

## SECTION 10

### REGISTERED AND CERTIFIED PRODUCTION OF INDUSTRIAL HEMP

In this Section:

- 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 in Health Canada’s *List of Approved Cultivars*.
- “THC” means delta-nine ( $\Delta 9$ ) tetrahydrocannabinol, which is the component of Industrial Hemp regulated by Health Canada.
- 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 roging requirements. Variety descriptions normally define these ratios.
- All production of Industrial Hemp crops in Canada is subject to license application approval by Health Canada.

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

#### 10.1 SEED CLASSES AND GENERATIONS

- 10.1.1 Breeder or Pre-Basic seed: determined by Breeder.
- 10.1.2 Foundation seed: one generation, grown by accredited Foundation plot growers. (Refer to Section 11.)
- 10.1.3 Registered seed: one generation.
- 10.1.4 Certified seed: one generation.
- 10.1.5 Only varieties of Industrial Hemp approved by Health Canada are eligible for certification.

#### 10.2 LAND REQUIREMENTS

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

**Table 10.2.2: Specific Crop Land Requirements**

Inspected Crop	Must NOT be grown on land which:
Registered	In the preceding 3 years produced a crop of Industrial Hemp.
Certified	In the preceding 2 years produced a non-pedigreed crop of Industrial Hemp or a different variety of Industrial Hemp.
	In the preceding 1 years produced a pedigreed crop of the same variety.

### **10.3 CROP INSPECTION**

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

- 10.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector at least once prior to swathing or harvesting.
- 10.3.2 A crop that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.
- 10.3.3 The crop 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 pedigreed status.

### **10.4 CROP STANDARDS**

#### **10.4.1 Isolation**

- a) The area, density, stage of maturity and location of any contaminating pollen source is an important factor in cross pollination, and therefore must be noted on the *Seed Crop Inspection Report* for consideration in determining pedigreed status. There shall not be any industrial hemp plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m.
- b) The required isolation must be provided prior to flowering and crop inspection.

#### **10.4.2 Weeds**

- a) All crops for pedigree must be free of Prohibited noxious weeds.
- b) Very weedy crops will be declined pedigreed status.
- c) The presence of Broomrape (*Orobanche* spp.) in Industrial Hemp crops is cause for declining pedigreed status.

#### **10.4.3 Maximum Impurity Standards**

- a) Impurities should be removed prior to crop inspection.
- b) Any combination of impurities may be reason for declining pedigreed status.
- c) Table 10.4.4A and Table 10.4.4B indicate the maximum number of impurities permitted by the CSGA 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 10.4.4A and Table 10.4.4B.

#### **10.4.4 Roguing**

- a) All male flowers rogued from the crop should be removed from the field.
- b) Regrowth of rogued male flowers or plants must be prevented.

### **10.5 SPECIFIC REQUIREMENTS**

- 10.5.1 It is recommended that not more than one variety of Industrial Hemp be grown under the management of one grower.
- 10.5.2 Growers are required by Health Canada to obtain THC test results, from a recognized laboratory, verifying that the THC content of their Industrial Hemp crop complies with

Health Canada regulations. Growers may be required to submit these results to the CSGA before a crop certificate is issued.

## **10.A ADDITIONAL MINIMUM REQUIREMENTS FOR DIOECIOUS TYPES**

### **10.3A CROP INSPECTION**

**10.3.4A** Dioecious seed crops shall be inspected after flowering when male plants are beginning to senesce.

### **10.4A CROP STANDARDS**

**Table 10.4.2A: Minimum Isolation Distances Required Between Inspected Dioecious Type Industrial Hemp Crops and Other Crops**

<b>Inspected Crop</b>	<b>Other Crops</b>	<b>Isolation Distance Required</b>
<b>Registered</b>	- Different varieties of Industrial Hemp - Non-pedigreed crop of same kind	4800 meters (15,748 feet)
	- Seed crop of same variety that meets Certified standards for varietal purity	1600 meters (5249 feet)
	- Seed crop of same variety that meets Registered standards for varietal purity	1 meter (3.32 feet)
<b>Certified</b>	- Different varieties of Industrial Hemp - Non-pedigreed crop of same kind	1000 meters (3230 feet)
	- Planted with pedigreed seed of the same variety that meets Certified standards for varietal purity	200 meters (646 feet)
	- Same pedigreed class seed crop of same variety	1 meter (3.32 feet)

