

**VIRGINIA HANDBOOK**  
**of**  
**SEED CERTIFICATION STANDARDS**  
**(Revised February 2010)**

**General Seed Certification Standards**

The general seed certification standards are applicable to the Certification of all seed and to all vegetative material used for propagation. Specific Certification standards for the crops are as follows; provided, however, that crops not provided for herein may be Certified according to Certification Standards last established by the Association of Official Seed Certifying Agencies and such standards that shall subsequently be adopted or amended by the State Certified Seed Board.

**CERTIFYING AGENCY**

The Official Seed Certifying Agency in Virginia is the Virginia Crop Improvement Association, a non-profit organization of seed growers duly chartered under the laws of Virginia. Code of Virginia, Title 3.1, Ch.16, Art2.

The Certifying Agency works in cooperation with seed growers, seedsmen, the Divisions of the Virginia Polytechnic Institute and State University, the Virginia Department of Agriculture and Consumer Services, the State Certified Seed Board, and the Association of Official Seed Certifying Agencies in providing an adequate seed Certification program for the State of Virginia. Duties of the Certifying Agency include, but are not restricted to, the following:

- (a) Select qualified growers and producers of Certified seed.
- (b) Maintain and supply foundation seed required in the Certification program.
- (c) Supervise and administer the branding, labeling, and tagging of all classes of Certified seed.
- (d) Promote the production and use of Certified seed.
- (e) Provide field inspection, sampling, tagging and other services, and to make charges for such services to the extent necessary.
- (f) To enforce all standards of Certification hereafter promulgated by the State Certified Board.
- (g) To provide for, require and maintain appropriate records of pedigrees, varieties, and production of all crops under Certification.
- (h) To establish procedures, schedules, deadlines, quotas, and guidelines necessary to the administration of an effective seed Certification program.

**MEMBERSHIP**

The Association may admit as members any persons, or regularly organized body of persons, growing seed on their own land or rented land, or contracting for growth of seed in Virginia, who may choose to make seed growing a special branch of their farming operations, and who conform to the regulations of the Association.

**PURPOSE OF CERTIFICATION**

The purpose of Certification shall be to reproduce and make available to the public, through Certification, high quality seed and propagating material of superior plant varieties so grown and distributed as to insure genetic purity and a minimum of seed or plant-borne diseases. The word seed, or seeds, as used in these Standards shall be understood to include all propagating material that may be Certified.

## I. CLASSES OF SEED RECOGNIZED AND DEFINITION OF TERMS

- A. Breeder Seed is seed or vegetative propagating material directly controlled by the originating or sponsoring plant breeding institution, firm, or individual, and is the source for the production of the other classes of certified seed.
- B. Foundation Seed is a class of certified seed which is the progeny of Breeder or Foundation seed or vegetative propagating material produced and handled to maintain genetic purity and identity, as outlined for Foundation seed in the standards of the Seed Certification Program.
- C. Registered Seed is a class of certified seed which is the progeny of Breeder or Foundation or vegetative propagating material produced and handled to maintain genetic purity and identity as outlined for Registered seed in the standards of the Seed Certification Program.
- D. Certified Seed is a class of certified seed which is the progeny of Breeder or Foundation or Registered seed or vegetative propagating material produced and handled to maintain genetic purity and identity as outlined for Certified seed in the standards of the Seed Certification Program.
- E. Variety - The term variety (cultivar) denotes an assemblage of cultivated individuals which are distinguished by any characters (morphological, cytological, chemical or others) significant for the purposes of agriculture, forestry, or horticulture and which, when reproduced (sexually or asexually) or reconstituted, retain their distinguishing features.
- F. Off-type - a plant or seed not part of the variety in that it deviates in one or more characteristics from that which has been described by the breeder as being usual for the strain or variety.
- G. Hybrid - The term "hybrid" applied to kinds or varieties of seed means the first generation seed of a cross produced by controlling the pollination and by combining (1) two or more inbred lines; (2) one inbred or a single cross with an open pollinated variety; or (3) two selected clones, seed lines, varieties, or species. "Controlling the pollination" means to use a method of hybridization which will produce pure seed which is at least 75 percent hybrid seed. Hybrid designations shall be treated as variety names.
- H. Open-Pollination - The term "open pollination" means pollination that occurs naturally as opposed to controlled pollination such as by detasselling, cytoplasmic male sterility, self-incompatibility or similar processes.
- I. Lot of Seed - a definite quantity of seed identified by a lot number, every portion or bag of which is uniform, within permitted tolerances, for the factors which appear in the labeling.
- J. Purity - the name of the kind, type or variety and the percentage thereof; the percentage of other crop seed; the percentage of weed seeds; the percentage of inert matter; and the names of the noxious weed seeds and the rate of occurrence of each.
- K. Conditioning - the various procedures involved in the mechanical handling of seed after harvesting to prepare the seed for marketing.
- L. Variants - seed of plants which are (a) distinct within the variety but occur naturally within the variety, (b) 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) which were a part of the variety as originally released. Variants are not to be considered off-types.
- M. Label - the term label as used herein shall be defined as an attachment to or printed area of a seed container which contains product identity and quality information as required by these standards and the Virginia State Seed Law.

