

GENERAL SEED CERTIFICATION STANDARDS (Applies to All Crops)

The general seed certification standards apply to all crops eligible for certification and, with standards for the individual crops shall constitute the standards of the North Carolina Crop Improvement Association.

I. CERTIFYING ORGANIZATION

An Act of the 1929 General Assembly of North Carolina provides for State Certification of seeds or plants or plant parts. The detailed law, ratified March 19, 1929, and amended in 1933, 1955 and 1983 is found in the General Statute, Article 30 of Chapter 106, Sections 269-276. See pages 66-67 of this Handbook.

Under the provisions authorized by this law (106-276), 'certification of crop seeds shall be subject to the supervision of the Board of Crop Seed Improvement. The North Carolina Crop Improvement Association is recognized as the official agency for seed certification.'

The North Carolina Crop Improvement Association is an incorporated nonprofit organization of seed growers. Seed certification is conducted by the Association in cooperation with the seed growers; North Carolina State University and its College of Agriculture and Life Sciences (Agricultural Research Service and Cooperative Extension Service); North Carolina Department of Agriculture; and, the North Carolina Seedsmen's Association.

II. PURPOSE OF ASSOCIATION

The purpose of the Association is to maintain and make available to the public, through certification, sources of high quality seed and propagating material of varieties so grown and distributed as to ensure genetic identity, a high degree of genetic and mechanical purity, and a minimum of seed or plant-borne diseases. The word 'seed' or 'seeds' is understood to include all types of propagating material in this document.

III. REQUIREMENTS OF MEMBERSHIP

Membership in the North Carolina Crop Improvement Association is required of each seed grower who applies for certification. Membership is open to all persons or concerns engaged in agricultural work are interested in Crop Improvement activities. Each member shall pay annual membership dues.

IV. ELIGIBILITY REQUIREMENTS FOR GROWERS

The Association personnel, through publications, personal contact, workshops and other educational media shall aid growers in their understanding of seed production, conditioning and marketing activities necessary to meet the requirements for certification.

- A. The grower's honesty and integrity must be unquestionable.
- B. The grower must have full and complete knowledge of agronomic practices essential to production of the class or classes of seed he/she desires to produce and must agree to follow such practices.

- C. Proper clean out of planting, harvesting and conditioning equipment essential to carrying out the grower's certification program is the grower's responsibility.
- D. Each grower shall agree to pay all regularly assessed fees and to abide by the by-laws of the Association before obtaining inspection and receiving certification of seed crops. The applicant must agree to be responsible for complying with all rules and standards made or adopted by the Board of Directors which pertain to active participation in production and sale of the class or classes of seed the applicant may produce and market.
- E. Members will be expected to attend regular annual meetings of the Association and such other meetings as may be called.

V. SPECIAL REQUIREMENTS FOR REGISTERED GROWERS

The Board of Directors of the Association must approve growers desiring to become producers of Registered Seed. Consideration will be given only to growers who have:

- A. Three or more years experience as a satisfactory producer of Certified Seed. The exception being that Strawberry, Sweet Potato, and Turfgrass growers are allowed to produce Foundation, Registered, and Certified or their equivalent generations of seed in their first year.
- B. Direct control over all production and conditioning operations.
- C. Registered Seed must be conditioned under the direct control of the Registered grower, who produced the seed, except that such seed can be transferred to another Registered grower for conditioning after receiving permission from the Association.

VI. SPECIAL REQUIREMENTS FOR CONTRACT SEED PRODUCTION

Members wishing to produce Certified Seed under contract with growers must agree to the following requirements:

- A. Designate a 'field person' responsible for the supervision of all contract production.
- B. Select good farmers as growers, work with them in planning for the seed production, and go over a contract agreement with them. Each grower should be furnished a copy of the Certification Standards for the crop being produced. Copies of crop standards are available at the Association office.
- C. Visit each field during the growing season to determine whether any field should be rogued or canceled. The contractor will have all roguing done prior to the North Carolina Crop Improvement Association field inspection.
- D. Complete an application, and for each grower, supply proof of source of seed planted by submitting tags and invoices showing variety, class, lot number and quantity.
- E. Have the field person accompany the North Carolina Crop Improvement Association inspector to all fields whenever possible.
- F. Ensure that all planters, combines, hauling equipment, and storage facilities are properly cleaned prior to usage.

- G. Keep complete records showing the quantity of seed delivered to each contract grower.
- H. Keep each lot of seed properly identified at all times.
- I. Thoroughly clean all conditioning equipment between conditioning of non-Certified and Certified Seed and between conditioning of different varieties of Certified Seed.
- J. A representative sample of each lot of seed as it is to be offered for sale must be submitted to the Association office and tested.

VII. ELIGIBILITY REQUIREMENTS FOR CERTIFICATION OF CROP VARIETIES

Only those varieties that are approved by the Certification Advisory Committee and accepted by the North Carolina Crop Improvement Association Board of Directors shall be eligible for certification. For those crops where national variety review boards exist, it is recommended that varieties be submitted for review to determine their merit for certification.

Members of the Certification Advisory Committee shall be recommended by the North Carolina State University College of Agriculture and Life Sciences and approved by the Board of Directors. The committee shall be composed of two plant breeders, one plant pathologist, one representative from the Official Variety Testing program, one extension specialist and one from the Crop Improvement staff.

