

**CHAPTER 74-03-01
GENERAL SEED CERTIFICATION REQUIREMENTS**

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74-03-01-09. Field inspection.

1. Applications. Applications for field inspection, accompanied by the correct fees, payment of past-due accounts, and proof of seed eligibility, must be received at the state seed department office in Fargo not later than June fifteenth. The penalty fee will apply after that date. Applications for grass seed must be received by May first to avoid late penalty. Applications for hybrid wheat and industrial hemp must be received by June first to avoid late penalty. Applications for millet and buckwheat must be received by July fifteenth to avoid late penalty. Applications for soybeans requiring only a single inspection (preharvest) must be received by August first to avoid late penalty. In case of an emergency or unusual circumstances due to weather or crop conditions, the deadline may be extended at the discretion of the seed commissioner. In such an event, late application penalties may be waived.
2. Information required on application. The application shall be completed by the applicant and returned to the seed department. All questions must be answered completely and correctly. The location of the farm and field, including the legal description, shall be given clearly so that the inspector will be able to find the farm and field readily without waste of time and extra travel. Farm service agency field maps or equivalent must be provided by the applicant. If the seed is the grower's own seed, sufficient evidence must be provided to the department to verify eligibility. If the seed is purchased, an official certified seed tag or bulk certificates must accompany the application.
3. Roguing and spraying fields. Roguing is essential to maintain the purity of varieties and high standards of certified seed. Roguing fields prior to inspection is recommended to remove undesirable plants from fields. Plants that should be removed include off-type plants, other crop plants, prohibited and restricted noxious weeds, and other impurities which may be growing in the field.

Roguing is usually done by pulling off-types or other crop plants or weeds and removing them from the field. In the case of small grain, roguing should be done after heading as foreign plants are seen most easily at this time. In hybrid seed production, fertile off-types and undesirable plants should be removed before pollen is shed. Sterile off-types may be removed any time prior to the final inspection.

Whenever practical and advisable, seed fields should be sprayed with pesticides according to the manufacturer's label to control pests. Growers must follow posting requirements as specified by state and federal agencies responsible for the regulation and use of pesticides.

4. Weeds and diseases.
 - a. Prohibited noxious weeds under North Dakota seed laws and rules are leafy spurge, field bindweed (creeping jenny), Canada thistle, perennial sow thistle, Russian knapweed, hoary cress (perennial peppergrass), absinth wormwood, musk thistle, spotted knapweed, and yellow starthistle and Palmer amaranth.
 - b. Restricted noxious weeds under North Dakota seed laws and rules are dodder species, hedge bindweed (wild morning glory), wild oats, and quackgrass.
 - c. A field may be rejected if it is the field inspector's opinion that the amount and kind of weeds present make it difficult to conduct the inspection, or the field condition is such that the quality of the cleaned seed may be questionable.
 - d. Objectionable weed seeds are restricted noxious weeds under North Dakota seed laws and rules and may include some common weeds which cause a specific problem in the conditioning of some individual crops.
 - e. Diseases not governed by specific crop standards may be cause for rejection if it is the field inspector's opinion that the quality of the cleaned seed may be affected or if results of tests made on the seed indicate a disease condition which will affect the crop produced from such seed.
5. Cancellation of field inspection. An application may be canceled by the applicant before the field inspection is completed. The application fee minus an administrative fee will be refunded to the applicant. The request for cancellation, however, must reach the state seed department before the inspector arrives in the general locality of the field or before inspection has occurred. Refunds will not be made after the field is inspected or because the field has been rejected.
6. Appeal. Reinspection of rejected fields may be considered, provided the application for appeal allows a reasonable amount of time for reinspection prior to harvest. A fee for reinspection may be assessed.
7. The variety name stated on the application will be standard for inspection when entering the field. Absent compelling visual evidence to the contrary, the variety or selection declared by the applicant will be presumed correct if the documentation provided is valid.

History: Amended effective May 1, 1986; May 1, 1988; December 18, 1989; September 1, 2002; January 2, 2006; July 1, 2007; July 1, 2010; October 1, 2012; July 1, 2018; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-53-37, 4.1-53-42, 4.1-53-59

74-03-01-11. Seed conditioning, sampling, and laboratory inspection.

1. **Identification in storage.** Field-inspected seed must be identified at all times. Identification must be traceable to field inspection numbers from the crop year in which the seed was produced. Conditioned seed in storage must be identified by kind, variety, class, and lot number displayed on the bin or storage container.
2. **Preconditioned sample testing.** To hasten labeling or determine the quality of seed which has passed field inspection prior to conditioning, a representative sample of seed may be submitted to the state seed department for the purpose of germination and disease testing. The sample should be cleaned on a small mill or hand sieve to approximate as nearly as possible the quality of the entire lot after conditioning.

Results of germination and disease tests conducted on preconditioned samples may be used for final certification purposes. A labeler may request new tests for labeling purposes after the seed lot is conditioned. Fragile crops such as soybeans, field beans, lentils, chickpeas, and field peas must be tested for germination after the final conditioning of the seed lot to assure correctness of label claims. The labeler is responsible in all cases for information stated on seed labels.

3. **Conditioning.** All field-inspected seed which is to be labeled must be conditioned and must meet the minimum seed standards for the crop and class. Field-inspected seed may be conditioned either by the grower or by an approved seed conditioner.
 - a. Conditioning by seed grower.
 - (1) A seed grower does not need an approved conditioning facility permit if the grower conditions the grower's own seed on the grower's premises with the grower's equipment.
 - (2) The seed grower must complete a sampler's report in its entirety, attach the report -to a two-pound [.907-kilogram] sample that is representative of the entire seed lot, and deliver to the state seed department for analysis.
 - b. Conditioning by an approved facility.
 - (1) To be eligible for final certification, field-inspected seed shall be conditioned by a facility approved by the seed department. Seed conditioned at an unapproved facility will be ineligible for final certification.
 - (2) If ownership of the seed lot is transferred to a different individual or entity, the grower must complete and sign a grower's declaration. Transfer of ownership of field-inspected seed is limited to an approved conditioner or bulk retailer unless the transfer has been approved by the commissioner.
 - (3) While conditioning, the seed lot must be sampled at regular intervals by an authorized sampler. The sample and completed sampler's report must be submitted to the state seed department for analysis.
4. **Sampling procedures.** Representative samples of seed for testing and analysis must be collected during or after conditioning in accordance with sampling procedures outlined in the current association of official seed certifying agencies operational procedures.
 - a. All seed lots eligible for final certification shall be sampled during conditioning as follows:

- (1) Portions of conditioned seed may be drawn by hand as seed is conditioned to form a composite, representative sample for a seed lot; and
 - (2) Automatic mechanical devices may be used to continually or intermittently draw representative samples as a seed lot is conditioned.
- b. Specific instructions to samplers are found on the reverse side of the sampler's report.

