards

### 1. Varietal Purity (on average in either 10 or 100 m<sup>2</sup>)

- a. Off-types/other varieties of the same crop kind
  - i. Foundation – 3 plants/100 m<sup>2</sup>
  - ii. Registered – 1 plant/10 m<sup>2</sup>
  - iii. Certified – 1 plant/10 m<sup>2</sup>

### 2. Mechanical Purity (on average 10 or 100 m<sup>2</sup>)

- a. Plants of species that may cross pollinate (CP/DTD in contaminant table below) and plants of species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below) and plants of Dahurian wildrye (in the case of *Elymus* spp. only)\* i.e., the combined total number of contaminant plants must not exceed
  - i. Foundation – 3 plants/100 m<sup>2</sup>
  - ii. Registered – 1 plant/10 m<sup>2</sup>
  - iii. Certified – 1 plant/10 m<sup>2</sup>
- b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Wheatgrass, that also includes Bromegrass, Fescue, Ryegrass and Altai and Russian Wildrye.

\**Elymus* spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid

\*\*Broadglumed and Slender are self-pollinated

Contaminant (Right) Inspected Crop (Below)	Agropyron		Elymus					Thinopyrum			Pascopyrum
	Crested	Siberian	Broadglumed	Slender	Northern	Streambank	RS Hybrid	Intermediate	Pubescent	Tall	Western
Crested	n/a	CP/DTD	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Siberian	CP/DTD	n/a	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Broadglumed**	DTS	DTS	n/a	DTD	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Slender**	DTS	DTS	DTD	n/a	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Northern	DTS	DTS	DTS	DTS	n/a	CP/DTD	DTS	DTS	DTS	DTS	DTS
Streambank	DTS	DTS	DTS	DTS	CP/DTD	n/a	DTS	DTS	DTS	DTS	DTS
RS Hybrid	DTS	DTS	DTS	DTS	DTS	DTS	n/a	DTS	DTS	DTS	DTD
Intermediate	DTS	DTS	DTS	DTS	DTS	DTS	DTS	n/a	CP/DTD	DTS	DTS
Pubescent	DTS	DTS	DTS	DTS	DTS	DTS	DTS	CP/DTD	n/a	DTS	DTS
Tall	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	n/a	DTS
Western	DTS	DTS	DTS	DTS	DTS	DTS	DTD	DTS	DTS	DTS	n/a