SOUTHERN SEED CERTIFICATION ASSOCIATION, INC.

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Industrial Hemp Standards

Standards for Certified Industrial Hemp Seed

I. APPLICATION OF GENETIC CERTIFICATION STANDARDS

A. The Genetic Certification Standards in Chapter 1 are basic.

B. The Genetic Standards are modified as follows:

1. All production of industrial hemp crops are subject to license application approval that may be required by regulatory authorities.
2. Only varieties of industrial hemp approved by regulatory authorities are eligible for certification.
3. The allowable area of an industrial hemp research area or production field may be determined by state or local agencies.
4. Growers may be required by regulatory agencies to obtain THC test results according to applicable regulations. Growers may be required to submit these results to the seed certifying agency before a crop certificate is issued.

II. LAND REQUIREMENTS

A. Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.

B. Fields for Foundation and Registered classes of industrial hemp seed must not be planted on land which in the previous 5 years grew a crop of industrial hemp.

C. Crops for Certified seed must not be grown on land which in the preceding 3 years produced a crop of industrial hemp.

D. Weeds

1. Fields may be refused certification due to excessive weeds.
2. The presence of Broomrape *(Orobanche spp.)* in an industrial hemp field may be cause for declining certified status.

III. FIELD STANDARDS

A. CROP INSPECTION

1. It is the grower's responsibility to ensure that fields are inspected by an authorized inspector at least twice prior to swathing or harvesting, except in the case of Foundation and Registered monoecious type and unisexual female hybrids, in which 3 inspections are required.
2. A field that is cut, swathed or harvested prior to crop inspection is not eligible for certification.
3. Fields must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining certified status.
   a. First inspection must be made before female (pistillate) flowers of the inspected crop are receptive and after the formation of male (staminate) flowers, preferably before pollen is shed.

b. Second inspection must be made during the receptive stage of the female plants in the inspected field, normally within 3 weeks of first inspection.
c. If a third inspection is necessary, it must be made when off-type female flowers can be identified.
d. Isolation areas will be inspected for volunteer Industrial Hemp plants and harmful contaminants on each inspection.

B. ISOLATION

1. Isolation areas must be kept free of Industrial Hemp plants. Under optimum conditions, not more than 3 plants per 11 square feet of harmful contaminants (species that can cross pollinate with the inspected crop) are permitted within the required isolation distance(s) adjacent to the inspected crop. The conditions of each crop are assessed by the seed certifying agency which may alter this standard, usually by reducing the number of contaminant plants permitted per square yard, according to the contamination risks involved.
2. The required isolation as outlined in Table 1 must be in place prior to the time of flowering and crop inspection.
3. If Dioecious male plants start flowering before removal from field, all plants around them should be destroyed for a radius of 10 feet for Foundation and 6 feet for Registered seed crops.

Table 1 –
Minimum Isolation Distances Required Between Inspected Industrial Hemp and Other Crops

Inspected Crop	Other Crops	Isolation Distance Required (feet)
Dioecious type – Registered and Foundation	- Different varieties of Industrial Hemp - Non-certified crop of same kind	16,150
	- Lower certified class seed crop of same variety	6460
	- Same class of certified seed of same variety	3
Dioecious type – Certified	- Different varieties of Industrial Hemp - Non-certified crop of same kind	3230
	- Lower certified class seed crop of same variety	646
	- Same class of certified seed of same variety	3
Monoecious type and Hybrids – Registered and Foundation	- Dioecious variety of Industrial Hemp - Non-certified crop of same kind	16,150
	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid)	6460
	- Lower certified class seed crop of same variety	3230
	- Same class of certified class of same variety	3
Monoecious type and Hybrids – Certified	- Dioecious variety of Industrial Hemp - Non-certified crop of same kind	3230
	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid) - Lower certified class seed crop of same variety	646
	- Same class of certified class of same variety	3

C. IMPURITY STANDARDS

1. Impurities should be removed prior to crop inspection.

2. Any combination of impurities may be reason for declining certified status.
3. An Industrial Hemp crop for certified status, unless otherwise specified by the Breeder, must not exceed the limits, as outlined in Table 2., of harmful contaminants (species that can cross pollinate with the inspected crop), plants of other varieties or distinct types foreign to the variety being inspected, weeds or other crops with seeds that are difficult to separate from Industrial Hemp seed (e.g. Hemp Nettle).
4. Table 2 indicates the maximum number of impurities permitted by AOSCA in approximately 10,000 plants of the inspected crop. The inspector makes at least 6 counts (10,000 plants each) or the equivalent to determine the number of impurities. The resulting average of these counts must not exceed the maximum impurity standards in Table 2