5. Maximum lot size and numbering.

- a. The maximum lot size for bagged seed is five thousand bushels [17619.54 dekaliters] except for small seeded legumes and grasses which is twenty-two thousand five hundred pounds [10000 kilograms]. Bulk seed lots do not have a maximum size limit except bin capacity. Each bin is considered a separate seed lot. For all crops, one sample for each lot is required. The entire lot must be certified at the time final certification is completed.
- b. The lot number shall be designated by the labeler. The lot number of the seed planted may not be used as the new lot number for the seed being certified during the current crop year.

6. **Commingling (mixing) of inspected seed fields.** Seed of the same kind and variety from different fields that pass field inspection may be commingled if the seed is of the same class and general quality. If seed of different classes is commingled, the seed becomes eligible for the lowest class only.

7. **Commingling carryover certified seed lots.** Carryover seed from certified lots may be commingled if the seed is of the same variety, class, and general quality. If seed of different classes is commingled, the seed becomes eligible for the lowest class only. A new germination test is required for labeling. Germination tests should be done on each lot prior to commingling to ensure none of the lots have gone out of condition.

8. The state seed department may resample any lot of seed before final certification or after the seed is labeled.

9. **Official samples.** At the request of a customer, an official sample may be collected by a representative of the seed department, with expenses incurred by the customer. The seed department shall determine the appropriate collection method and sample size. Sampling bulk seed in bins requires that a minimal amount of seed is withdrawn from the bin. The amount shall be determined by the quantity of seed in the lot, but shall be no less than five percent of the total lot size. Test results from official samples shall supersede all previous test results and shall be final.

10. Laboratory analysis.

- a. All laboratory testing shall be done by qualified personnel of the state seed department. Analysis and tests of seed samples and definition of analysis terms shall be in accordance with the rules of the association of official seed analysts (AOSA). In certain cases when time constraints are critical to the efficient movement of certified seed, the commissioner may accept germination or other test results from an approved laboratory, through the certification agency of the state of origin of the seed.
- b. If more than one sample of seed from the same lot is tested without additional conditioning, an average shall be taken of all purity tests conducted. Results from the most recent germination or disease test shall be used as the final result.
- c. Seed from certain classes or kinds, or both, may be subject to variety identification analysis at the discretion of the department, with testing fees payable by the grower or labeler.

History: Amended effective May 1, 1986; May 1, 1988; December 18, 1989; August 1, 1991;

September 1, 2002; January 2, 2006; July 1, 2007; July 1, 2010; October 1, 2012; July 1, 2018; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-53-46

74-03-01-12. Labeling.

All classes of certified seed, when offered for sale, shall have an official certification label affixed to each container clearly identifying the certification agency, the lot number or other identification, variety name and kind, and class of seed. The responsibility for properly labeling foundation, registered, or certified seed rests with the grower or first distributor.

1. Records. Each person whose name appears on the label and handles seed shall keep for a period of three years, complete records of each lot of seed handled. All records pertaining to the lot involved must be accessible for inspection by the commissioner at any time during customary business hours. Records shall include:
 - a. Quantity of seed grown and conditioned or purchased for bulk sale.
 - b. Quantity of bulk certified seed sold by variety and lot number.
 - c. A current inventory of each variety of seed available for sale.
 - d. Consult Federal Seed Act regulations part 201 for recordkeeping requirements for seed in interstate commerce.
2. Samples. It is the initial labeler's responsibility to maintain possession of a two-pound [.907-kilogram] sample identified by kind, variety, class, and lot number of each lot of certified seed sold, whether bagged or in bulk, for a period of one year after the final disposition of the seed lot.
3. No person may disclaim responsibility of the vendor of the seed for the data on the label required by law, and any such disclaimer of vendor's express or implied warranty is invalid.
4. Bagged seed.
 - a. All bagged seed represented or sold as foundation, registered, or certified must be bagged in new bags and the official certification tag properly affixed on the bag. Certification tags are void if improperly used or not attached to the bag. Containers or tote bags larger than one hundred sixty pounds [72.77 kilograms] may be considered bulk seed.
 - b. The use of two tags, the official certification tag and a separate analysis tag, on foundation, registered, or certified seed is optional.
 - c. Certified seed will be considered mislabeled unless the seed analysis is on either the certification tag or on an additional tag or printed on the bag.
 - d. Certification tags are not valid when they are transferred in any manner other than attached to the eligible seed bag.
5. Bulk seed. In the case of seed sold in bulk, the bulk certified seed certificate takes the place of the certified seed tag. The complete seed analysis will be printed on the certificate.
 - a. Foundation and registered class seed may be sold in bulk only by the applicant producer, or by an approved conditioner.
 - b. Certified class seed may be sold in bulk by the applicant producer, an approved conditioner, or an approved bulk retail facility.

- c. Approved bulk retail facilities may be allowed to handle bulk registered seed on a case-by-case basis only when authorized by the state seed department. If authorized by the seed department, the bulk retailer must designate which bins will be used for registered seed.
- d. Bulk retail seed facilities must be approved annually before certified seed can be handled in bulk. Such facilities may be part of a seed conditioning facility or may be approved only for handling bulk certified seed. Before approval, all procedures for receiving, storing, dispensing, and recordkeeping must be inspected. The applicant must demonstrate acceptable procedures for maintaining purity and identity of bulk certified seed.
- e. Offsite bins or satellite bin locations shall be managed in the same manner as those at an approved facility. Bins shall be listed on a separate bin list registered under the name of an approved facility. All satellite locations shall be inspected annually by the seed department.
- f. Handling bulk certified seed:
 - (1) A separate storage bin must be available for each lot that will be sold in bulk. Each bin shall be considered a separate lot of seed and shall be labeled accordingly.
 - (2) All bins, augers, conveyors, and other equipment must be cleaned before storage or handling certified seed.
 - (3) All hopper bins must be equipped with bottom access ports, inside ladders, or some other means approved by the seed department to facilitate access for cleaning.
 - (4) All augers used to convey seed must be reversible.
 - (5) All bins must be clearly and prominently marked to show kind, variety, class, and lot number.
 - (6) All bin openings must be closed to prevent contamination, except when seed is being put in or removed from the bin, or to allow for aeration.
- g. A maximum of two physical transfers are permitted after final certification.
- h. It is the seller's responsibility to:
 - (1) Handle seed in a manner to prevent mixtures and contamination.
 - (2) Supply seed that is representative of the seed tested and approved for certification.
 - (3) Ensure all bins, augers, conveyors, and other equipment are adequately cleaned before handling certified seed.
 - (4) Determine that the vehicle receiving bulk certified seed has been cleaned prior to receiving the seed. If it is not clean, this is to be noted on the bill of sale or transfer certificate.
 - (5) Provide to the purchaser a bulk certificate for each load of bulk certified seed at the time of delivery.
 - (6) Ensure that the conditioned lot is not moved from the premises of the approved conditioning facility or labeler's facility until the sample has been tested by the state seed department laboratory and shows that the lot is eligible for certification.
- i. It is the buyer's responsibility to:
 - (1) Obtain a bulk certificate from the seller for each load of bulk certified seed at the time of delivery.