The word 'variety' or 'varieties' as herein used shall include strains and hybrids.

Varieties recommended by a national variety review board or Certified by another certifying agency will be accepted as eligible for certification. Those varieties for which an application for Plant Variety Protection has been made will be accepted for certification provided the originator supplies the required information. For all other varieties the breeder or sponsoring institution or organization must describe and document in an application to the North Carolina Crop Improvement Association those characteristics of a variety which give it distinctiveness by supplying the following information: (Applications for variety certification are available at the Association office.)

- A. The name of the variety, a statement of its origin and the breeding procedures used in its development.
- B. A statement delineating the geographic area or areas of adaptation and primary purpose for which a variety will be used.
- C. A detailed description of the morphological, physiological and other characteristics of the plants and seed that distinguish it from other varieties.
- D. Evidence of performance including data on yield, insect and disease reactions and other information in support of the identity of the variety. Performance tests shall include appropriate check varieties, which are used extensively in the area of intended use. Acceptable testing would be performance data for at least one year in the Official Variety Test of the North Carolina Agricultural Research Service where such a testing program is available. Additional performance data from other sources would also be considered.
- E. Procedure for maintaining seed stocks.

- F. Seed classes proposed to be used and information concerning the breeding of the variety that would influence the number of generations that would be Certified.
- G. A description of the manner in which the variety is constituted when a particular cycle of reproduction or multiplication is specified.
- H. Any additional restrictions on the variety specified by the breeder, with respect to geographic area of seed production, age of stand or other factors affecting genetic purity.
- I. A sample of seed representative of the variety as marketed.

The Certification Advisory Committee shall review and evaluate the information presented by the plant breeder in terms of the preceding criteria and determine the variety's eligibility for certification and make recommendations to the Association for final action by its Board of Directors. The Board of Directors reserves the right to deny or suspend certification of the seed of a variety if problems arise with the variety.

A current list of Varieties Eligible for Certification will be maintained in the Association office.

VIII. DEFINITIONS

Definitions of terms as used for purposes of certifying seed are as follows:

- A. Conditioning - The term conditioning refers to the mechanical handling of the seed from harvest until marketing and includes cleaning, sizing, applying seed treatment, bagging or any other operation in the handling of the seed before marketing.
- B. Plant Breeder - A plant breeder is defined to include any person or organization actively engaged in the breeding and maintenance of varieties of plants.
- C. Plant Variety Protection or Protected Variety - A protected variety is one for which a breeder or sponsoring organization has filed application for protection with the US Plant Variety Protection Office and/or the US Patent office.
- D. National Variety Review Boards - The National Variety Review Boards are an organizational part of the Association of Official Seed Certifying Agencies. These Boards are concerned with an evaluation of varieties submitted for certification and determine if the variety merits certification.
- E. Noxious Weeds - The term noxious weeds refers to those weeds listed as noxious in the North Carolina Seed Law 'Rules, Regulations, Definitions and Standards.'
- F. Off-types - Off-type means any seed or plant not a part of the variety in that it deviates in one or more characteristics from the variety as described and may include seed or plants of other varieties; seed or plants not necessarily any variety; seed or plants resulting from cross-pollination by other kinds or varieties; seed or plants resulting from uncontrolled self-pollination during production of hybrid seed, or segregates from any of the above plants.
- G. Other Variety - Other variety shall be considered to include plants or seed of the same kind that can be differentiated from the variety that is being inspected, but

shall not include variations which are environmental or characteristic of the variety (variants) as defined by the breeder.

- H. Unit of Certification - The unit of certification shall be a clearly defined area that may be divided subject to regulations for specific crops. (See 'Specific Certification Standards' for the crop.)
- I. Variants - The term variants refers to the following:
1. Variants are defined as seed or plants which (a) are distinct within the variety but occur naturally in the variety, (b) are stable and predictable with a degree of reliability comparable to other varieties of the same kind, within recognized tolerances, when the variety is reproduced or reconstituted, and (c) were originally a part of the variety as released. Variants are not to be considered off-types.
 2. Some variants may be trivial and of no harm or agronomic benefit to the variety and it would not be economically feasible for the breeder to purify the strain for these variants. The presence of these variants should be noted by the breeder when describing the variety but need not establish a definite frequency for their occurrence; and, they should not be considered as an identifying character in field or seed inspections. Other variants may be considered by the breeder to be agronomically important and/or as aids in identifying the variety. These variants should be described by the breeder including the expected frequency of occurrence. Characteristics subsequently identified in the variety which were unknown or unobserved at the time of variety release may be later described and designated as variants by the breeder if shown to be present in the variety as released.
 3. Tolerances for labeling purposes are to be applied to the level of the variants specified by the breeder of the variety as follows: seed inspection - table 11 in the Rules for Testing Seeds, Association of Official Seed Analysts; field inspection - the table of Tolerances for Field Inspections in the *Certification Handbook*, Association of Official Seed Certifying Agencies For seed law enforcement purposes, the tolerances in table 11 are to be applied to the level of the variants plus the tolerance applied for labeling.
- J. Variety - The term variety means a subdivision of a kind which is distinct, uniform, and stable; distinct in the sense that the variety can be differentiated by one or more identifiable morphological, physiological, or other characteristics from all other varieties of public knowledge; uniform in the sense that variations in essential and distinctive characteristics are describable; and stable in the sense that the variety will remain unchanged to a reasonable degree of reliability in its essential and distinctive characteristics and its uniformity when reproduced or reconstituted as required by the different categories of varieties.