**Table 10.4.4A: Maximum Impurity Standards**

<b>Inspected Crop</b>	<b>Maximum Number of Off-types or Other Varieties</b>
<b>Registered</b>	10
<b>Certified</b>	20

**Table 10.6A: Summary of Seed Crop Inspection Standards for Dioecious Types**

<b>Dioecious Type</b>	<b>Registered</b>	<b>Certified</b>
<b>Minimum Size of Field (acres) (Health Canada requirement)</b>	1.0	1.0
<b>Maximum Size of Field (acres)</b>	---	---
<b>Previous Land Use: minimum number of years without hemp production</b>	3	2/1
<b>Maximum Impurity Standards:</b>		
• Maximum number of off-types or other varieties (#/10,000 plants)	10 (0.1 %)	20 (0.2 %)
<b>Number of Inspections</b>	1	1
<b>Minimum Isolation Distance (meters):</b>		
• From different varieties and non-pedigreed hemp crops	4800	1000
• From seed crop of same variety that meets Certified standards for varietal purity	1600	-
• From crop planted with pedigreed seed of the same variety that meets Certified standards for varietal purity	-	200
• From seed crop of same variety that meets Registered standards for varietal purity	1	-
• From same pedigreed class seed crop of same variety	-	1

## **10.B ADDITIONAL MINIMUM REQUIREMENTS FOR MONOECIOUS TYPES AND HYBRIDS**

### **10.3B CROP INSPECTION**

**10.3.4B** Monoecious seed crops shall have two inspections, one just before or at early flowering and one up to three weeks later.

### **10.4B CROP STANDARDS**

**Table 10.4.2B: Minimum Isolation Distances Required Between Inspected Monoecious Type Industrial Hemp Crops and Other Crops**

<b>Inspected Crop</b>	<b>Other Crops</b>	<b>Isolation Distance Required</b>
<b>Registered</b>	- Dioecious variety of Industrial Hemp - Non-pedigreed crop of same kind	4800 meters (15,748 feet)
	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid)	2000 meters (6460 feet)
	- Lower pedigreed class seed crop of same variety	1000 meters (3230 feet)
	- Same pedigreed class seed crop of same variety	1 meter (3.23 feet)
<b>Certified</b>	- Dioecious variety of Industrial Hemp - Non-pedigreed crop of same kind	1000 meters (3230 feet)
	- Different varieties of the same type of Industrial Hemp (Monoecious or Female Hybrid)	200 meters (646 feet)
	- Lower pedigreed class seed crop of same variety	
	- Same pedigreed class seed crop of same variety	1 meter (3.23 feet)

**Table 10.4.4B: Maximum Impurity Standards**

Inspected Crop	Maximum Number of "Too Male" Monoecious Plants	Maximum Number of Dioecious Male Plants Shedding Pollen	Maximum Number of Off-types or Other Varieties
Registered	1000	2	10
Certified	–	100	20

**Table 10.6B: Summary of Seed Crop Inspection Standards for Monoecious Types**

Monoecious Type and (Unisexual Female) Hybrids	Registered	Certified
<b>Minimum Size of Field (acres) (Health Canada requirement)</b>	1.0	1.0
<b>Maximum Size of Field (acres)</b>	---	---
<b>Previous Land Use: minimum number of years without hemp production</b>	3	2/1
<b>Maximum Impurity Standards:</b>		
• Maximum number of Monoecious "too male" plants shedding pollen during inspection (#/10,000 plants)	1000 (10.0%)	---
• Maximum number of Dioecious male plants** shedding pollen during inspection (#/10,000 plants)	1000 (10.0%)	---
• Maximum number of off-types or other varieties (#/10,000 plants)	10 (0.1 %)	20 (0.2 %)
<b>Number of Inspections</b>	2	2
<b>Minimum Isolation Distance (meters):</b>		
• from Dioecious varieties and non-pedigreed Hemp crops	4800	1000
• from other Monoecious varieties	2000	200
• from lower pedigreed classes, same variety	1000	200
• from same pedigreed class, same variety	1	1

\*\* If Dioecious male plants start flowering before removal from field, all plants around them should be destroyed for a radius of 3 meters for Foundation and 2 meters for Registered seed crops.