- (2) Provide a clean vehicle or container in which to load seed.
- (3) Maintain purity of the seed after it has been loaded into the buyer's vehicle.

History: Amended effective May 1, 1986; September 1, 2002; January 2, 2006; July 1, 2007; July 1, 2010; October 1, 2012; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-53-12, 4.1-53-13, 4.1-53-39

74-03-01-14. Carryover seed.

All carryover seed must be retested for germination before new certified seed labels will be issued by the state seed department.

- ~~1. **Unconditioned carryover.** All unconditioned carryover seed eligible for certification must be reported to the state seed department. Failure to report will disqualify the seed for certification.~~
- ~~2. **Certified carryover.**~~
 - ~~a. **Bagged seed.** All carryover seed must be retested for germination before new certified tags will be issued by the state seed department.~~
 - ~~b. **Bulk seed.** All carryover bulk seed must be retested for germination before new bulk certificates will be issued. Carryover bulk seed cannot be recertified in bags unless a new sample is submitted for purity and germination analysis.~~

History: Amended effective May 1, 1986; September 1, 2002; January 2, 2006; July 1, 2010; October 1, 2012; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-53-42

**CHAPTER 74-03-02
SPECIFIC CROP REQUIREMENTS - SMALL GRAINS**

Section	
74-03-02-01	Land Requirements
74-03-02-02	Field Inspection
74-03-02-03	Field Standards
74-03-02-04	Seed Standards (Wheat - Oats - Barley - Rye - Triticale)
74-03-02-05	Seed Standards (Flax) [Repealed]

74-03-02-04. Seed standards (wheat - oats - barley - rye - triticale).

Seed count required, ~~on wheat, oats, barley, and durum.~~

Variety identification test required for hard red spring wheat and barley.

Factor	Standards for Each Class		
	Foundation	Registered	Certified
Pure seed (minimum) *	99.0 percent	99.0 percent	99.0 percent
Total weed seeds (maximum)	2 per pound	5 per pound	10 per pound
Other varieties **	1 per 2 pounds	1 per pound	3 per pound
Other crop seeds (maximum)	1 per 2 pounds	1 per pound	3 per pound
Inert matter (maximum) ***	1.0 percent	1.0 percent	1.0 percent
Prohibited noxious weed seeds +	none	none	none
Objectionable weed seeds (maximum) ++	1 per 2 pounds	1 per 2 pounds	1 per pound
Germination +++	85.0 percent	85.0 percent	85.0 percent

*The standard for durum, triticale and rye shall be 98.0 percent minimum.

**Other varieties shall not include variants characteristic of the variety. White wheat must be tested for red wheat contaminants.

***For all crops foreign matter other than broken seed shall not exceed 0.2 percent. Durum, triticale, and rye may contain 2.0 percent maximum inert matter.

+Including the seeds of quackgrass.

++Objectionable weed seeds shall include the following: dodder, wild oats, hedge bindweed (wild morning glory), giant ragweed (kinghead), falseflax, and dragonhead.

+++Winter wheat, durum, triticale and rye minimum 80.0 percent.

Note: A barley labeler is responsible for having a loose smut test, by an official laboratory, on the harvested seed of each field of barley. If seed from more than one field is blended without having a test for each field, a loose smut test must be made on each seed lot or subplot. The percentage of loose smut will be printed on the certification certificate or label.

History: Amended effective May 1, 1986; May 1, 1988; December 18, 1989; August 1, 1991; September 1, 2002; January 2, 2006; July 1, 2010; October 1, 2012; July 1, 2018; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

**CHAPTER 74-03-09
SPECIFIC CROP REQUIREMENTS - MUSTARD, CRAMBE, CANOLA, AND RAPE
(NONHYBRID)**

Section	
74-03-09-01	Land Requirements
74-03-09-02	Field Inspection
74-03-09-03	Field Standards
74-03-09-04	Seed Standards

74-03-09-03. Field standards.

1. General.

a. Isolation. A field producing any class of certified seed must have the minimum isolation distance from fields of any other variety of the same kind, or from a noncertified crop of the same variety as follows:

(1) Producing foundation seed ~~– one thousand three hundred twenty feet [402.34 meters]. All foundation fields of mustard, canola, or rape must be isolated by three hundred thirty feet [100.58 meters] from fields of the other kind (rape from mustard or canola; mustard from rape or canola; or canola from rape or mustard).~~

- a) Crambe – six hundred sixty feet
- b) Mustard – one thousand three hundred twenty feet
- c) Rapeseed – six hundred sixty feet

(2) Producing registered crambe seed - six hundred sixty feet [201.17 meters].

(3) Producing certified seed ~~– six hundred sixty feet [201.17 meters]. Required isolation between classes of the same variety – ten feet [3.05 meters].~~

- a) Crambe – six hundred sixty feet
- b) Mustard – six hundred sixty feet
- c) Rapeseed – three hundred thirty feet
- d) Required isolation between classes of the same variety – ten feet [3.05 meters.]

b. Unit of certification. The field is the unit of certification. A portion of a field may be accepted for certification provided that the rejected portion in no way impairs the genetic purity of the portion accepted.

2. Specific field standards.

Factor	Foundation	Maximum Permitted in Each Class	
		Registered	Certified
Other varieties *	1:2,000	1:2,000	1:500
Inseparable other crops	1:2,000	1:2,000	1:500

*Other varieties include plants that can be differentiated from the variety being inspected, but shall not include variants characteristic of the variety.

History: Amended effective May 1, 1986; December 18, 1989; September 1, 2002; January 2, 2006; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

**CHAPTER 74-03-11
SPECIFIC CROP REQUIREMENTS – SUNFLOWER**

Section	
74-3-11-1	Land Requirements
74-3-11-2	Field Inspection
74-3-11-3	Field Standards
74-3-11-4	Seed Standards (Sunflower) [Repealed]
74-03-11-04.1	Precontrol Standards
74-3-11-5	Postcontrol Standards [Repealed]
74-03-11-05.1	Seed Standards

74-03-11-03. Field standards.