K. Additional Definitions

1. INBRED LINE

An inbred line is a relatively true-breeding strain resulting from controlled self-fertilization or of backcrossing to a recurrent parent with selection or its equivalent.

2. SINGLE CROSS

The first generation of a cross of two inbred lines, an inbred line and a foundation backcross, or of two foundation backcrosses.

3. FOUNDATION SINGLE CROSS

A foundation single cross is a single cross used in the production of foundation backcrosses or of double, three-way, or top crosses.

4. FOUNDATION BACKCROSSES

A. A first generation foundation backcross shall be the first generation cross between a foundation single cross of related inbred lines and an inbred line which shall be the same as one of the inbreds in the foundation single cross.

B. A second generation foundation backcross shall be the cross of a first generation backcross (ear parent) with its recurrent inbred parent (pollen parent).

5. DOUBLE CROSS

A double cross is the first generation hybrid between two foundation single crosses.

6. TOP CROSS

The first generation of a cross between an open pollinated variety and an inbred line, a foundation backcross, or a foundation single cross.

7. THREE-WAY CROSS

The first generation of a cross of a foundation single cross and an inbred line or a foundation backcross.

8. OPEN-POLLINATION

Open-Pollinated seed is seed produced as a result of natural pollination as opposed to hybrid seed produced as a result of controlled pollination.

IX. **CLASSES AND SOURCES OF CERTIFIED SEED**

A. Four classes of seed shall be recognized in seed certification, namely: Breeder, Foundation, Registered, and Certified. These classes are defined as follows:

1. Breeder Seed

Breeder Seed is seed or vegetative propagating material directly controlled by the originating or sponsoring plant breeding institution, or person, or designee thereof. Breeder Seed is the source for production of seed of the other classes of Certified seed.

2. Foundation Seed

Foundation Seed is seed which is the progeny of Breeder or Foundation Seed produced under control of the originator or sponsoring plant breeding institution,

or person, or designee thereof. Foundation Seed is a class of Certified seed, which is produced under procedures established by the certifying agency for the purpose of maintaining genetic purity and identity.

3. Registered Seed

Registered Seed shall be the progeny of breeder or Foundation Seed handled under procedures acceptable to the certifying agency to maintain satisfactory genetic purity and identity.

4. Certified Seed

Certified Seed shall be the progeny of Breeder, Foundation or Registered Seed so handled as to maintain satisfactory genetic purity and identity, and which has been acceptable to the certifying agency (see exception IX, B, 2).

B. Limitations of Generations

1. The number of generations through which a variety may be multiplied shall be limited to that specified by the originating breeder or owner of the variety and shall not exceed two generations beyond Foundation Seed.

2. The following exceptions to the above limitation of generations are permitted:

a. Recertification of the Certified class may be permitted for older crop varieties where Foundation Seed is not being maintained.

b. The production of an additional generation of the Certified class may only be permitted on a one-year basis when:

(1) An emergency is declared by the certifying agency stating that Foundation and Registered seed supplies are not adequate to plant the needed Certified acreage of the variety;

(2) Permission of the originating or sponsoring plant breeder, institution, firm or owner of the variety is obtained (if applicable); and

(3) The additional generation of Certified Seed produced to meet the emergency need is declared to be ineligible for recertification.

C. At the discretion of the Association, a grower may be permitted to continue production of Certified Seed from Registered lots of seed that were fully inspected but not accepted because of factors which did not involve genetic identity and purity of the germplasm.

X. APPLICATION FOR CERTIFICATION

A. Application for Field Inspection forms may be secured from the North Carolina Crop Improvement Association.

B. Establishing the source of seed used by the grower may be done by submitting with the application form the Foundation or Registered tags and labels removed from the containers of seed planted. Other evidence of source of seed such as purchase invoice or other documentary evidence may be accepted. Growers planting their own Foundation or Registered Seed need not submit labels with their application.

- C. Certification charges and dates for filing application. The application form for certification should be on file with the Association on or before the filing date and be accompanied with the appropriate fees.
- D. Late applications may be accepted at the discretion of the Association; however, a late filing fee will be charged per application.
- E. Canceling Application
Applicants desiring to cancel applications for certification must inform the Association office in sufficient time to notify the field inspector. In such cases, all but the membership dues will be refunded. Once the inspector has made a trip to the farm, a minimum of a farm fee will be charged and acreage fees may be charged.
- F. Reinspection is permitted to allow the grower to rogue off-types and weeds from the fields in order to meet certification standards.

XI. HANDLING OF CROP PRIOR TO INSPECTION

The grower will be responsible for cleaning all planting equipment. Roguing of off-type plants, objectionable crop plants and weeds should be done prior to field inspection. The process of roguing refers to the removal of off-type, diseased or otherwise undesirable plants and weeds from the seed field.

XII. CONTAMINATING CROPS AND WEEDS

Every field for which certification is requested shall show evidence of good management and shall show that reasonable precaution has been taken to control contaminating crops and varieties and objectionable weeds, the seed of which are indistinguishable or inseparable with available conditioning equipment from seed of the particular crop being inspected.

