CHAPTER 74-03-11
SPECIFIC CROP REQUIREMENTS - SUNFLOWER

74-03-11-01. Land requirements.

A crop will not be eligible for certification if planted on land where sunflowers were grown during the previous year.

History: Amended effective May 1, 1986.
General Authority: NDCC 4.1-52-10
Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-11-02. Field inspection.

1. **Open pollinated production.**

   a. The first inspection shall be made prior to the bloom stage.

   b. The second inspection shall be made after the crop is at least fifty percent in bloom and before it is fully matured.

2. **Hybrid and inbred production.**

   a. At least three field inspections shall be made, one during the bud to early bloom stage and two during bloom.

   b. In a field producing hybrid sunflower seed, at least fifty percent of the male parent plants must be in bloom and producing pollen at the time the female parent is in full bloom. The heads of female plants shedding pollen must be removed and disposed of in a manner which will prevent their pollen from being disseminated. Off-type male plants shall be removed from the field before pollination.

   c. The field shall be considered the unit for certification. Fields shall be separated from other inseparable crops by a distance adequate to prevent mechanical mixture and from other sunflowers by five thousand two hundred eighty feet [1609.34 meters].

   d. In inbred lines and foundation single crosses only the foundation class shall be recognized. In hybrid varieties only the certified class shall be recognized.

3. **Diseases.** Standards for seed-borne diseases in sunflowers are not specified; however, the inspector may reject fields for disease if the quality of the seed will be affected.

History: Amended effective May 1, 1986; May 1, 1988; January 2, 2006; October 1, 2012.
General Authority: NDCC 4.1-52-10
Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-11-03. Field standards.

Factor	Open Pollinated Varieties	A, B, or R	Hybrid Production	
			Seed Parent	Pollen Parent
Pollen shedding female plants (Maximum)		1:1,000*	5:1,000	
Branched wild-types		1:1,000	1:1,000	1:1,000
Purple plants **		1:1,000	1:1,000	1:1,000
White seeded plants		1:1,000	1:1,000	1:1,000
Total including above (maximum)	5:1,000	4:1,000	4:1,000	4:1,000
Isolation (minimum) **	5,280 feet	5,280 feet	5,280 feet	5,280 feet
Corn plants bearing seed	none	none	none	none

*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 species.

History: Amended effective May 1, 1986; May 1, 1988; January 2, 2006; July 1, 2020.
General Authority: NDCC 4.1-52-10
Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-11-04. Seed standards (sunflower).

Repealed effective May 1, 1988.

74-03-11-04.1. Precontrol standards.

If field inspection shows one or more of the following, the applicant may request that seed certification be based on the results of a precertification grow-out test approved by the North Dakota state seed department.

1. Inadequate isolation.

2. Too few male parent plants shedding pollen when female plants are receptive.

3. Excess off-types not to include wild types.

In such cases at least two thousand plants must be observed and meet the following standards before hybrid and inbred seed can be certified from fields with problems listed above.

	Maximum Permitted	
Factor	Hybrid	Inbred
Sterile plants	5.0%	
Sterile or fertile plants		5.0%
Morphological off-types	0.5%	0.5%
Wild types	0.2%	0.2%

Total (including above types)	5.0%	5.0%

For nonoil types, hybrid seed which contains not more than fifteen percent sterile plants may be certified. If it contains eighty-five percent to ninety-five percent hybrid plants, the percentage of hybrid shall be shown on the certification label.

History: Effective May 1, 1988.
General Authority: NDCC 4.1-52-10
Law Implemented: NDCC 4.1-52-10, 4.1-53-42

74-03-11-05. Postcontrol standards.

Repealed effective May 1, 1988.

74-03-11-05.1. Seed standards.

	Standards for Each Class		
Factor	Foundation	Registered	Certified
Pure seed (minimum)	98.0 percent	98.0 percent	98.0 percent
Total weed seeds (maximum)	none	none	3 per pound
Other varieties (maximum) *	1 per pound	1 per pound	5 per pound
Other crop seeds (maximum)	1 per pound	1 per pound	3 per pound
Inert matter (maximum)	2.0 percent	2.0 percent	2.0 percent
Objectionable weed seeds **	none	none	none
Prohibited noxious weed seeds	none	none	none
Germination (minimum)	85.0 percent	85.0 percent	85.0 percent
Sclerotia	5 per pound	5 per pound	5 per pound

*To include not more than two purple seeds or two white seeds per pound. Other varieties shall not include variants characteristic of the variety.

**Objectionable weed seeds shall include the following: buckhorn plantain, dodder, wild oats, nightflowering catchfly, giant foxtail, hoary alyssum, horsenettle, quackgrass, wild vetch species, wild radish, hedge bindweed (wild morning glory), and nightshade.

History: Effective May 1, 1988; amended effective September 1, 2002; January 2, 2006; October 1, 2012.
General Authority: NDCC 4.1-52-10
Law Implemented: NDCC 4.1-52-10, 4.1-53-42