

CHEMICALLY ASSISTED HYBRID BARLEY AND HYBRID WHEAT

Explanation of General Standards as applied to Chemically Assisted Hybrid Barley and Wheat: The General Seed Certification Standards are basic and, together with the following specific standards, constitute the standards for certification of chemically assisted Hybrid barley and Hybrid wheat.

I. Classes and Sources of Seed

- A. A commercial hybrid is one to be planted for any use except seed production.
- B. Only the class "Certified" is recognized in the production of a commercial hybrid.
- C. A commercial hybrid must be produced from seedstocks approved by the certifying agency. The female seedstocks may be of the foundation, registered or certified classes.

II. Land History Requirements

Crossing blocks shall be planted on land on which the last crop grown was of another kind or was planted with a class of certified seed of the female parent. A crop will not be eligible for certification if planted on land on which the same kind of crop (example: wheat following wheat) was grown the previous year, unless the previous crop was grown from a class of certified seed of the female parent. Minimum tillage production practices (example: wheat/soybeans/wheat) does not change the above land history requirements.

III. Field Standards

A. **Isolation**

1. Isolation requirements for seedstocks are those used for the certification of varieties.
2. Commercial Hybrids - A specific hybrid to be accepted for certification must be so located that the seed parent is not less than 330 feet from a contaminating field of wheat of another market class. However, in the case of the same market class as the seed parent, the distance may be modified by the planting of the pollen parent border to be determined with the following table:

ISOLATION TABLE

Minimum Distance from Contaminating Wheat	Feet of Pollen Border
330 Feet	0
215 Feet	15
275 Feet	25
160 Feet	35
100 Feet	50

Isolation distances may be modified by the certification agency when necessary.

3. Interplanted Blocks

a. Interplanted blocks of female seed parent and pollinator shall be separated by an unplanted strip a minimum of one foot in width. Harvest separation distance will be determined by the certifying agency.

b. Pollinator strips shall be clearly identifiable (or marked) in a manner approved by the certifying agency prior to harvest to prevent mechanical mixture.

B. Inspections

The crossing fields shall be given at least three (3) field inspections, as follows:

1. *Prior to flowering* - bag seed parent heads to determine level of sterility, planting ratios, isolations and off-type plants.

2. *During flowering* - evaluate isolation, off-types, presence of volunteer plants, note apparent nicking problems and possible sterility problems.

3. *After heads begin to assume a mature color* - collect bagged heads for determining hybridization, evaluate Off-types and make disease evaluations.

4. Specific Requirements

Factor	Maximum Permitted Certified
Other Varieties and Off-types (Seed Parent & Pollinator)	0.10% (1:1000)
Other Kinds of Small Grain	0.05% (1:2000)
Rye	None
Hairy Vetch	5 plants/acre
Loose Smut *	0.10% (1:1000)
Inspected Field	
Bordering Fields	0.20% (1:500)

Up to 600' from Inspected Fields

* If the above limits for loose smut are exceeded in the inspected field or bordering fields of small grain, seed harvested from the inspected field must either:

1. Be treated with a recommended systemic fungicide seed treatment that is labeled for the control of loose smut before certification tags could be issued; or

2. Be subjected to an embryo loose smut test. Seed Standards for maximum loose smut content must be met before certification tags could be issued.

IV. Seed Standards

<u>Factor</u>	<u>Class of Seed</u>
	Certified
Pure Seed (minimum)	98.00%
Inert Matter (maximum)	2.00%
Total Other Crop Seed (maximum)	0.10%
Other Varieties (maximum)	0.10%
Other Small Grain (maximum)	0.05%
Rye and Hairy Vetch (maximum)	2 per lb
Total Weed Seed (maximum)*	0.03%
Noxious Weed Seed (maximum)	None
Germination (minimum)	85.00%
Loose Smut (maximum)	1.00%

* Total weed seed content shall not exceed 10 seeds per pound.

** Embryo loose smut test is required if field standards for loose smut are exceeded and seed is not treated with appropriate seed treatment.

V. Determining Percent Hybridization

Final certification shall be contingent upon determination of percent hybridization.

A. Field samples from bagged and unbagged seed parent heads from the production field, or

B. Other methods which determine the percent hybridization approved by the certifying agency.