Land used for the production of Certified Seed should be free of all noxious weeds, especially noxious weeds that produce seed that will be difficult to separate from the crop seed. Under the North Carolina Seed Law, certain weeds are classified as 'Prohibited' and 'Restricted' noxious. The law prohibits the sale of crop seeds containing any prohibited noxious weed seeds. (There are other weeds considered objectionable in certain crops - see: 'Specific Certification Standards' for each crop.)

XIII. DISEASES

Plant diseases may be considered in determining whether or not a crop shall finally be approved for certification. Tolerances will depend on the seriousness of the diseases, whether or not they are seed-borne and can be controlled effectively by seed treatment. Every field for which certification is requested shall show evidence that reasonable precautions have been taken to control seed-borne diseases. To meet certification requirements, the field at time of inspection shall not contain more than established tolerances of serious seed-borne diseases listed in the standards for individual crops.

If reasonable tolerances of controllable seed-borne diseases are exceeded, the Association shall have the authority to require that such lots of seed be treated with a currently recommended seed treatment before the seed can be offered for sale as Certified.

XIV. SEED TREATMENT

Seed planted for the production of Certified Seed should be treated if seed-borne diseases are present or if required in the standards for individual crops. All treated seed offered for sale must be labeled in compliance with State and Federal Laws.

XV. FIELD INSPECTION

One or more field inspections shall be made prior to harvest each time a seed crop of any Certified class is to be harvested and when genetic purity and identity or any other factor affecting seed certification can best be determined. The field shall be in such condition to permit an adequate inspection to determine genetic purity and identity. (See: 'Specific Certification Standards' for each crop.) When minor problem(s) (i.e. isolation, border) are noted on the Field Inspection Report, a Seed Field Harvest Affidavit for Completing Certification must be submitted to the Association office indicating that the problem was remedied as instructed. If two or more varieties are planted in the same field without adequate border/isolation then the field must be inspected a second time to ensure that the adjacent border rows are not harvested until after this second inspection. A flag must be placed outside the normal operating area of the field to delineate the boundary between the two varieties. A field with two different classes of seed of the same variety planted adjacent to each other must be harvested so that the border rows of the higher class are placed in the container of the lower class of seed. If fields do not meet certification standards for other reasons then the grower is allowed to rogue off-types and weeds from the fields in order to meet certification standards; this will require a mandatory re-inspection. All individual licensing production protocols and varietal variances supplement NCCIA standards, relative to the standards approved by the Board of Directors for the crop kind, variety and class of seed or sod applied for.

XVI HARVESTING, STORING, CONDITIONING AND SAMPLING

One or more inspections of harvested lots of seed from inspected fields may be made at any time by representatives of the Association, who shall have authority to reject for certification, any lot not properly protected from mixture, or improperly identified, or which fails to meet purity or quality standards. The grower and/or conditioner is responsible for proper cleaning of all harvesting and conditioning equipment and storage facilities and must ensure that the identity and variety purity of the seed between harvest and labeling have been maintained.

A. Conditioning

1. Harvesting and storing seed for certification must be done so that the life of the seed is protected. Harvesting equipment must be cleaned and properly adjusted by the grower and operated to keep mechanical injury at a minimum. Moisture content of the seed must be considered for proper harvesting and storage. Do not store high moisture seed without drying. Keep insects under control and properly label all lots of each variety of unconditioned seed. The grower is responsible to see that the seed storage area is clean.
2. Conditioning equipment is an essential part of a good seed program. Ownership or direct control of complete conditioning machinery is recommended. When

conditioning Certified Seed, the grower is required to see that the equipment is thoroughly 'cleaned' and properly adjusted during its operation.

3. Conditioning seed - the following requirements must be met by conditioners of Certified Seed:
 - a. Facilities shall be available to perform conditioning without introducing mixtures.
 - b. Identity of the seed must be maintained at all times.
 - c. Records of all operations relating to certification shall be complete and adequate to account for all incoming seed and final disposition of seed.
 - d. Conditioners shall permit inspection by the certifying agency of all records pertaining to Certified Seed.
 - e. Conditioners shall designate an individual who shall be responsible to the certifying agency for performing such duties as may be required.
4. Seed lots of the same variety and Certified class may be blended and the same seed class retained. If lots of different classes of Certified seed are blended, the lowest class shall be applied to the resultant blend. Such blending can only be done as authorized by the certifying agency.

B. Transfer of Ownership of Unconditioned Seed

When an applicant sells unconditioned seed to someone else for conditioning and completion of certification, the applicant must:

- Supply the Association with a record showing the amount, kind and variety of seed transferred. The Shipping and Receiving Report on the Movement of Bulk Seed for Conditioning must be submitted to the Association office.
- Give permission for the Association to issue the required certification tags to the conditioner.
- Samples must be taken as described in D below.

Registered Seed may be transferred to another Registered grower for conditioning after receiving permission from the Association office.

C. Size of Lots

The conditioned seed should be divided into lots so that each lot is uniform throughout. This means that the number of containers in each lot should be kept at a reasonably low number.

D. Sampling

It is important that a **representative sample** be taken from each lot of seed as it is to be offered for sale and submitted to the Association office. For peanuts, the seed may be sampled after shelling and before treating with the sample being hand treated using the same seed treatment material that will be used for treating the entire lot.

