HYBRID CANOLA AND RAPESEED STANDARDS
(As of February 2019)

The General Seed Certification Standards, as adopted by the Montana Seed Growers Association, are basic and together with the following specific standards constitute standards for certification of hybrid canola and rapeseed.

I. Definitions
   A. A line - line or population which is male sterile.
   B. B line – male fertile line or population capable of maintaining male sterility
   C. Restorer line – Line or population used as male parent which has the capability of restoring fertility to male sterile lines/population which crossed with them
   D. Self-Incompatible line – male fertile line or population which is capable of self-pollination.
   E. Self-Compatible line- male fertile line or population which is capable of self-pollination.

II. Designation of Classes of Seed
   A. A Commercial hybrid is one to be planted for any use except seed production.
   B. Only the certified seed is recognized in the production of commercial hybrid seed.

III. Unit of Certification
   A. The entire crossing field grown by and/or belonging to an applicant and used for seed must be eligible for seed.

IV. Seed Requirements
   A. Breeder or Foundation seed must be used to establish all fields of hybrid canola/rapeseed for certification. The direction of the cross must remain unchanged throughout the certification program unless adequate data is provided to certifying agency to show that no change in variety performance results from the reversal of parentage.

V. Land Requirements
   A. Foundation Seed- Crops for foundation status must not be planted on land which has grown canola/rapeseed, mustard or oilseed radish during the preceding five years.
   B. Certified Seed- Crops for certified status must not be planted on land which has grown canola/rapeseed, mustard, or oilseed radish during the preceding three years.
   C. Land used for all classes of certified seed production must be free from volunteer contamination plants.
   D. All roadways, ditch banks and other areas adjacent to a certified field shall be practically free from plants that can cross pollinate with the inspected seed crop. Contaminating cross pollinating plants within the required isolation distance, depending on density, stage of maturity, location and distance from the inspected crop, may be cause for rejection of the seed field.

VI. Isolation
Hybrid Canola/Rapeseed fields producing foundation or certified seed must be isolated by 2,640 feet (1/2 mile) from any other canola/rapeseed crops.

VII. Field Standards-General
   A. A portion of a field may be certified if the area to be certified is clearly defined. Portions of a field not meeting isolation requirements for certification must not be harvested as any class of certified seed.
   B. Volunteer plants may be cause for field rejection or down grading to a lower certification class.

VIII. Field Standards-Specific

<table>
<thead>
<tr>
<th>Ratio of Plants – Maximum Permitted</th>
<th>Fdn</th>
<th>Cert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Varieties*</td>
<td>1:10,000</td>
<td>1:10,000</td>
</tr>
</tbody>
</table>

*Other Varieties will be considered to include off-type plants and plants that can be differentiated from the variety being inspected.
IX. Field Inspection
A. Fields producing foundation or certified seed must be inspected when the crop is in the early flowering stage of female parent. Additional inspections may be warranted.
B. It is suggested that the inspector makes six counts of 10,000 plants per count in the field to be certified to determine the number of impurities. The average of the (six) counts must not exceed the number given for impurity in the preceding table.
C. It is the grower’s responsibility to ensure that crops have been inspected prior to harvest. Crops cut, swathed or harvested prior to being field inspected are not eligible for certification.

X. Preparation of Seed for Final Certification
A. Cleaning
   1. Clean all seed at an approved plant authorized by the MSGA. A list of authorized cleaning plants is available through the MSGA office or website www.mtseedgrowers.org.
   2. Seed delivered to the cleaning plant by grower must be identified by variety and certification number. A copy of the grower’s Application for Certification or field inspection form will suffice.
B. Seed Sample for Grade Determination
   1. Submit a cleaned, one pound sample labeled with growers name, cleaning plant name, certification number, and lot number to the Montana Seed Growers Association for “Certification Grade Determination”.
   2. Use official MSGA seed sample bags obtained by calling MSGA office.
   3. If multiple lots from the same fields are harvested and cleaning separately, a sample for purity and germination must be submitted for each clean lot.
C. Tag orders should be noted on the “Conditioner’s Report”. Tags will be issued upon receipt of production fees or at the discretion of MSGA.

XI. Seed Standards

<table>
<thead>
<tr>
<th>Factor</th>
<th>Fdn%</th>
<th>Cert%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Seed</td>
<td>min. 99.00</td>
<td>99.00</td>
</tr>
<tr>
<td>Inert Matter</td>
<td>max. 1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Hybridity</td>
<td>min. 80.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Other Crop Seed</td>
<td>max. 9/lb</td>
<td>18/lb</td>
</tr>
<tr>
<td>Other Varieties</td>
<td>max. 0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>Other Kinds</td>
<td>max. 0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Total Weed Seed</td>
<td>max. 90/lb</td>
<td>180/lb</td>
</tr>
<tr>
<td>Noxious Weed Seed¹</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Objectionable Weed Seed²</td>
<td>max. 9/lb</td>
<td>18/lb</td>
</tr>
<tr>
<td>Diseases:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sclerotia (sclerotinia sclerotiorum)</td>
<td>7/lb</td>
<td>7/lb</td>
</tr>
<tr>
<td>Phoma lingam</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Total Germination</td>
<td>min. 85.00</td>
<td>85.00</td>
</tr>
</tbody>
</table>

¹ None means none found during normal inspection procedures. None is not a guarantee that the lot is free of noxious weed seed.

² Objectionable weed seeds are defined as: Restricted weeds plus, Brassica nigra, Sinapis arvensis, Brassica juncea (unless the crop is canola quality Brassica juncea), and Raphanus raphanistrum.

³ Other kinds shall not exceed 1/lb for Foundation and 5/lb for Certified.

⁴ A certificate from an accredited laboratory indicating the percent of hybridity must be submitted prior to final certification.