Factor	Open-Pollinated* Varieties		Seed Parent	Pollen Parent
	Open Pollinated Varieties	A,B or R	Hybrid Production Seed Parent	Hybrid Production Pollen Parent
Pollen shedding female plants (Maximum)		<u>1:1,000</u>	<u>45:1,000</u>	
Off types other than pollen shedding female plants (maximum) Branched wild-types		<u>1:51,000</u>	<u>1:51,000</u>	<u>1:51,000</u>
Isolation allowances (maximum) per plants in the production field ** <u>Purple plants</u>	<u>4:5,000</u>	<u>1:51,000</u>	<u>1:51,000</u>	<u>1:51,000</u>
<u>White seeded plants</u>		<u>1:1,000</u>	<u>1:1,000</u>	<u>1:1,000</u>
Total including above (maximum)	<u>5:1,000</u>	<u>44:1,000</u>	<u>45:1,000</u>	<u>44:21,000</u>
Isolation (minimum) **	5,280 feet	5,280 feet	5,280 feet	5,280 feet
Corn plants bearing seed	none	none	none	None

*To include not more than one plant per 5,000 plants of the following types: wild type branching, purple, white seeded. Other varieties include plants that can be differentiated from the variety being inspected, but shall not include variants characteristic of the variety. Standard applies only to A-line.

**Must be isolated from other varieties, strains, hybrids, volunteer sunflower, noncertified crops of the same variety, and hybrid and wild Helianthus annuus species.

History: Amended effective May 1, 1986; May 1, 1988; January 2, 2006; April 1, 2020.

General Authority: NDCC 4.1-53-11

Law Implemented: NDCC 4.1-53-11, 4.1-53-42

**CHAPTER 74-03-09
SPECIFIC CROP REQUIREMENTS - MUSTARD, CRAMBE, CANOLA, AND RAPE
(NONHYBRID)**

Section	
74-03-09-01	Land Requirements
74-03-09-02	Field Inspection
74-03-09-03	Field Standards
74-03-09-04	Seed Standards

74-03-09-03. Field standards.

1. General.

- a. Isolation. A field producing any class of certified seed must have the minimum isolation distance from fields of any other variety of the same kind, or from a noncertified crop of the same variety as follows:
- (1) Producing foundation seed ~~one thousand three hundred twenty feet [402.34 meters]. All foundation fields of mustard, canola, or rape must be isolated by three hundred thirty feet [100.58 meters] from fields of the other kind (rape from mustard or canola; mustard from rape or canola; or canola from rape or mustard).~~
 - a) Crambe – six hundred sixty feet
 - b) Mustard – one thousand three hundred twenty feet
 - c) Rapeseed – six hundred sixty feet
 - (2) Producing registered crambe seed - six hundred sixty feet [201.17 meters].
 - (3) Producing certified seed ~~six hundred sixty feet [201.17 meters]. Required isolation between classes of the same variety – ten feet [3.05 meters].~~
 - a) Crambe – six hundred sixty feet
 - b) Mustard – six hundred sixty feet
 - c) Rapeseed – three hundred thirty feet
 - d) Required isolation between classes of the same variety – ten feet [3.05 meters.]
- b. Unit of certification. The field is the unit of certification. A portion of a field may be accepted for certification provided that the rejected portion in no way impairs the genetic purity of the portion accepted.

2. Specific field standards.

Factor	Foundation	Maximum Permitted in Each Class	
		Registered	Certified
Other varieties *	1:2,000	1:2,000	1:500
Inseparable other crops	1:2,000	1:2,000	1:500

*Other varieties include plants that can be differentiated from the variety being inspected, but shall not include variants characteristic of the variety.

History: Amended effective May 1, 1986; December 18, 1989; September 1, 2002; January 2, 2006; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

CHAPTER 74-03-14
SPECIFIC CROP REQUIREMENTS – HYBRID WHEAT and HYBRID RYE

Section

- 74-03-14-01 General Requirements
- 74-03-14-02 Land Requirements
- 74-03-14-03 Field Inspection
- 74-03-14-04 Field Standards
- 74-03-14-05 Seed Standards

74-03-14-01. General requirements. The following genetic standards are applicable for the production of parental lines and hybrids of wheat and rye produced by comingling a cytoplasmic male-sterile seed parent and a fertility restorer line.

1. **Eligibility requirements for varieties.** Standards applicable to wheat and rye varieties apply to the production of pollinator lines.
2. **Definition of parental types**
 - a. **Maintainer (B-line).** A line with normal fertile cytoplasm that is used as a pollinator to increase the Seed Parent.
 - b. **Seed Parent (A-line).** A cytoplasmic male-sterile line (cms), that is genetically identical to the Maintainer line that when pollinated by a Restorer, produces hybrid seed.
 - c. **Restorer (R-line).** Any male fertile line possessing nuclear restoration genes used as a pollinator in the production of commercial hybrid seed.
3. **Eligible seed classes.**
 - a. Only the Certified class is recognized in the production of commercial hybrid seed. A commercial hybrid is planted for any use except for seed production. To be certified, a commercial hybrid must be produced from Foundation class seed stocks. These seed stocks shall consist of male steriles, inbred lines, and/or hybrids.
 - b. Only the Foundation class is recognized for parental lines.

History: Effective April 1, 2018; April 1, 2020

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-14-03. Field inspection. Fields for the production of parental lines utilized in hybrid wheat and hybrid rye production shall be inspected as follows. Roguing to remove undesirable plants must be done prior to field inspection. Rogued plants must be removed from the field.

1. AxB production. Seed parents shall be inspected three times. The first inspection shall occur after heading but before anthesis to check for off-type plants. The second and third inspections shall be during anthesis to check for shedders in

the seed parent, the presence of which shall immediately be communicated with the seed producer to allow for roguing.

2. Maintainers and Restorers. Male lines shall be inspected at least once for purity after the crop is fully headed.
3. Commercial hybrid production fields shall be inspected at least once.

History: Effective April 1, 2018; April 1, 2020

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-14-04. Field standards

1. Isolation.

- a. Seed Parent increases (AxB). Fields or parts of fields acceptable for production of seed parents to be used for the production of commercial hybrid seed must be so located that the seed parent is not less than 2,640 feet [804.67 meters] for wheat and 3,280 feet [1000 meters] for rye from fields of other kinds or varieties which could provide a source of contamination, or from fields of the same variety that do not meet varietal purity requirements for certification. The A-line and B-line shall be separated by an unplanted strip of ground adequate to prevent mechanical mixture.
- b. Maintainer and Restorer increases. Fields or parts of fields acceptable for production of pollinator lines must be so located that the line is not less than 30 feet [9 meters] for wheat and 660 feet [200 meters] for rye from fields of other kinds or varieties which could provide a source of contamination, or from fields of the same variety that do not meet varietal purity requirements for certification. Prior to inspection, the field must be isolated from inseparable crops by a strip at least five feet wide to prevent mechanical contamination.
- b.c. _____ Commercial hybrids. Fields or parts of fields acceptable for production of commercial hybrid seed must be no less than 330 feet [100 meters] for wheat and 1,640 feet [500 meters] for rye from fields of other kinds or varieties which would provide a source of contamination, or from fields of the same variety that do not meet varietal purity requirements for certification.