An Association representative must sample the seed before labels can be issued unless conditioned and sampled by an 'Approved Conditioner.' When a

representative of the Association samples the seed, a charge will be made for this service (see page 19).

To secure a representative sample, equal portions shall be taken from evenly distributed parts of the quantity of seed to be sampled. Access shall be had to all parts of that quantity. A **representative sample** should be taken as follows: (See Rules for Testing Seed of the Association of Official Seed Analysts)

1. For lots of one to six bags, sample each bag.
2. For lots of more than six bags, sample five bags plus at least 10% of the number of bags in the lot.
3. Bulk seed - take at least as many cores or handfuls as if the same quantity of seed were in bags of an ordinary size lot. Take the samples from well-distributed points throughout the bulk.

The Association reserves the right to resample any lot of seed after certification has been granted.

The size of sample depends upon the crop and is specified in the seed certification standards for the crop.

E. Sampling Foundation and Registered Seed (not offered for sale)

A sample of all Foundation and Registered Seed to be planted by a Certified seed producer for reproduction must be submitted to the Association office. This applies to Foundation and Registered Seed grown by the Certified seed grower for reproduction even though the seed may not be offered for sale.

F. Germination Test and Seed Analysis

1. Analysis and test of samples of seed and definitions of analytical terms shall be in accordance with procedures prescribed in the current issue of the Rules for Testing Seeds of the Association of Official Seed Analysts (AOSA). Purity and germination reports will be accepted from any official AOSA seed laboratory or an approved commercial seed laboratory staffed with a Registered Seed Technologist (RST). A copy of the analysis report along with a representative file sample must also be submitted to the Association office.
2. Germination tests and seed analyses, which are made on more than one sample taken from the same lot of seed without recleaning or reconditioning, shall be averaged to determine acceptance or rejection for certification.

G. Records

The grower is responsible for records of all operations relating to certification. These records shall be complete and adequate to account for all incoming seed and final disposition of seed and shall be available at any time for inspection by representatives of the Association. Contact the Association office for a suggested form - Harvest, Storage and Conditioning Log of Certified Seed Lots.

XVII. APPROVED CONDITIONERS

Grower/conditioners of Certified Seed with two or more years experience will be eligible to apply for the classification of 'Approved Conditioner.' This is strictly a voluntary

program; no one is required to be an 'Approved Conditioner' in order to condition Certified Seed. (See Section XVI: 'Harvesting, Storing, Conditioning and Sampling.')

The facilities and equipment of applicants must be such that genetic purity of seed can be maintained and seed can be conditioned to meet certification standards. The benefits accruing to an 'Approved Conditioner' are:

- The right to take the conditioned seed sample.
- The right to request advance issue of certification tags or labels.
- The right to ship seed after receiving the conditioned sample purity report but prior to receiving the conditioned sample germination report.

A. Personnel

One person for each 'Approved Conditioner' will be designated responsible to the Association for proper handling of Certified seed. This will normally be the individual with major responsibility for conditioning, storage, labeling, and shipment of the seed. This person must stay abreast of current developments in seed conditioning through the use of magazines, newsletters, personal contacts, short courses, workshops, etc. This person must be informed about changes in laws and regulations that affect the handling of Certified Seed.

B. Inspections

A Crop Improvement inspector will make an annual inspection of facilities and equipment and make a report on their adequacy. The adequacy of records as required by the North Carolina Seed Law and its Regulations and the Federal Seed Act, including file samples, will also be a part of this report. Approved Conditioners will be required to abide by all provisions of the US Plant Variety Protection Act and US Patent law. Crop Improvement will maintain an itemized list of equipment for each 'Approved Conditioner' (except peanut conditioners when stipulated). Crop Improvement personnel will make periodic unannounced visits to 'Approved Conditioners' at a time when normal conditioning operations are in progress. Crop Improvement will counsel on sampling techniques to be used by each 'Approved Conditioner' and conduct a program of spot-check sampling in order to continually evaluate performance. The annual Approved Conditioner fee is shown in the schedule of fees on page 23.

C. Granting of 'Approved Conditioner' classification

A list of conditioners who meet the requirements and who desire the classification of 'Approved Conditioner' for specific crop kinds will be recommended to the Board of Directors on a semi-annual basis. The Board of Directors will pass on each conditioner recommended.

D. Advance issued tags and labels

An 'Approved Conditioner' may request advance issue of certification labels to be attached to the containers during seed conditioning. Analysis information on the label will be as desired by the 'Approved Conditioner.' Germination percentage labeling will be supported by a preliminary germination test.

The advance issuing of labels to 'Approved Conditioners' is permitted as a convenience and privilege. This privilege may be suspended wholly or partly on an

individual basis for causes as prescribed herein. Advance tags issued for seed lots that are later found by tests to be not in conformity with analysis information printed on the tags must be returned to the Association office by July 15 for warm season crops (, soybeans, peanuts, etc.) and December 15 for cool season crops (wheat, oats, barley, etc.). Any grower failing to return all ineligible tags by the date specified will be required to explain the discrepancy in person before the Board of Directors. In cases wherein the grower's explanation for the discrepancy is unacceptable, the Board may place the grower on probation and suspend all or part of his advance tag ordering privileges, or take such other action as it deems warranted by the circumstances of the case.

