

# North Dakota County Crop Improvement Associations

# Seed Increase Program

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*The North Dakota County Crop Improvement Association seed increase program provides a rapid increase of new released crop varieties in a procedure that ensures genetic purity and physical quality, adequate seed supplies and a fair price for both the seed and commodity producer.*

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



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## Objectives of the Program

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

1. Increase seed of the controlled generation classes (breeder, foundation, registered, certified) of newly released varieties of field crops as rapidly as possible.
2. Maintain genetic and physical seed purity during the increase program by requiring certification.
3. Provide good stewardship in the equitable distribution of foundation class seed to promote commercial grower access to clean genetics at a reasonable price.

## 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 Agricultural Research Service of the United States Department of Agriculture or from other countries. The experimental lines from NDSU breeding programs or introduced varieties are performance tested for a number of years at several locations in North Dakota. If they appear adapted and of value to North Dakota producers, they are submitted to the NDSU Variety Release Committee for its review and recommendation.

## North Dakota Agricultural Experiment Station Variety Release Committee

The chair of the Plant Sciences Department is responsible for arranging NDSU Variety Release Committee meetings, chairing each meeting and keeping records of all presentations and votes. The committee evaluates the merit of each proposed new variety and makes a recommendation to release or not release to the director of the North Dakota Agricultural Experiment Station. This committee also establishes a list of recommended names by priority for each new variety. Release committee recommendations are forwarded to the experiment station director who makes the final decisions on varietal releases and naming.

The variety release committee is crop specific and is composed of individuals and representatives of organizations with crop responsibility. For example:

- The breeder of the variety
- The foundation seedstocks director
- The Agronomy Seed Farm director
- Other scientists who helped develop the variety (plant pathology, cereal science, entomology, USDA, etc.)
- The NDSU Extension agronomist
- The Research and Extension Centers
- The grower organization(s) for the crop
- The North Dakota Association of Extension Agents
- The North Dakota Crop Improvement & Seed Association
- The North Dakota Agriculture Association
- The North Dakota State Seed Department
- The State Board of Agriculture Research and Education

Representatives of the above institutions have one vote except for the research extension centers representatives, who have two votes.

## Pedigreed Seed System

The pedigreed seed system is an internationally recognized program designed to maintain pure genetics in released varieties. This is accomplished by setting standards that must be met during production in the field and seed standards that must be met after harvesting and conditioning the seed. It is a limited generation system with four recognized classes.