2. Specific Field Standards.

Factor	A-Line Foundation	B & R-Lines Foundation	Commercial Hybrid Certified
Pollen Shedders	1:3,000	N/A	NA
Other varieties*	1:3,000	1:3,000	1:3,000
Inseparable Other Crops	1:30,000	1:30,000	1:5,000
Prohibited noxious weed seeds**	none	none	none

* Other varieties include plants that can be differentiated from the variety being inspected, but shall not include variants which are characteristic of the variety.

** The tolerance for prohibited or objectionable weeds, or both, in the field will be determined by the inspector.

History: Effective April 1, 2018; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-14-05. Seed standards.

Variety identification test is required for A, B and R-lines of wheat. Hybridity test is required on hybrid seed. Seed count required on all ~~lines~~ hybrids.

Standards for Each Class		
	A, B, R-Lines	Commercial Hybrid
Factor	Foundation	Certified
Pure seed (minimum)	98.0 percent	98.0 percent
Hybridity (minimum)*	N/A	75%
Total weed seeds (maximum)	0.10 percent	0.10 percent
Other varieties **	0.005 percent	0.05 percent
Other crop seeds (maximum)	0.01 percent	0.08 percent
Inert matter (maximum) ***	2.0 percent	2.0 percent
Prohibited noxious weed seeds	none	none
Germination	80.0 percent	80.0 percent

~~*Hybridity will be determined by an acceptable method of acceptable accuracy that can be reproduced by a certifying agency. The completed and test results shall~~ must be submitted to the agency with a declaration of the hybridity prior to final certification of each lot of spring cereals and within 160 days of harvest for winter cereals.

**Other varieties include plants that can be differentiated from the variety being inspected, but shall not include variants which are characteristic of the variety.

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

History: Effective April 1, 2018; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

CHAPTER 74-03-16
SPECIFIC CROP REQUIREMENTS – INDUSTRIAL HEMP

Section	
74-3-16-1	General Requirements
74-3-16-2	Land Requirements
74-3-16-3	Field Inspection
74-3-16-4	Field Standards
74-3-16-5	Seed Standards

74-03-16-01. General requirements. All production of industrial hemp crops is subject to license application approval that may be required by regulatory authorities. Only growers who possess a current license with the North Dakota Department of Agriculture are eligible to produce certified seed. Only varieties of industrial hemp approved by regulatory authorities for seed production and which meet Federal Seed Act eligibility requirements will be eligible for certification. Growers may be required by regulatory agencies to obtain THC test results according to applicable regulations. Growers may be required to submit test results to the seed certifying agency before labels are issued. Upon meeting final certification requirements, eligible seed will be labeled in the licensee's name only.

History: Effective May 1, 2017; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-16-02. Land requirements. A crop of Foundation or Registered class industrial hemp will not be eligible for certification if planted on land on which the same kind of crop was grown the previous three years unless the previous crop was the same variety and passed field inspection for certification. A crop for Certified class will not be eligible for certification if planted on land on which the same kind of crop was grown the previous two years unless the previous crop was the same variety and passed field inspection for certification.

History: Effective May 1, 2017; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-16-03. Field inspection. It is the grower's responsibility to ensure that fields are inspected prior to ~~swathing~~ or harvesting. A field harvested before inspection will not be eligible for certification. All fields must be inspected at least once before harvest at a stage of growth when varietal purity is best determined. One inspection is required for Registered and Certified seed fields of dioecious varieties. Two inspections are required for all classes of monoecious varieties and Foundation seed fields of dioecious varieties.

History: Effective May 1, 2017; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-16-04. Field standards

1. Isolation.

- a. Prior to flowering and inspection, the field must be isolated from fields of any other variety or fields of the same variety not meeting genetic purity requirements for certification.
- b. The minimum isolation distances required between inspected ~~industrial~~ hemp and other hemp crops shall be maintained as specified in the following table. There shall be no hemp plants within 300 feet of a seed field and no more than 4 plants per acre outside 300 feet. ~~Industrial Hemp~~ crops shall be isolated from other inseparable crops by a minimum of ten feet.

2. Specific Field Standards.

- a. Roguing to remove undesirable plants must be done before field inspection. Rogued plants must be removed from the field to be harvested.
- b. Any combination of impurities may be reason for failing an inspection. Unless otherwise specified by the breeder, an ~~industrial~~ hemp crop for certification must not exceed the limits specified in the following table. Impurities may include harmful contaminants (species capable of cross pollinating with the inspected variety), plants of other varieties or distinct types foreign to the variety being inspected, weeds or other inseparable crops.

Minimum Isolation Distances Required Between Inspected ~~Industrial~~ Hemp and Other Crops

Inspected Crop	Other Crops	Isolation Distance Required (feet)
Dioecious type Foundation	- Different varieties of hemp - Non-certified crop of hemp	15,748
	- Lower certified class seed crop of same variety	6,460
	- Same class of certified seed crop of same variety	10
Dioecious type Registered	- Different varieties of hemp - Non-certified crop of hemp	15,748
	- Seed crop of same variety that meets Certified standards for varietal purity	5,249
	- Seed crop of same variety that meets Registered standards for varietal purity	3
Dioecious type Certified	- Different varieties of hemp - Non-certified hemp	2,624
	- Planted with certified seed of the same variety that meets Certified standards for varietal purity	656
	- Seed crop of same variety that meets Certified standards for varietal purity	3
Monoecious type Foundation	- Dioecious variety of hemp - Non-certified crop of hemp	15,748
	- Other monoecious varieties	9,690
	- Lower certified class seed crop of same variety	

	- Same class of certified seed of same variety	16
Monoecious type Registered	- Dioecious variety of hemp	15,748
	- Non-certified crop of hemp	
	- Different varieties of the same type of hemp (monoecious or female hybrid)	6,460
	- Seed crop of same variety that meets Certified standards for varietal purity	3,230
Monoecious type Certified	- Seed crop of same variety that meets Registered standards for varietal purity	3
	- Dioecious variety of hemp	3,230
	- Non-certified crop of hemp	
	- Different varieties of the same type of hemp (monoecious or female hybrid)	656
- Planted with certified seed of the same variety that meets Certified standards for varietal purity		
	- Seed crop of same variety that meets Certified standards for varietal purity	3

b.c. The table indicates the maximum number of impurities permitted in approximately 10,000 plants of the inspected crop.

Factor	Dioecious Types		Monoecious Types		Monoecious Types & Hybrids Certified
	Foundation	Registered Certified	Foundation	Registered	
"Too Male" Monoecious plants	NA	NA	500	1,000	NA
Dioecious male plants shedding pollen	NA	NA	1	2	100
Other impurities	3	10	3	10	10

	Maximum Impurity Standards per 10,000 plants in Hemp Seed Crops	
	Maximum Number of Dioecious Male Plants Shedding Pollen	Maximum Number of Off-Types or Other Varieties
Dioecious type Foundation	=	3
Dioecious type Registered	=	10
Dioecious type Certified	=	20
Monoecious type Foundation	1	3
Monoecious type Registered	2	10
Monoecious type Certified	100	20

History: Effective May 1, 2017; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-16-05. Seed standards.