E. Shipment of conditioned seed

Conditioned seed shall not be moved prior to receiving supporting test results of purity analysis from the conditioned sample. Conditioned seed may be moved prior to receiving germination test results of the conditioned sample. For each lot of seed shipped prior to receiving a germination test result of the conditioned sample, the 'Approved Conditioner' will maintain a record at time of shipment showing the disposition of each such lot.

F. Loss of 'Approved Conditioner' classification

When more than five percent (5%) of the volume of any one crop kind of Certified Seed conditioned by an 'Approved Conditioner' during a single conditioning season are found by the Association and/or State Seed Control Officials to be out of tolerance with the analysis label, or seed are not handled as required in these regulations, then the conditioner will forfeit the 'Approved Conditioner' classification for that crop kind for no less than one year. During this period, advance issue of labels will not be permitted, all conditioned samples will be pulled by Crop Improvement personnel, and movement of seed will not be permitted until complete test results from conditioned samples are received. Return to the 'Approved Conditioner' classification will not be automatic, but will be considered by the Board of Directors upon recommendation of the director.

'Approved Conditioner' status will be canceled for growers not growing and certifying seed for two (2) consecutive years.

G. Provisional Approved Conditioner (Peanuts Only)

Peanut growers receiving the provisional Approved Conditioner classification may take the conditioned seed sample.

1. For a new peanut conditioner, the fields will be inspected by an Association staff member during which time the grower's records, storage and conditioning equipment will be inspected. The provisional Approved Conditioner program will be reviewed.
2. In late fall, an inspection will be made again of the grower's facilities using the 'Approved Conditioner' inspection procedures. An additional inspection will be made when seed shelling begins.
3. The Director of the Association will recommend to the Board of Directors of the Association a list of peanut conditioners who meet the requirements and desire

the classification of 'Provisional Approved Conditioner.' The Board will pass on each conditioner recommended. After two (2) consecutive years of provisional operations, the conditioner will be eligible to apply for full status as an 'Approved Conditioner.'

4. While the conditioner is on provisional status, inspections will be made during the shelling season.

XVIII. BAGS, TAGS AND LABELS

- A. Bags - Certified Seed must be offered for sale in new containers or bags. The new bags must be printed with the standard emblem of the North Carolina Crop Improvement Association or that of the producer or vendor. The reuse of bags is not permitted. Seed which have to be reconditioned must be placed in new bags. Containers of all Certified Seed (except peanuts) must be stamped, printed or stenciled with the variety name and lot number. For peanuts, containers of Certified Seed must be stamped, printed or stenciled with the variety name. Containers of all Certified seed must be closed in a manner to prevent tampering (e.g. sewn, sealed, glued, etc.) at the time of filling.

Large containers of more than 500 pounds net weight need not be printed with the Crop Improvement emblem or that of the producer or vendor. Reuse of such containers is permitted provided that they are thoroughly cleaned between uses. The variety name and lot number may appear on a separate label attached at the time the container is filled in lieu of being stamped, printed or stenciled on the container.

- B. Tags and Labels - A service charge will be assessed for each container of seed labeled which includes the cost of the certification label. An additional charge will be collected for payment of NCCA fees. All seed sold as 'North Carolina Certified' must have an official North Carolina certification tag or label properly affixed to the container except as specified in section XIX. Certification tags and labels must be secured from the Association or used with permission of the Association. This label identifies the seed as to class of Certified Seed, crop variety, lot number, applicant, vendor and bears the seed analysis and germination percent as required by the North Carolina Seed Law and the Federal Seed Act. The Certification label must be securely attached to each container in such a manner that it cannot be removed without damage to the label. If staples are used, a minimum of two staples per label of a heavy quality is required. The following colors of labels shall be used to designate classes of seed:

White for Foundation
Purple for Registered
Blue for Certified

The grower shall designate the germination and purity analysis printed on the label when ordering labels. This shall not be above the percentages shown on the analysis report.

The blue Certified tag or label will be printed with either 'Certified-1' or 'Certified-2' to indicate the quality standards met by the labeled seed lot. The nomenclature printed on the tag indicates that there are two quality levels of the Certified class. Each level

is supported by a minimum set of quality standards. (See 'Specific Certification Standards' for each crop). There is no difference in genetic or variety purity for the two classifications. A regular NCDAs analysis tag or tax stamp is not required on the container to which a North Carolina certification tag is affixed since all fees have been paid.

Alternative labeling systems (certification labels and analysis printed directly on the bag, vendor-printed tags, etc.) will be allowed only with semi-annual approval of the Board of Directors, based on recommendation of the Director of the Association. Only 'Approved Conditioners' are eligible to participate in this program. 'Approved Conditioners' who wish to participate must make formal written application for approval and agree to:

1. Have all tags and bags approved by the Association staff. All tags must meet AOSCA standards.
2. Provide copies of invoices or other documentation showing the number of preprinted bags received.
3. Provide a copy of label information (sample tag) for each lot labeled.
4. Provide a weekly accountability of containers labeled. The reporting form is supplied by NCCIA.

All standards that apply for advanced issuance of tags apply to alternative labeling systems. Seed may be labeled under such systems with a future test date but shall not be moved prior to receiving germination from a preliminary germ or final germ and purity test results to support the label with a correct test date. However, ownership of seed may not change prior to receiving final germ and purity lab results. This approval will be automatically revoked upon evidence that any seed has been labeled but not accounted for. This revocation will remain in effect until the next regular meeting of the Board of Directors at which time continued revocation or re-approval will be considered.