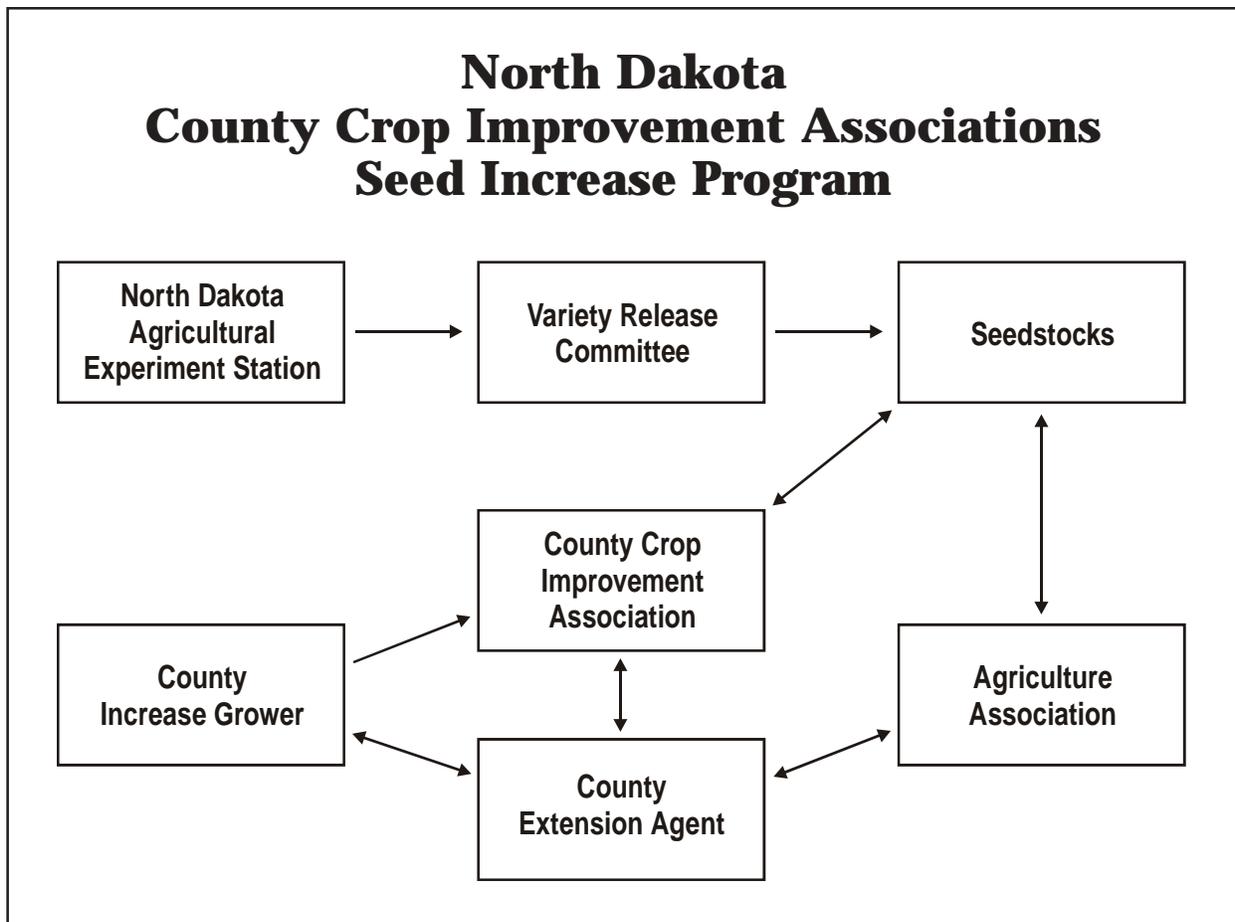
The breeder seed class is the seed designated by the plant breeder as having the traits described for the variety. Breeder seed is used to produce foundation class seed. The foundation seed program of each state maintains foundation class seed of public varieties.

Foundation seed is planted to produce registered seed (this class is not recognized in all crops or varieties). Registered class seed (or foundation class seed) is sown to produce the certified

seed class. Certified seed is used to produce commodity crops.

In North Dakota, the increase of breeder and foundation seed of these new varieties is under the control and supervision of plant breeders and the Foundation Seedstocks Project's personnel in the Department of Plant Sciences. The NDSU Agronomy Seed Farm at Casselton and the NDSU Research Extension Centers are used for summer increase. When a more rapid increase is desirable, seed of a new variety is increased in Arizona, California, Mexico, New Zealand or Chile during the winter months and returned to North Dakota for further increase the same year.

When there is not enough suitable experiment station land available to sufficiently increase the foundation class seed supply, experienced growers are selected to increase the seed under a production contract with the experiment station.



## 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 variety and after there is sufficient seed available to allocate to the counties. Allocation of a definite number of bushels to each county is made by a NDSU Seedstocks committee that includes members of the North Dakota Crop Improvement and Seed Association with input and representation from each of four districts in North Dakota.

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 then selects experienced seed producers knowledgeable in the pedigreed program for increasing the seed allocated to the county and 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 Project

1. To increase foundation class seed of a new variety for allocation to counties.
2. To estimate the amount of seed needed to supply anticipated demand based on adaptability and usefulness of the new crop variety.
3. To establish a statewide committee to review and set a uniform price for seed of newly released varieties increased and sold under contract with county crop improvement associations and the North Dakota Agriculture Association.
4. To assist the allocation committee in determining the amount of seed of new varieties to be allocated to each county based on the total amount of available seed, the varietal adaptation and average historical production of the crop in the county.