Table 2 - Maximum Impurity Standards

Inspected Crop	Maximum Impurity Standards per 10,000 plants in Registered and Certified Industrial Hemp Seed Crops		
	Maximum Number of "Too Male" Monoecious Plants	Maximum Number of Dioecious Male Plants Shedding Pollen	Maximum Number of Other Impurities
Dioecious type - Foundation	-	-	3
Dioecious type Registered and Certified	–	–	10
Monoecious type – Foundation	500	1	3
Monoecious type Registered	1000	2	10
Monoecious type and Hybrids Certified	–	100	10

IV. SEED STANDARDS

INDUSTRIAL HEMP SEED STANDARDS

Standards for Each Class

Factor	Foundation	Registered	Certified
Pure seed (minimum)	98.0%	98.0%	98.0%
Inert matter (maximum)*	2.0%	2.0%	2.0%
Weed seeds (maximum)	0.10%	0.10%	0.10%
Total other crop seeds (maximum)	0.01%	0.03%	0.08%
Other varieties (maximum)	0.005%	0.01%	0.05%
Other kinds (maximum)**	0.01%	0.03%	0.07%
Germination (minimum)	80.0%	80.0%	80.0%

*Inert matter shall not include more than 0.5 per cent of material other than seed fragments of the variety under consideration.

**Other kinds shall not exceed 2 per lb. (454 grams) for Foundation; 6 for Registered; 10 for Certified.

Guidelines for the Production of Certified Industrial Hemp Seed

1. Definitions

- Industrial Hemp (*Cannabis sativa L.*) includes varieties of these kinds:
  - Dioecious type: with male and female flowers on separate plants.
  - Monoecious type: with male and female flowers on the same plant.
  - (Unisexual Female) Hybrids: with sterile male and fertile female flowers on the same plant.
- "Approved Cultivar" means any variety designated as eligible for production by federal or local regulatory authorities
- "THC" means delta-nine (Δ9) tetrahydrocannabinol, which is the component of Industrial Hemp regulated by federal or local regulatory authorities.
- Although traditionally a crop with a Dioecious plant type (similar to open pollinated corn), many Monoecious varieties of hemp (*Cannabis sativa L.*) have been developed. Hemp is sexually polymorphic and often produces many different ratios of intersexual plant types that can increase roguing requirements. Variety descriptions normally define these ratios.

2. Foundation Seed Production

Any means of processing or conditioning of seed from a Foundation production area which may contaminate the varietal purity of the seed is prohibited

Area of Foundation Fields
When unforeseen circumstances do not permit proper maintenance of the entire field, it is recommended that the area be reduced by destroying part of the field or by isolating a part to meet the requirements of a lower status of certified seed. The remainder of the field must meet the requirements for Foundation field production.

The area of a Foundation field includes the "walkways" provided within the field to facilitate effective roguing.

3. Recommended Production Procedures

Field Planting

a) Fields shall be planted to facilitate inspection, roguing and harvesting.
b) Fields shall be planted in areas easily accessible for frequent maintenance and to provide the maximum protection from outside sources of contamination, such as roadways and building sites.
c) Regulations for land requirements are minimum standards and caution is necessary in choosing land, as volunteer growth from previous crops may vary according to local conditions.
d) The regulations for isolation are minimum standards. It is always to the grower's advantage to provide more isolation than required. When planting Foundation fields, specific requirements may influence the location and size of the field. It is a safeguard if adjacent crops are the same variety as the field and are inspected for certified status.

Roguing

a) The field must be thoroughly and intensively rogued many times throughout the crop season.
b) Off-type male flowers must be removed before the receptive stage of female flowers in the inspected crop.
c) The numbers and kinds of plants removed should be recorded and described on the appropriate forms.
d) All male flowers rogued from the crop must be removed from the production area and burial is recommended.
e) Regrowth of rogued flowers or plants must be prevented.

Harvesting, Cleaning and Storing

a) A seed grower should have access to the necessary equipment for harvesting and cleaning the seed from the field in such a manner as to ensure that the varietal purity of the seed is maintained.
b) The seed should be stored, in compliance with federal or local regulations, in a clean, cool, dry area.
c) The seed containers should be labelled for identification.

It is recommended that not more than one variety of Industrial Hemp be grown under the management of one grower.