In the event of loss of Approved Conditioner status for reasons of more than five percent of Certified seed being out of tolerance with the label, a conditioner previously approved to use an alternative labeling system will be allowed to continue using that system during the one year probationary period. Permission will in no case be extended beyond one year. All other provisions of section XVII.F will apply.

Compliance with certification requirements for labeled containers lies in all cases with the individual or concerns whose name and/or certification number is printed on the certification label.

- C. Carryover Seed - Certification labels on carryover seed in North Carolina showing a 'date of test' more than nine months old are void until the seed are resampled and new labels carrying up-to-date information are placed on the containers. The new certification labels may be secured from the Association office.

Unused Certified seed labels and those removed from carryover seed, if not more than one year old from 'date of test' on the label, may be returned to the Association office for a credit of the state tax paid. A similar credit may be received for pressure

sensitive labels used and for seed labeled under an alternative labeling system that is being carried over provided a label from each lot is returned to the Association office with a signed statement indicating the number of labeled bags in the lot.

- D. Rejected Seed - Seed, which has been rejected for certification, must have all references to Certified Seed completely obliterated or removed from the container. This may be done by use of a suitable paint or stain.

XIX. CERTIFYING SEED IN BULK

- A. The principles for the bulk retail sale of Registered and Certified Seed of small grain, soybeans and peanuts are as follows:
1. All field and seed standards applying to bagged seed shall be applied to bulk Certified Seed.
 2. Only 'Approved Conditioners' may be involved in bulk retail sales.
 3. Seed transfer in bulk is permitted - from the 'Approved Conditioner' directly to the consumer.
 4. Fees for bulk retail sales will be based on each fifty pounds (50) of seed sold.
- B. The following procedures will be used to certify seed in bulk:
1. Only 'Approved Conditioners' may apply in writing for permission to sell Registered and Certified Seed in bulk and must be approved by the Board of Directors of the Association.
 2. Seed must be conditioned, sampled and tested and all standards met before certificates may be issued (same procedures as for Certified Seed sold in bags).
 3. Each bin of bulk stored conditioned seed, which is ready for sale in bulk, must be completely labeled with a Bulk Bin Label and Inventory form. This form will be issued in triplicate by the Association (to be ordered in the same manner as regular Certified tags). One copy is to be attached to the bin, a copy is to be kept by the grower, and one copy is to be returned to the Association office.
 4. Bulk Retail Sale Certificate for Certified Seed will be issued to the grower (to be ordered in same manner as regular Certified tags). For each sale, a signed and completed certificate will be given to the buyer, a copy sent to the Association office with a one-quarter pound sample of seed taken as the container is loaded, and the grower will keep a copy. These certificates will be numbered and the grower must account for all of them at the end of the grower's selling season.

XX. VERIFICATION PLANTINGS

The certifying agency will use 'grow-out' tests for the major crops to determine that genetic purity and identity are maintained at all stages by the Certified seed producer. Samples of all Foundation and Registered seed grown in North Carolina that is to be recertified must be planted in the verification plantings.

XXI. SUB-STANDARD SEED IN EMERGENCIES

It is recognized that conditions may arise in which certain lots of seed that may be desirable for the advancement of crop improvement would be lost if regular certification

standards were strictly enforced. Under such circumstances, seed failing to meet certification standards other than those affecting genetic purity may be Certified provided there is no injury to the reputation of Certified Seed. The certification tags or labels attached to such seed shall clearly show the respects in which the seed does not meet the regular certification standards.

XXII. INTERAGENCY CERTIFICATION

- A. Interagency certification is the participation of two or more certifying agencies in performing the services required to certify the same lot or lots of seed. The methods and standards employed in each step of the interagency certification process are identical with those used when certification is completed by a single agency. (See: 'Specific Certification Standards' for the crop.)
- B. Only those varieties approved for certification by an official seed-certifying agency will be eligible for interagency certification.
- C. In general, interagency certification is used when the operations of production and conditioning are conducted in more than one state and when there is a physical transfer of the seed across state borders for distribution outside the state in which it was grown. In these instances, appropriate seed certifying agencies would concur in the operation pertaining to that variety. This concurrence would provide an opportunity for any of the participating states to hold to its own standards; such adherence is intended to provide for uniformity of standards of interagency and state Certified Seed and would preclude bypass of a state's own regulations. The same rules of policy, insofar as standards are concerned in governing state certification, would be followed in interagency certification.
- D. Application for interagency certification shall be made directly to the Association. Seed to be recognized for interagency certification must be received in containers carrying official certification labels or documentary evidence of its eligibility supplied by another certifying agency including:
 - 1. Variety and kind
 - 2. Amount of seed (pounds or bushels)
 - 3. Class of seed (Foundation, Registered or Certified)
 - 4. Field inspection report number or lot number traceable to a certifying agency's records.
- E. Although detailed arrangements may be made between two agencies for the interagency certification of a specific lot, it is not necessary to obtain prior approval from a member agency to apply interagency certification labels unless such action is clearly prohibited on the label issued by the original certifying agency. The agency last having jurisdiction of the seed must keep on file complete information indicating the amount of seed finally Certified, nature of service rendered (recleaning, rebagging or relabeling, etc.) and the certification and lot numbers of the seed involved.
- F. Interagency certification labels, in addition to complying with Section XVIII of these standards, shall carry the certification identification number and clearly identify the

certifying agencies involved. The variety, kind and class of seed must also be shown.