Factor	Standards for Each -Class		
	Foundation	Registered	Certified
Pure seed (minimum)	98.0 percent	98.0 percent	98.0 percent
Total weed seeds (maximum)	0.10 percent	0.10 percent	0.10 percent
Other varieties	0.005 percent	0.01 percent	0.05 percent
Other crop seeds (maximum)	0.01 percent	0.03 percent	0.08 percent
Inert matter (maximum) *	2.0 percent	2.0 percent	2.0 percent
Prohibited noxious weed seeds	none	none	none
Other kinds**	0.01 percent	0.03 percent	0.07 percent
Germination	80.0 percent	80.0 percent	80.0 percent

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

** Other –kinds shall not exceed 2 per pound for Foundation, 6 for Registered and 10 for Certified.

History: Effective May 1, 2017; April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

CHAPTER 74-03-17
SPECIFIC CROP REQUIREMENTS – FABA BEANS

Section

74-03-17-01	<u>Land Requirements</u>
74-03-17-02	<u>Field Inspection</u>
74-03-17-03	<u>Field Standards</u>
74-03-17-04	<u>Seed Standards</u>

74-03-17-01. Land requirements.

A crop of faba bean will not be eligible for certification if planted on land on which the same kind was grown the year previous unless the previous crop was the same variety and was inspected for certification.

History: Effective April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-17-02. Field inspection.

Field inspection shall be made when the crop is flowering.

History: Effective April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-17-03. Field standards.

1. **Isolation.** Prior to inspection, the field must be isolated from inseparable crops by a fence row, natural boundary, or by strip at least five feet [1.52 meters] wide which is either mowed, sprayed, or uncropped. A field must be isolated at least 30 feet [10 meters] from different varieties or non-certified varieties of fababean.

2. **Specific field standards.**

<u>Factor</u>	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
<u>Other varieties *</u>	<u>1:2,000</u>	<u>1:1,000</u>	<u>1:500</u>
<u>Inseparable other crops</u>	<u>None</u>	<u>1:2,000</u>	<u>1:1,000</u>
<u>Prohibited noxious weed seeds **</u>	<u>none</u>	<u>none</u>	<u>none</u>

*Other varieties include plants that can be differentiated from the variety being inspected, but may not include variants that are characteristic of the variety.

**The tolerance for prohibited or objectionable weeds, or both, in the field will be determined by the inspector.

History: Effective April 1, 2020

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-17-04. Seed standards.

A seed count is required.

<u>Factor</u>	<u>Standards for Each Class</u>		
	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
<u>Pure seed (minimum)</u>	<u>98.0 percent</u>	<u>98.0 percent</u>	<u>98.0 percent</u>
<u>Total weed seeds (maximum)</u>	<u>none</u>	<u>1 per pound</u>	<u>2 per pound</u>
<u>Other varieties *</u>	<u>1 per 2 pounds</u>	<u>1 per pound</u>	<u>2 per pound</u>
<u>Other crop seeds (maximum)</u>	<u>None</u>	<u>1 per pound</u>	<u>2 per pound</u>
<u>Inert matter (maximum) **</u>	<u>2.0 percent</u>	<u>2.0 percent</u>	<u>2.0 percent</u>
<u>Prohibited noxious weed seeds</u>	<u>none</u>	<u>none</u>	<u>none</u>
<u>Objectionable weed seeds</u>	<u>none</u>	<u>none</u>	<u>none</u>
<u>Germination</u>	<u>85.0 percent</u>	<u>85.0 percent</u>	<u>85.0 percent</u>

*Other varieties include plants that can be differentiated from the variety being inspected, but may not include variants that are characteristic of the variety.

**Inert matter may not include more than 0.5 percent of material other than seed fragments of the variety under consideration.

History: Effective April 1, 2020.

General Authority: NDCC 4.1-52-10

Law Implemented: NDCC 4.1-52-10, 4.1-53-42

ARTICLE 74-04
SEED POTATO CERTIFICATION STANDARDS

Chapter

74-04-01 Seed Potato Certification Standards

CHAPTER 74-04-01
SEED POTATO CERTIFICATION STANDARDS

Section

74-04-01-01	Definitions
74-04-01-02	General Requirements and Responsibilities
74-04-01-03	Exclusion of Warranty and Limitation of Remedy
74-04-01-04	Application Fees and Restrictions
74-04-01-05	Seed Potato Farm Requirements
74-04-01-06	Seed Eligibility
74-04-01-07	Seed Classification and Limited Generation
74-04-01-08	Field Inspection Standards
74-04-01-09	Postharvest Testing Program
74-04-01-10	Storage and Packaging Requirements
74-04-01-11	Official North Dakota Seed Potato Grades

74-04-01-02. General requirements and responsibilities.

1. Participation and responsibility.
 - a. Participation in this seed potato program is voluntary and may be withdrawn prior to the first inspection.
 - b. Responsibilities.
 - (1) Seed department responsibilities. The inspections, approvals, certification, and production of these rules and regulations will be done by the state seed department.
 - (2) Applicants' responsibilities. The farming, sanitation practices, storing, and packing will be the grower's responsibility. It is the responsibility of the applicant to maintain genetic purity and identity at all stages of certification, including planting, harvesting, storing, and handling. Evidence that any lot of seed has not been protected from contamination that might affect genetic purity or is not properly identified shall be cause for possible rejection of certification.
2. General requirements.
 - a. Potatoes to be eligible for the program shall have been in a certification program and winter tested for eligibility.
 - b. Fields will pass two or more inspections given by visual examination of a representative sample of the plants which method and size of sample will be determined by the state seed department.
 - c. Fields passing inspection will be stored in a seed warehouse and sorted to grade at shipping time.
 - d. Responsibility for the quality of work done in sorting the potatoes falls upon the grower or a thoroughly qualified agent authorized by the grower.
 - e. Requirements for certification are not complete on any lot of eligible potatoes until properly

labeled as described in this chapter and an official seed grade inspection certificate has been issued. Official labels will be provided to the grower by the state seed department in hard copy or electronic form. Official seed grade inspections are compulsory for seed shipped out of state. Grade inspection is voluntary for intrastate shipments. For those shipments that are not inspected, or that fail to meet grade standards described in section 74-04-01-11, the label must state "no grade".

