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## North Dakota County Crop Improvement Association

# Seed Increase Program

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*The North Dakota County Crop Improvement Association seed increase program provides a rapid increase of newly released crop varieties through a process that ensures adequate supply of high-quality seed.*

*New varieties entering this program supply the producer and agricultural industry with improved genetics selected for improved performance, including increased yield, enhanced quality attributes and superior disease and pest resistance.*

## Objectives of the Program

The North Dakota County Crop Improvement Association (CCIA) seed increase program for new North Dakota Agricultural Experiment Station (NDAES) varieties of field crops requires the cooperative efforts of the Experiment Station, NDSU Extension, the North Dakota State Seed Department (NDSSD), state and county Crop Improvement Associations and qualified seed increase growers in a well-planned and well-organized program. The objectives of the program are to:

1. Provide for a rapid introduction and significant market penetration of improved varieties for North Dakota producers.
2. Utilize the seed certification process to ensure varietal identity, genetic purity and physical quality of seed throughout the increase program.
3. Provide good stewardship in the equitable distribution of Foundation-class seed to promote access to improved genetics for commercial growers.

## Introduction of New Varieties

The North Dakota Agricultural Experiment Station develops new varieties through breeding programs or introduces seed of new varieties from other states, the USDA Agricultural Research Service or from other countries. The performance of experimental lines from NDSU breeding programs or introduced varieties are evaluated for a number of years at several locations in North Dakota. Lines that are adapted and of value to North Dakota producers are submitted to the NDSU Variety Release Committee for review and recommendation.

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## North Dakota Agricultural Experiment Station Variety Release Committee

The head of the NDSU Plant Sciences Department is responsible for arranging Release Committee meetings, chairing each meeting and keeping records of all presentations and outcomes. The committee evaluates the merits of each candidate variety and eligible representatives vote to approve, deny or table a candidate for more testing. The committee also establishes and ranks potential names. Committee recommendations are sent to the NDAES director for the final decision on releases and naming.

The variety release committee is crop-specific and is composed of representatives of organizations with crop responsibility including:

- Breeder of the variety
- Other scientists who contributed to the development of the variety (plant pathology, cereal science, entomology, USDA, etc.)
- Foundation seedstocks director
- NDSU Agronomy Seed Farm director
- NDSU Extension agronomist
- NDSU Research Extension Centers
- Grower organization(s) for the crop
- North Dakota Association of Extension Agents
- North Dakota Crop Improvement & Seed Association
- North Dakota Agriculture Association
- North Dakota State Seed Department
- State Board of Agriculture Research and Education

Representatives of the above institutions have one vote except for the Research Extension Centers, who have two votes.

## Seed Certification System

The seed certification system is an internationally recognized program designed to maintain varietal identity and genetic purity of seed stocks. This is accomplished through rules and standards that must be met during field production, handling and conditioning. Seed samples that are representative of the finished lot must meet the minimum quality standards for the crop and class to be certified.

There are four recognized seed classes in the certification system: Breeder, Foundation, Registered and Certified. In order to help reduce the potential for contamination, certification is limited to two generations beyond Foundation class, i.e., Registered and Certified.

The breeder seed class is the seed designated by the plant breeder as having the traits described for the variety. Breeder seed is directly controlled by the originating plant breeder or sponsoring organization. Breeder seed is used to produce Foundation class seed. The foundation seed program of each state maintains Foundation class seed of public varieties.

Foundation seed is the progeny of Breeder or Foundation seed and is planted to produce Registered seed.

Registered class seed is the progeny of Foundation seed and is planted to produce the Certified seed. Registered seed may not be recognized by some genetic providers or for some crops.

Certified seed is the progeny of Registered or Foundation seed and is used to produce commodity crops.

In North Dakota, the increase of Breeder and Foundation seed is under the control and supervision of plant breeders and the Foundation Seedstocks Program in the Department of Plant Sciences. Seed is produced at the NDSU Agronomy Seed Farm and/or one or more of the NDSU Research Extension Centers.