- G. When a container of Certified Seed is opened and relabeled, all procedures must be with approval of the certifying agency.

XXIII. COMPLYING WITH FEDERAL AND STATE LAWS

Responsibility for any obligation arising from the sale or shipment of seed, which has been Certified, rests with the grower or subsequent handler making the sale or shipment.

Responsibility for compliance with Federal and State Laws rests with the Certified seed grower or shipper/seller of the seed.

XXIV. GROWER'S OR VENDOR'S RESPONSIBILITY

- A. The grower or vendor whose name and/or number appears on the certification label guarantees to the first buyer that the seed to which the label is attached is a part of the lot of seed designated on the label and is at least equal to the samples which have met all requirements for certification.
- B. Responsibility for compliance with certification requirements of the seed in the container to which the certification label is attached and the proper use of the label, lies in all cases with the individual or concern whose name and/or number is printed on the certification label.

XXV. MARKETING

The Association office aids its members in marketing seed and prospective buyers in locating sources of Certified Seed by means of current seed lists. Producers may request that their Certified acreage not be published in the Certified seed lists. The Association office does not sell seed. The responsibility for seed selling rests strictly with the individual producers.

Each member of the Association who produces and sells Certified Seed is required to keep a record of all Certified Seed sales. As required by the North Carolina State Seed Law and the Federal Seed Act, this record shall be invoices showing lot number, kind and variety, origin, germination, purity, seed treatment, and the labeling of each lot, including a file sample. This information shall be kept for the amount of time required by applicable laws. Failure to supply these records upon request from a representative of the Association, or to give satisfactory cause for failure, automatically forfeits a grower's privilege of producing Certified Seed.

XXVI. REVOKING CERTIFICATION

The Association may revoke certification of designated seed lots if it has been determined that the application was fraudulent in any manner. It may also revoke certification if it is determined that errors were made by the applicant or North Carolina Crop Improvement Association such that the seed lot is not in compliance with the standards of NCCIA, AOSCA, or the Federal Seed Act.

SCHEDULE OF FEES

Annual Dues

Membership (applicant)	\$ 100.00
Associate Member	\$ 30.00
Approved Conditioner	\$ 150.00
Alternative Labeling	\$ 150.00

Inspection Fees

Crop	Fee per Farm ¹	Fee per Acre	Filing Date ²
Grass (forage)	50.00	8.00	April 1
Grass (turf and sod)			
Cool-season	50.00	5.00	Feb. 1
Warm-season	50.00	5.00	April 1
Hybrid Barley and Hybrid	50.00	2.00	April 1
Hybrid Corn	50.00	2.00	April 1
Lespedeza	50.00	1.00	August 1
Other Horticultural Crops	50.00	8.00	June 15
Peanuts	50.00	1.50	July 1
Small Grain	50.00	1.50	April 1
Soybeans	50.00	1.50	August 1
Sweetpotatoes	50.00	8.00	August 15
Tobacco	50.00	100.00	June 15

¹ Reinspection fee - \$50.00 per farm

² Late filing fee - \$100.00 per application

Greenhouse Inspections	\$ 50.00 (per visit) + \$15.00 per greenhouse
Sweetpotato Storage	\$100 farm fee + \$15.00 generation/variety fee
Combines (per location)	\$ 25.00
Storage Bins (per location)	\$ 25.00

Label Fees

Tags/Labels - \$0.15 each plus \$0.04 NC State Seed tax

Tags/Labels- alternative labeling - \$0.10 each plus \$0.04 NC State Seed tax

Bulk Retail Sales - \$0.15 per 50 pounds sold, plus \$0.04 NC State Seed tax

Bulk Retail Sales - alternative labeling - \$0.10 per 50 pounds sold, plus \$0.04 NC State Seed tax

The following is a list of weeds considered noxious in North Carolina as contained in the 'Rules, Regulations, Definitions and Standards' of the North Carolina Department of Agriculture.

PROHIBITED NOXIOUS WEEDS

Balloonvine	Itchgrass	Johnsongrass	Witchweed
Crotalaria	Jimsonweed	Serrated Tussock	

Restricted Noxious Weeds -- Limitations per one pound of seed

Spurred Anoda	4	Bindweed.....	27
Cocklebur.....	4	Cornflower (Ragged Robin).....	27
Wild Onion and/or Wild Garlic.....		Nutsedge.....	27*
Small grain or larger seeds.....	4**	Texas Panicum.....	27
Grasses and small seeded legumes	27**	Canada Thistle.....	27
Sandbur.....	4	Dock.....	54
Sicklepod.....	4	Dodder.....	54
Blessed Thistle.....	4	Giant Foxtail.....	54
Velvetleaf.....	4	Horsenettle.....	54
Morning-glory, Wild.....	8	Wild Mustard et al.....	54
Corn Cockle.....	10	Bracted Plantain.....	54
Wild Radish.....	12	Buckhorn Plantain.....	54
Bermudagrass	27	Quackgrass.....	54

* Two (2) Tubers in peanuts

** Bulblets

Fields which are heavily infested with common weeds may be rejected for certification.