## **II. ELIGIBILITY REQUIREMENTS FOR CERTIFICATION OF VARIETIES**

A variety shall be eligible for certification in Virginia only if it has been approved as meriting certification by the Seed Certification Program or one other agency which is a member of AOSCA, or by an appropriate national variety review board. The originator, developer, owner or agent must provide the following information when eligibility for certification is requested (This information may be submitted on forms provided by the Seed Certification Program or on an application for U.S. Plant Variety Protection):

- A. The name of the variety. This name must be the established name if the variety has previously been marketed.
- B. A statement concerning the variety's origin and the breeding procedure used in its development.
- C. A detailed description of the morphological, physiological and other characteristics of the plants and seed that distinguish it from other varieties, including variants and the frequency expected within the variety.
- D. Evidence of performance of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety.
- E. A statement delineating the geographic area or areas of adaptation of the variety.
- F. A statement on the plans and procedures for the maintenance of seed classes, including the number of generations through which the variety may be multiplied.
- 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.

Upon approval of a variety for certification, a detailed description of the identifiable characteristics of the variety shall be supplied to the Secretary of AOSCA by the Seed Certification Program. The Secretary of AOSCA shall make this description available to other certifying agencies to enable certification of the variety in their states.

## **III. LIMITATIONS OF GENERATIONS**

The number of generations through which a variety may be multiplied shall be limited to that specified by the originating or sponsoring breeder or owner of the variety and shall not exceed two generations beyond the Foundation seed class with the following exceptions:

- A. Re-certification of the Certified class may be permitted for older varieties where Foundation seed is not being maintained.
- B. The production of an additional generation of the Certified class only may be permitted on a one-year basis, when an emergency is declared by the certifying agency stating that the Foundation and Registered seed supplies are not adequate to plant the needed Certified acreage of the variety. The permission of the originating or sponsoring plant breeder, institution, firm or owner of the variety, if existent, must be obtained. The additional generation of certified seed to meet the emergency need is ineligible for re-certification.

## **IV. APPLICATION FOR CERTIFICATION**

- A. All persons who desire to have seed certified in Virginia must file applications with the Seed Certification Program. Application blanks are available from the Virginia Crop Improvement Association office, 9225 Atlee Branch Lane, Mechanicsville, Virginia 23116 or the website at [www.virginiacrop.org](http://www.virginiacrop.org).

**B. Filing Applications and Establishing Source of Seed**

In order to establish the source, class and quantity of seed used to plant each crop to be considered for certification, the applicant must submit with the application an invoice or bill of lading and one label from each lot of seed planted or other documentation acceptable to the Certification Program. In cases where growers plant eligible seed from their own production, evidence of the seed stock eligibility must be provided. The applicant's signature on the application for certification is affidavit that the information submitted for verification of seed eligibility represents the total amount of seed used

**C. Certification Charges and Dates for Filing Applications**

Completed applications with accompanying seed documentary evidence specified in section B should be filed with the Seed Certification Program by the appropriate dates specified on the application and should be accompanied with applicable fees as indicated on the certification application form. Every effort will be made to inspect all fields applied for, but the Certification Program reserves the right to reject incomplete applications or applications submitted after the established due dates.

