

Hemp – Certified Production of Feminized Hemp Seed

The requirements shown here are specifically for Certified seed production of Feminized Hemp Seed (FHS) varieties which produce only female plants. Traditional production of Dioecious and Monoecious type varieties of **Open-pollinated Industrial Hemp** is not included and can be found under separate headings.

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 FHS production.

Classes and Generations

Certified: one generation.

Parent Material Requirements

Breeder or Foundation status parent material must be used to produce Certified seed. Parental germplasm, propagating methods and protocols for Certified seed production must be described by a CSGA recognized Plant Breeder in the application for variety certification eligibility (Form 300) and remain the same throughout the life of the variety.

Types of FHS Varieties

There are several types of FHS varieties depending on the parental germplasm and the propagation methods that are used. FHS varieties can be single genotypes, polycrosses or hybrids. They can be derived from clones, seed or a combination of both. Seed production protocols include maintenance of the parent material and the procedures used to generate Certified seed of the FHS variety. A FHS variety is a separate variety from the parent material from which it is derived.

Land & Growth Facility Requirements

All types of FHS varieties can be produced in a contained growth facility (growth room, greenhouse, polyhouse) or in a field.

Field Production

Seed crops of FHS varieties must not be planted on land which in the previous three years grew a crop of industrial hemp.

Growth Facility

The growth facility must contain only plants used in the production of Certified seed of the variety. There must be a period of 60 days between successive productions of Certified seed, unless the same pollen parent is used, in which case the interval is 10 days.

Crop Inspection

It is the seed grower's responsibility to ensure that the seed crop is inspected twice by an authorized inspector, once just prior to any pollen release, and once when the pollination period is complete (all male flowers have shed their pollen).

Crop Standards

Isolation

All types of FHS varieties, whether produced inside a growth facility or in a field, must maintain a minimum isolation distance from any sources of contaminating pollen as described below.

Field Production

Outdoor seed crops of FHS varieties must be at least 4800 m from any contaminating pollen sources.

Growth Facility

Indoor seed crops of FHS varieties must be at least 4800 m from outdoor contaminating pollen sources. Other growth facilities which contain different pollen parent plants must be at least 800 m away. These requirements can be adjusted provided there is adequate pollen control pursuant to an agreement with the CSGA.

Maximum Impurity Standards

Crop Standards

1. All true male (dioecious, XY) and monoecious (XX) plants must be removed from the parent material prior to the first inspection (prior to any pollen shed) for all types of FHS varieties.
2. Any vegetative reproductive material which differs significantly in appearance from the average of the parental reproductive material, is likely a somaclonal variant ('sport') and must be removed prior to the first inspection (prior to any pollen shed).
3. In seed derived parent material, plants not conforming to the norm of the variety may be considered off-types. The maximum number of off-types permitted is 1 in 100 plants of the seed parent.

Seed Standards

There is insufficient information currently available to determine with any certainty the appropriate levels of varietal purity for FHS varieties. As FHS varieties are intended to be grown in the absence of pollen, any male plants are particularly undesirable. It may, however, be practically impossible to produce seed lots with no males and/or monoecious plants. Until there is more detailed information the following will serve as guidelines:

1. The maximum number of male (XY) individuals in a Certified seed lot of an FHS variety is 3/10,000 plants.
2. The maximum number of monoecious (XX) individuals in a Certified seed lot of an FSH variety is 5/10,000 plants.

Specific Requirements

1. A CSGA recognized Plant Breeder's documented Quality Management System (QMS) is required for production of Certified seed of FHS varieties. The QMS seed production protocols must address all the certification requirements for FHS production, be approved by the CSGA and audited by an independent third-party.