5. To prepare legal contracts that will be executed between the grower, county crop improvement associations and the North Dakota Experiment Station Seedstocks Project.

Additional information on the Seedstocks Project can be obtained from the internet at [www.ag.ndsu.nodak.edu/aginfo/seedstock/fss/fsshome.htm](http://www.ag.ndsu.nodak.edu/aginfo/seedstock/fss/fsshome.htm) .

### Responsibility of the County Crop Improvement Association

County crop improvement associations/county crop committees with the support of the county extension agent act as county administrators of the seed increase program and have important functions in the increase of new varieties. County committees perform an important service by carefully selecting qualified producers. The following guidelines and responsibilities will be helpful to county committees in achieving program objectives:

1. After receiving written notification that a given quantity of seed of a new variety is available for county increase:
  - A. Study information on the variety and determine how much should be accepted based on variety, adaptation and future needs in the county for the seed.
  - B. Notify the Seedstocks project director of the quantity the county will accept. A county is not under obligation to accept any or all of the seed that is offered.
2. Selection of contract growers:
  - A. County crop improvement associations/committees have a responsibility to announce new variety allocations and request signup for contract grower selection.
  - B. Each county crop improvement 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 crop improvement association must screen all applicants and then select producers who have demonstrated an ability to produce and make available for further increase the highest possible number of bushels of high-quality, pure seed. Some counties may distribute seed for increase to specific areas of the county to ensure 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, arrange a meeting to discuss the variety, bushels offered, price and full contract obligations. Growers must sign three copies of the contract, (one copy for the grower, one copy for the county crop improvement association/committee, and one copy for NDSU Seedstocks). Contract growers must submit payment for the seed to the county crop improvement association or Foundation Seedstocks before seed is picked up. Checks must be made payable to the Foundation Seedstocks Project. It is important that the grower fully understands the conditions of the contract: grower requirements, field requirements, harvesting, conditioning and storage.
  4. Make arrangements for securing seed. A copy of the grower's contract must be presented to seed stocks personnel in order to obtain that foundation seed. Transportation will be at the grower's expense.
  5. During the last week in May, contract growers must be contacted to make sure they have the necessary application for certified field inspection and to reaffirm the need to maintain isolation strips, rogue impurities, prepare to maintain pure seed at harvest and to submit a sample for germination to the North Dakota State Seed Department immediately after harvest.
  6. Remind each contract grower to obtain a field inspection report 10 days before harvest. Contact the North Dakota State Seed Department at (701) 231-5400 for information relating to the field inspection report and certification status. The North Dakota State Seed Department Web site, [www.state.nd.us/seed//](http://www.state.nd.us/seed//), provides additional information on the North Dakota seed certification and regulatory programs.
  7. The North Dakota Crop Improvement and Seed Association 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.
  8. Arrangements for conditioning and distribution will vary by availability of conditioning plants. Arrangements should be coordinated between growers and the county crop improvement association so all seed lots are conditioned about the same time.
  9. Final distribution should follow completion of conditioning as closely as possible. The county crop improvement association/committees 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 tags are issued.
  10. Pricing and distribution rights are to be maintained by the county crop improvement association throughout the length of the contract.

**ONLY  
APPROVED  
CERTIFIED  
SEED  
CONDITIONING  
PLANTS  
MUST  
BE USED**

11. If demand for increase seed within the county is not sufficient to utilize production of a particular variety, seed can be sold outside the county after the Feb. 1 release date established in the contract. The contract price, however, must be maintained through June 30.
12. Association fees (check-off) must be collected on all seed transactions as outlined in the seed increase agreement with 50 percent of the money remitted to the North Dakota Crop Improvement and Seed Association 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 crop improvement association districts within the state and three directors are elected for staggered three-year terms from each district. The responsibilities of the North Dakota Crop Improvement and Seed Association regarding the new variety seed increase program are:

1. Serve in an advisory capacity to the North Dakota Agricultural Experiment Station, NDSU Extension Service and the North Dakota State Seed Department in regard to policies and methods affecting the allocation, distribution and sale of county crop improvement association increase seed.
2. Relay recommendations and resolutions affecting the seed increase programs from the associations at the county and district level to the appropriate agency.
3. Promote the sale and distribution of increased seed through the use of promotional materials such as advertisements, brochures, computerized seed lists and educational programs.
4. Facilitate cooperation between county organizations.