- f. The responsibility for properly and accurately labeling foundation or certified seed rests with the grower of the seed. The labels will be issued to the purchaser only on order or authorization from the grower, who must provide to the purchaser a proper and accurate label for each container or load of seed at the time of delivery. Labels must not be applied to stock other than that indicated on the tags or bulk certificates. Bulk shipments, by truck or railcar, when thoroughly disinfected, may be considered the container.
 - g. The seed label must contain the following information:
 - (1) Year in which the crop was produced.
 - (2) Grower/labeler's name.
 - (3) Variety.
 - (4) ~~Generation~~ Field year.
 - (5) Class.
 - (6) Certification or application number of the seed lot.
 - (7) Total amount in container represented by cwt.
 - h. Resorting or regrading. If a lot of potatoes fails to meet certified seed grade requirement upon inspection, they are to be reconditioned to meet the requirement or the official labels must be removed.
 - i. Reconditioning while in transit. In the case of any circumstance making it essential to recondition seed in transit, permission must be obtained from the state seed department.
 - j. Latent virus testing. Serological testing for latent viruses shall be voluntary and a requirement for only virus-tested seed. Virus-tested seed meeting established tolerances may be indicated on the label.
 - k. Upon the discretion of the state seed department, potato seed lots originating from out of state may be subjected to a laboratory test, by a seed department-approved laboratory, for the detection of seedborne pathogens. Eligibility for recertification of any seed lot so tested must be based on that laboratory test. Additional documentation, including health certificates or summer or winter, or both, field readings, may be required by the seed department prior to acceptance for recertification in this state.
 - l. Failure to comply with any of the requirements of this chapter may be cause for rejection or cancellation of the lot or the certification of any seed as seed potatoes.
3. No person may disclaim responsibility of the vendor of the seed for the data or information on the label required by law and any such disclaimer of vendor's express or implied warranty is invalid.
 4. Violations. The state law specifically states the use of the term "certified" or the term "registered" or any term or terms conveying a meaning substantially equivalent to the meaning of any said terms, either orally or in writing, printing, marking, or otherwise in reference to or in connection with or in advertising or characterizing or labeling seed potatoes or the containers thereof is

prohibited, unless such potatoes shall have been duly inspected and certified pursuant to the provisions of the law. ~~Any violation of this law and any person on conviction thereof, shall be fined not more than one hundred dollars and cost for first offense and not more than five hundred dollars and costs of prosecution for subsequent offenses.~~

History: Amended effective December 1, 1981; June 1, 1992; January 2, 2006; July 1, 2007; October 1, 2012; July 1, 2018; April 1, 2020.

General Authority: NDCC 28-32 **Law Implemented:** NDCC 4.1-55-02

74-04-01-04. Application fees and restrictions.

1. Application for field inspection must be received in the state seed department, ~~university station 1313 18th St N, PO Box 5257, Fargo, North Dakota, not later than June fifteenth.~~ There is a three dollar per acre [.40 hectare] cash penalty for later applications.
2. At least one-half the fees and all due accounts must accompany the applications.
3. Applications are subject to cancellation in the case of crop failure or other valid reason and the application fee, minus a cancellation fee will be returned if the request reaches the state seed department before the inspector arrives in the general locality of the field. However, in such a case, the crop must be plowed under or destroyed so as not to create a disease hazard.
4. Separate application forms are required for latent virus testing.
5. Loss by drown outs, if over twenty-five percent of the field, will be allowed after the first inspection only. No adjustments will be made thereafter.
6. Fee schedules for field inspection, grade inspection, latent virus testing, cancellation fees, and late penalties are subject to change and available at the state seed department.
7. Prompt payment of all fees will be required at all times.
8. Additional testing costs such as laboratory tests will be assessed ~~at costs~~ to the grower.

History: Amended effective December 1, 1981; December 1, 1987; June 1, 1992; September 1, 1997; September 1, 2002; July 1, 2018; April 1, 2020.

General Authority: NDCC 28-32 **Law Implemented:** NDCC 4.1-55-02

74-04-01-07. Seed classification and limited generation.

1. All seed potatoes must be limited to seven years of reproduction in the field. Seed lots may be reproduced beyond this limit with prior approval of the state seed department providing the seed lot has been winter tested and eligible for recertification.
2. ~~Pre~~ Nuclear seed stocks must originate from tissue-culture derived plantlets, minitubers, microtubers, or pathogen-tested stem cuttings. Experimental breeding selections shall originate from pathogen-tested material. The first year of reproduction of these stocks will be regarded as nuclear seed stock (generation zero). ~~Nuclear seed (first field year) is the progeny of prenuclear seed, generation 1 (second field year) is the progeny of nuclear seed, generation 2 (third field year) is the progeny of generation 1 seed, generation 3 (fourth field year) is the progeny of generation 2 seed, generation 4 (fifth field year) is the progeny of generation 3 seed, generation 5 (sixth field year) is the progeny of generation 4 seed, and sixth generation (seventh field year, certified class) is the progeny of generation 5 seed. The certified designation will be granted to lots meeting the minimum standards outlined in section 74-04-01-08 and by approval of the commissioner. Subsequent generations will be regarded as:~~

- a. FY1 (first field year) is the progeny of nuclear seed.
 - b. FY2 (second field year) is the progeny of FY1.
 - c. FY3 (third field year) is the progeny of FY2.
 - d. FY4 (fourth field year) is the progeny of FY3.
 - e. FY5 (fifth field year) is the progeny of FY4
 - f. FY6 (sixth field year) is the progeny of FY5.
 - g. Certified class (seventh field year) is the progeny of FY6.
3. Prenuclear seed stocks intended to be grown in the field greenhouse as nuclear-seed potatoes minitubers, microtubers or stem cuttings must be laboratory-tested, be demonstrated to be free of the following pathogens, and meet the following standards:
- a. *Clavibacter michiganensis* subsp. *sepedonicus* (ring rot).
 - b. *Erwinia carotovora* (blackleg and soft rot).
 - c. Potato virus A.
 - d. Potato virus M.
 - e. Potato virus X.
 - f. Potato virus Y.
 - g. Potato leafroll virus.
 - h. Potato spindle tuber viroid.
 - i. Potato mop top virus.
 - j. All micropropagation production must be approved by a certification agency.
 - k. Good records must be maintained on all tests and submitted with the application for field inspection.
 - l. A minimum of one percent of the plantlets must have been tested for the above pathogens using the most reliable testing techniques.
4. Basic seed must originate from sources described above and developed in seed plots and have met specific field inspection and winter test standards established by the state seed department. Seed stocks will be grown a limited number of generations field years.
- Experimental cultivars under evaluation by the state seed department in cooperation with universities or industry will meet program requirements of and will be maintained under guidelines and standards established by the state seed department. Seed stocks will be grown a limited number of generations field years.
5. Foundation class seed must be seed meeting standards for recertification.
- a. Foundation seed will be produced on farms found to be free of bacterial ring rot for three years. All seed stocks must be replaced on a farm in which bacterial ring rot has been found.
 - b. Excessive blackleg symptoms will be cause for rejection as foundation stock.