## North Dakota CCIA Seed Increase Program

The North Dakota County Crop Improvement Association seed increase program process begins after the decision to release and name a new variety and if there is sufficient seed available to allocate to the counties. Allocation of a definite quantity of seed to each county is made by the North Dakota Crop Improvement and Seed Association (NDCISA) Allocation Committee. This committee is comprised of board members representing each of the four districts and the Executive Committee.

Allocation decisions are based on a review of recent historical crop production and the adaptation of the variety to each county. The county organization with input from the county extension agent selects experienced seed producers who are knowledgeable in the certification program to increase the seed allocated to the county. The county organization supervises the program.

The following sections describe and provide guidelines for the various groups or organizations that have responsibilities relating to this increase program.

## Responsibilities of the Seedstocks Program

1. Determines the target volumes of new varieties to be produced for distribution to the county seed increase program.
2. Increases Foundation class seed of new varieties for allocation to counties.
3. Sets the price for new releases. Pricing committee includes the NDAES director, the Plant Science Department head, the Agronomy Seed Farm director, a Research Extension Center director, an extension agronomist, a county agriculture and natural resources agent and the Foundation Seedstocks director.
4. Make Foundation seed available to the NDCISA for distribution.

Additional information on the Seedstocks Program can be obtained on the Foundation Seed website: [www.ag.ndsu.edu/fss](http://www.ag.ndsu.edu/fss)

## Responsibilities of the County Crop Improvement Association

County crop improvement associations/county crop committees with the support of the county extension agent and the NDCISA, act as county administrators of the seed increase program and have important functions in the increase of new varieties. Perhaps the most important function is selection of qualified seed producers. The following guidelines and responsibilities will be helpful to county committees in achieving program objectives:

1. After receiving written notification that seed of a new variety is available for county increase:
  - A. Study information about the variety and determine whether there is interest in participating in the county seed increase program. A county is not obligated to accept any or all of the seed that is offered. The county committee should consider local adaptation, performance and marketability of the seed.
  - B. Determine the quantity of Foundation seed desired for their county and notify the NDCISA office.
2. Selection of contract growers:
  - A. County crop improvement associations/committees are responsible for announcing the availability of new variety allocations and soliciting contract growers for seed production.
  - B. Each county association should establish a minimum and maximum amount of seed that may be allocated to any one seed increase grower within their county.
  - C. The county association must screen all applicant producers and then select producers who have a history of successfully producing certified seed and/or demonstrated their ability to produce high-quality, pure seed. It is unwise to give the county's allocation of Foundation seed of a new variety to a grower that has no experience producing certified seed. Some counties choose to distribute in different areas of the county to help against losses due to hail, drought and other factors.

