

Guidelines for Certified Seed Production of Hybrid Wheat

Definitions

Inbred parent line or population: a relatively true breeding homozygous strain; used for parent seed crop production.

A-line (female seed parent): a cytoplasmic male sterile (CMS) line which, when pollinated by an R-line (Restorer), produces hybrid seed.

B-line (male parent maintainer): a male fertile line genetically identical to the A-line but with normal fertile cytoplasm; used to increase A-line seed while maintaining male sterility of the A-line.

R-line (male parent restorer): a male fertile line possessing nuclear restoration genes; used as the male parent in the production of Certified hybrid seed crops.

Hybrid: the first generation of a cross between two specified parent lines.

Certified Hybrid Production Methods

Blended Parent Lines: Certified production of CMS Hybrid Wheat with Blended Parent Lines where the Certified Hybrid is produced from a mixture of the two parents. It requires a seed mixture containing male sterile female parent (A-line) seed and restorer (R-line) seed (A+R). This mixture of Breeder or Select Hybrid Cereal Parent seed is considered a Select Technical Blend (TB) and requires a new Select TB crop certificate number from the CSGA. The Select TB is used to produce the Certified hybrid seed and is limited to one generation and cannot be used to produce subsequent generations of Select TB seed.

Individual Parent Lines: Certified production of CMS Hybrid Wheat with Individual Parent Lines where the Certified hybrid is produced from parents that are planted individually in alternating male and female bays or strips.

Classes and Generations

The following classes and generations are utilized in the certification of CMS Hybrid Wheat and parent lines (see illustration below):

Breeder:

- used, as well as Select Hybrid Cereal Parent class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant Breeder;
- no generation limit unless prescribed by the Breeder responsible for the variety.

Select Hybrid Cereal Parent (HCP) class seed:

- used, as well as Breeder class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant breeder or accredited plot growers;
- generation limits are prescribed by the Plant Breeder in the variety description.

Certified class hybrid seed:

- produced from Breeder or Select Hybrid Cereal Parent (HCP);
- sold to commercial producers and not eligible for certification.

Certification Classes for CMS Hybrid Wheat and Parent Lines