6. The certified class must meet the minimum field tolerances described in section 74-04-01-08. The classification serves as a quality standard for commercial planting purposes only and must meet all the requirements and responsibilities of this chapter. The certified class designation may be applied to any generation field year under the criteria set forth in section 74-04-01-07.8.
7. ~~Generation numbers~~ Field year designations increase with years of field reproduction from the original seed source. ~~Generation five~~ Field year six (FY6) will be the final generation of seed eligible for recertification. The certified seed class is not eligible for recertification. If seed availability is low for a specific potato variety, seed lots with more advanced generation numbers may be eligible for recertification providing the seed lot has passed a winter test and prior approval of the state seed department has been obtained.
8. Except for varietal mixtures, seed lots may be ~~downgraded or advanced in generation to certified class if they do not meet the disease tolerances for that generation or they~~ and may be placed in the certified class and sold by their ~~generation number~~ field year designation as certified seed providing they meet the specifications for that class. Disease tolerances for each ~~generation~~ field year of seed are outlined in the section on field inspection standards.

History: Effective December 1, 1981; amended effective December 1, 1987; June 1, 1992; September 1, 1997; July 16, 2001; September 1, 2002; January 1, 2005; January 2, 2006; July 1, 2010; April 1, 2020.

General Authority: NDCC 28-32

Law Implemented: NDCC 4.1-55-02

74-04-01-08. Field inspection standards.

1. Each seed potato field will be visually inspected based on sample inspection. The method of inspection and sample size will be at the discretion of the state seed department but a minimum of one hundred plants per acre [.40 hectare] will be inspected. For varieties that do not express readily visible symptoms of a disease, laboratory testing may be done for the pathogen.
2. The field tolerance established will be based on visible symptoms in the samples inspected. Diseases which cannot be observed visually may be present.

	First Inspection Tolerances (%) Foundation Class						Certified Class
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>Generation Field Year</u>
Varietal mixture	0.1	0.2	0.3	0.5	0.5	0.5	0.5
Spindle tuber viroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Severe mosaics (PVY)	0.2	0.3	0.4	0.5	0.5	0.5	1.0
Leaf roll (PLRV)	0.2	0.3	0.4	0.5	0.5	0.5	1.0
Total serious virus	0.2	0.3	0.4	0.5	0.5	0.5	1.0
*Bacterial ring rot	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Second and All Subsequent Inspections
Tolerances (%) Foundation Class
Generation Field Year

Certified Class
Generation Field year

	0-1	1-2	2-3	3-4	4-5	5-6	0-6
Varietal mixture	0.1	0.1	0.2	0.3	0.3	0.3	0.3
Spindle tuber viroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Severe mosaics (PVY)	0.0	0.1	0.2	0.3	0.3	0.3	1.0
Leaf roll (PLRV)	0.0	0.1	0.2	0.3	0.3	0.3	1.0
Total serious virus	0.0	0.1	0.2	0.3	0.3	0.3	1.0
*Bacterial ring rot	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Late blight found during field inspection must be confirmed by symptoms or laboratory diagnosis before being reported on the inspection report.

* The zero tolerance means that no amount is permissible when inspected. It does not mean that the seed is absolutely free of disease or disease-causing agents, but that none was found during inspection.

Varieties that do not express visible disease symptoms. Potato varieties that do not express visible disease symptoms of a specific pathogen may be subjected to a laboratory test to determine the levels of the pathogen in a seed lot. This testing may occur during the growing season or during the winter test, or both, and may affect eligibility of the seed lot.

Ring rot. Seed fields will be subject to a third (final) field inspection focused primarily on inspection for symptoms related to ring rot. If the field has not received a third inspection, the grower will be required to submit a four hundred tuber sample (minimum) per field for laboratory testing.

Blackleg. Since the blackleg disease may be latent, the inspector will record only the percentage observed during the first and second inspection, and no tolerance will be established. However, any excessive amount can be cause for rejection. Blackleg observations shall be based upon sample plants exhibiting the characteristic black, inky, soft, slimy, decomposed tissue of the stem.

Wilt. Only the percentage noted will be recorded on the first and second inspection, and may include other factors such as maturity, drought, or alkali problems but any excessive amount may be cause for rejection.

There will be zero tolerance for potato wart, corky ring spot, gangrene, golden nematode, root knot nematode, tuber moths, or other such injurious pests that have never been found and confirmed in North Dakota seed potato fields.

Tolerances for potato virus x tested seed. All of the above tolerances will apply, including a requirement that bacterial ring rot must not have been found on the farm during the season. Seed lots with no more than two percent potato virus x infection may be identified as virus x tested on certification labels.

3. Field conditions.

- a. Insect control must be maintained early and until the vines are killed or matured. Fields suffering excessive insect injury may be disqualified for certification. A grower will notify the inspector of the date of spraying and spray material applied.
- b. Vine killing. If a field has not received final inspection, the grower must obtain approval from the inspector before killing the vines. Furthermore, if the inspector deems it appropriate, a laboratory test may be required or strips of unkilld vines must be left in the seed fields to facilitate final inspections, or both. When strips are left for inspection, the first twelve rows (if a six-row planter was used, eight rows if a four-row planter was used) must not be vine-killed. It will be the responsibility of the seed producer to identify where seed planting began. Approximately ten percent of the seed field acreage must be left in strips.
- c. Any condition such as excess weeds, hail injury, foreign plants, chemical damage, soil

- conditions, or insect damage that interferes with proper inspection may disqualify the seed for certification.
- d. Roguing is permitted and recommended in many cases but must be done before the inspector arrives in the field.
 - e. Presence of disease or conditions not mentioned heretofore which may impair seed quality shall constitute cause for rejection or additional testing before final certification. Stocks which show an excessive percentage of total serious virus in official postharvest tests shall be considered ineligible for certification.
4. Appeal. Inspection of rejected fields will be considered, provided application is made within three days after rejection, the field is in good condition for inspection, and no additional roguing is done prior to reinspection.
 5. Bacterial ring rot control.
 - a. All seed produced by a farming operation in which bacterial ring rot has been found will be ineligible for recertification the following year.
 - b. If the farming operation is found to be infected, all equipment and storages must be cleaned and disinfected.
 - c. A farming operation found to be infected on three consecutive years shall be required to purchase all new seed, clean, and disinfect the operation under the supervision of the state seed department before entering any seed for certification.
 6. The variety name stated on the application will be the standard for inspection when entering the field. Absent compelling visual evidence to the contrary, the variety or selection declared by the grower will be presumed correct if the documentation provided is valid and the variety description characteristics meet the requirements of the chapter.
 7. Inspections, tests, certifications, and other acts are not intended to induce reliance on the seed department's inspections, certifications, or any other action or inaction for any purpose relating to quantity or quality of the seed or crop produced, fitness for purpose, merchantability, absence of disease, or variety or selection identification. Certification means only that the potatoes were randomly inspected, and at the time of the inspection the field or seed lot met the rules of the department.

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