- D. Contract growers must be selected in a fair, impartial and equitable manner.
3. After selection of proposed contract growers and allocation by NDCISA, arrange a meeting to discuss the characteristics of the variety, quantity offered, price and contract obligations. Growers must sign three copies of the contract, (one copy for the grower, one copy for the county association and one copy for NDCISA). Contract growers must submit payment for the seed to the county crop improvement association before seed is picked up. Checks must be made payable to the Foundation Seedstocks Program. It is important that the grower fully understands the conditions of the contract: grower requirements, field eligibility requirements, harvesting, conditioning testing and storage.
  4. Make arrangements for securing seed. In order to obtain Foundation seed, a copy of the grower's contract must be presented to seed stocks personnel at the location designated for pick up. Transportation is at the grower's expense.
  5. It is the responsibility of the county association and contract seed producer to apply for field inspection with the State Seed Department by the published deadlines which are established to ensure crops are inspected at the proper state of development. During the last week in May, contact seed producers to make sure they have the necessary application forms for field inspection. Reaffirm the need to maintain isolation strips, rogue impurities, and clean equipment and storage facilities prior to harvest.
  6. It is the seed grower's responsibility to ensure the field has been inspected by the Seed Department before harvest. Remind each contract grower to obtain a field inspection report from the Seed Department. Contact the Seed Department at 701-231-5400 for information relating to the status of fields.
  7. All field-inspected seed that is to be labeled and offered for sale must be conditioned and must meet the minimum seed standards for the crop and class (Registered). Seed may be conditioned by the seed producer or by an approved seed conditioner. A sample of conditioned seed must be submitted to the Seed Department for analysis. Seed lots that meet the minimum standards may be labeled as certified seed.
  8. It is the labeler's responsibility to ensure all certification requirements and state or federal seed laws are observed.
  9. Marketing Registered Seed:
    - A. The NDCISA will supply variety promotional information in the form of brochures and announcements to be posted in public places. Most counties develop publicity and start a sign-up sheet for general allocation of new varieties in December. A deadline for the sign-up should be announced. The directors may need to limit the amount offered depending upon requests and available supply. This will allow the county crop improvement association to make as widespread a distribution as possible.
    - B. Final distribution should follow completion of conditioning as closely as possible. The county association and conditioning plant operators must keep careful accounting of all seed conditioned from the increase seed lot. The county association may ask the seed conditioner to assist with distribution. Seed cannot be distributed until certification is complete and labels (bulk certificates or tags) are issued by the State Seed Department.
  10. If demand for Registered seed produced within the county is not sufficient to utilize the entire production of a variety, seed can be sold outside the county after the Dec. 1 release date stated in the contract. The contract price, however, must be maintained through June 30.
  11. Association fees (check-off) must be collected on all seed transactions as outlined in the seed increase agreement with 50% of the money remitted to the NDCISA office.

## Function of the North Dakota Crop Improvement and Seed Association

The North Dakota Crop Improvement and Seed Association is comprised of 12 directors selected from the membership of county crop improvement associations/committees. There are four districts within the state and three directors are elected from each district for staggered three-year terms. The responsibilities of the NDCISA regarding the new variety seed increase program are:

1. The NDCISA is the licensee of most varieties developed by NDSU and is responsible for the distribution, promotion and royalty collection of all licensed material.
2. The NDCISA will advise local CCIA's regarding new releases, provide and receive grower contracts, and aid county agents and producers in marketing county produced seed.
3. Serve in advisory capacity to the NDAES and NDSU Extension in regard to policies and methods affecting the allocation, distribution and sale of seed produced by the county.
4. Relay recommendations and resolutions affecting the seed increase programs from the associations at the county and district levels to the appropriate agency.
5. Promote the sale and distribution of increased seed through the use of promotional materials such as advertisements, brochures, computerized seed lists and educational programs.
6. Facilitate cooperation between county organizations.

## Function of Extension

NDSU Extension cooperates with the NDAES, county associations, NDSSD, Foundation Seed Program, local growers and local seed dealers in the county seed increase program.

The county extension agent represents the NDAES at the county level and assists the county crop improvement association or crops committee in managing the increase program as outlined for each new variety. An extension agronomist will serve in an advisory capacity to the state crop improvement association and seedstocks program. The extension agronomist will also assist with the preparation of educational materials describing new varieties and other educational programs on seed production.

## Function of State Seed Department

The North Dakota State Seed Department is the official seed-certifying agency in the state. The Seed Department enforces state and federal seed laws, inspects and analyzes seed offered for sale, and provides a public laboratory service for examining and analyzing seed and commercially produced crops for planting and consumption purposes.

The Seed Department is responsible for development of rules, regulations and standards for all classes of certified seed produced and handled in North Dakota. The department sets standards for facilities that condition and handle certified seed and performs annual inspections to ensure facilities meet those standards. The department operates two laboratories to assess the quality of seed products. The Seed Lab conducts purity, germination and other specialized seed tests required for labeling according to the rules of the Association of Official Seed Analysts (AOSA). The Diagnostic Lab performs seed health testing for seed-borne pathogens.