## Function of Extension Service

The NDSU Extension Service cooperates with the North Dakota Agricultural Experiment Station, county crop improvement associations/committees, North Dakota State Seed Department, local growers and local seed dealers in the county seed increase program.

The county extension agent represents the North Dakota Agricultural Experiment Station at the county level and assists the county crop improvement association or crops committee in carrying out 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 state seedstocks project. 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 North Dakota for field crop seeds and potato planting material and is charged with enforcement of state and federal seed laws. The department provides a service to the North Dakota agricultural industry and concentrates on activities that are designed to aid the seed industry and farmers with seed quality control and marketing.

The North Dakota State Seed Department is responsible for development of seed standards for all classes of certified seeds: foundation, registered and certified. The department sets standards for, inspects and approves seed conditioning plants. Purity, germination and standard seed analysis procedures including seed health and diagnostic testing services are available for a fee to certified seed growers and the general public. Certification status is not granted until all standards and requirements are met or completed.

## Function of the North Dakota Agricultural Association and Private Seed Trade

The North Dakota Agricultural Association is allocated an amount of seed equal to the largest county allocation. It is the responsibility of the seed allocation committee of the North Dakota Agricultural Association to select seed increase growers who do not or will not have an allocation of the same variety for increase from a county crop improvement association and follow the same increase regulations as applicable to counties.

The private seed trade, as represented by both distributors and local dealers in the North Dakota Agricultural Association, serves an important function in the introduction, promotion and adoption of any new variety. Their major roles in this program are to:

1. Learn the characteristics and usefulness of new varieties before they become available for general sale.
2. Make available approved certified seed conditioning facilities.
3. Promote the sale of high-quality North Dakota grown seed both within and outside the state.
4. Request and receive an allocation of each new variety for increase by selected Agricultural Association members in the state.

## 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/committee.
2. The grower will pay for the seed, apply and pay all fees related to field inspection, conditioning, final certification, any seed levy, research fees and the North Dakota seed tax.
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 distribute the seed produced 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 guarantee that the crop will be sold at the price established by the contract.
  - B. The grower must request an allocation, if desired, for the following year's production on his or her own farm.

### *Field requirements*

1. The field selected for seed increases must be able to meet certification standards 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. A field that was in fallow the year previous is the most desirable.
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 starthistle, Canada thistle, perennial sow thistle, Russian knapweed, hoary cress (perennial peppergrass), absinth wormwood, hemp (containing more than 1 percent THC), musk thistle, spotted knapweed, 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.

6. The crop should be planted in a timely manner according to good agronomic practice.
7. Isolation as required for certification must be maintained.
8. Spraying with herbicides, fungicides and insecticides as needed for the control of pests and pathogens should be considered.

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

1. Planting, harvesting and handling equipment and storage facilities must be cleaned thoroughly to avoid the possibility of other crop and variety admixtures.
2. The crop should be harvested in a timely manner to produce as high a quality seed as possible.
3. The grower should make arrangements for conditioning with an approved certified seed conditioning plant.
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.
6. Certification must be complete and tags available prior to any distribution.
7. Apply all tags and complete bulk seed certificates for each bag or bulk load.
8. If field or seed does not pass certification, all grain will be marketed through commercial grain channels and documented to the county crop improvement association.
9. Certification standards are available at North Dakota State Seed Department *or on the Internet at [www.state.nd.us/seed/](http://www.state.nd.us/seed/)*.

**An increase grower application form is available  
from your county office of the NDSU Extension Service**

**For more information on this and other topics, see: [www.ag.ndsu.nodak.edu](http://www.ag.ndsu.nodak.edu)**