All seed production fields intended for certification must be inspected by qualified inspectors of the Seed Department. Seed from fields that pass inspection must be conditioned by the grower or an approved seed conditioner and tested by the State Lab to ensure the seed meets the standards for the crop and class of seed produced. Seed that meets the published certification standards may then be labeled as North Dakota certified seed.

Consult North Dakota Field Seed Certification Standards for rules, regulations, standards and tolerances for producing and labeling certified seed. Failure to follow the regulations and meet the standards for certified seed will disqualify the seed for labeling and sale.

# County Increase Program Contract Grower Requirements

## **General requirements**

1. Contract growers will sign and fulfill the contract requirements and cooperate fully with the county crop improvement association and the NDCISA.
2. The grower will pay for the seed and apply for and pay all fees related to field inspection, conditioning, final certification, any seed levy, research fees and the North Dakota seed labeling fee.
3. The grower will clean the drill, combine, trucks, bins, etc., thoroughly between varieties and crops to avoid any possible crop or variety admixture.
4. The grower will provide for proper conditioning and ensure a representative seed sample is submitted by the conditioner to the Seed Lab for testing and ensure seed is labeled before distribution to seed producers as directed.
5. The grower understands that the production contract gives the county crop improvement association/committee authority for allocation of the entire crop produced and that:
  - A. The contract does not provide any guarantee that the produced seed will be sold.
  - B. The grower must request an allocation of seed, if desired, for the following year's production on his or her own farm.

## **Field requirements**

1. Fields selected for seed increases must meet certification eligibility requirements and have a high production potential.
2. The field to be used for seed increase must not have been planted in the previous year to the same kind or any other inseparable crops. Foundation and Registered class durum will not be eligible for certification if planted on field on which spring wheat was planted either of the two previous years. Consult Seed Department rules for specific crop requirements before planting.
3. The field should be free of prohibited noxious weeds. Prohibited noxious weeds under North Dakota seed laws and rules are leafy spurge, field bindweed (creeping jenny), yellow star-thistle, Canada thistle, perennial sow thistle, Russian knapweed, hoary cress (perennial peppergrass), absinth wormwood, musk thistle, spotted knapweed, Palmer amaranth and any other weed prohibited by North Dakota certification standards.
4. The field also should be relatively free of other weeds.
5. Commercial fertilizer on the basis of a soil test should be applied as needed. Make sure fertilizer is not contaminated with seed before spreading on fields. Presence of other crop seed is cause for rejection.
6. The crop should be planted in a timely manner according to good agronomic practice.
7. Isolation from other varieties of the same crop or other inseparable crops is required for certification.
8. The grower should consider the application of herbicides, fungicides and insecticides as needed for the control of pests and pathogens.

### ***Planting, harvesting, conditioning and storage***

1. Planting, harvesting and handling equipment and storage facilities must be cleaned thoroughly to avoid admixtures from other crops or varieties.
2. The crop should be harvested in a timely manner to produce the highest quality seed.
3. The grower should make arrangements for conditioning with an approved certified seed conditioning facility or approved mobile conditioner. Lists of approved conditioners may be found on the Seed Department website or by calling the department.
4. Seed should be conditioned to the highest practical class of certification.
5. The grower must provide storage until seed is distributed or the contract release date.
6. Certification must be complete and labels (bulk certificates or tags) available prior to any distribution. It is illegal to sell seed without labels.
7. Apply all tags to bagged lots or complete bulk seed certificates for each load of bulk seed sold.
8. Seed from fields that fail field inspection or lab analysis for certification must be marketed through commercial grain channels and documented to the CCIA and NDCISA.
9. Certification rules and standards are available from the North Dakota State Seed Department at 701-231-5400 or [www.seed.nd.gov/](http://www.seed.nd.gov/).

**North Dakota County Crop Improvement Association**

# **Seed Increase Program**

**An increase grower application form is available  
from your NDSU Extension county office.**

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