**D. Late Application Fee**

If an applicant fails to file application by the deadline date for filing an application for certification of a crop, a late fee may be added to regular certification charges.

**E. Canceling Applications**

To receive a full refund of all charges related to the application, applicants desiring to cancel applications for certification must inform the Seed Certification Program in sufficient time to notify the field inspector. If the inspector cannot be notified in time to prevent an unnecessary trip to the farm, the inspection fee will be assessed.

**V. PRODUCTION OF SEED**

**A. Maintenance of Genetic Purity and Identity**

1. The applicant for certification shall be responsible for maintaining genetic purity and identity at all stages of certification including seeding, harvesting, storage, conditioning and labeling of the seed. Failure of the applicant to maintain genetic purity and identity at any stage of certification shall be cause for rejection of the crop for certification.
2. The applicant's signature on the application for certification is affidavit of the following:
  - a. That all equipment involved in planting, harvesting or other handling will be adequately cleaned to maintain genetic purity and identity of the seed
  - b. That only the seed verified as the eligible seed source on the application was planted in the field(s) described on the application.
  - c. That the identity of the seed will be maintained from harvest to the time it leaves the applicant's possession through the use of an identification system as indicated in this section, G and Section VI, B, 2.

**B. Unit of Certification**

The unit of certification shall be a clearly defined area, which may be divided subject to specific crop standards.

### C. Field Inspection

Field inspections shall be made by qualified inspectors in accordance with appropriate procedures and schedules specified by the official Certification Agency. Inspector training sessions shall be conducted periodically in cooperation with USDA university plant breeders, plant pathologists, and VDACS personnel. Inspectors should follow AOSCA suggested procedures for inspecting fields.

One or more field inspections shall be made 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.

### D. Rejection of Fields and Re-inspection of Rejected Fields

Fields or portion of fields of seeds offered for certification may be rejected for any of the reasons set forth in the specific standards of the crop being considered. They may also be rejected because of poor workmanship on the part of the grower while in the field or poor quality in the harvested seed, should these factors be sufficient to constitute a reflection on the good name of certified seed. Such rejections shall be made at the discretion of the inspector.

If a grower desires re-inspection of a rejected field, he must notify the Certification Program when deficiencies have been corrected. A re-inspection fee may be charged. (See application for fees.) If a re-inspection can be performed in conjunction with other first-time inspection work on later maturing varieties, the re-inspection fee will not be charged.

### E. Objectionable Weeds

Every field for which Certification is requested shall show evidence of good management. Objectionable weeds, the seed of which are inseparable in cleaning, must be controlled. Maximum tolerance of objectionable weed seeds shall be shown in the specific rules of the crop to be Certified.

Unless otherwise stated, objectionable weeds shall be those classified as noxious by the Virginia Seed Law and are prohibited in all classes of Certified seed except when tolerances are stated in the rules of a specific crop. Noxious weeds are divided into two classes as follows:

1. Prohibited noxious weed seed (no tolerance allowed):

Balloonvine - Cardiospermum halicacabum

Canada thistle - Cirsium arvense

Field bindweed - Convolvulus arvensis

Johnsongrass, Sorgrass, and Sorghum alnum, and hybrids derived therefrom

Sorghum spp.-perennial

Plumeless thistles, which includes Musk thistle, and Curled thistle - Carduus spp.

Quackgrass - Aquopyron repens

Sicklepod - Cassia tora

2. Restricted noxious weed seeds (Tolerances may be allowed for specific crops):

For agricultural and vegetable seed:

Wild onion bulblets and Wild garlic bulblets - Allium spp.

Dodder - Cuscuta spp.

Wild mustard - Brassica spp.

Giant foxtail - Setaria faberi

Radish - Raphanus spp.

Restricted noxious weed seeds for lawn and turf seed and mixtures thereof. Those kinds listed below shall be restricted noxious weed seeds and shall be declared on the label under the heading “Noxious weed seeds” or “Undesirable grass seed” when present in bentgrasses, Kentucky bluegrass, chewings fescue, red fescue, hard fescue, varieties of perennial ryegrass, varieties of named turf type tall fescue, and/or mixtures containing these grasses. Such weed seeds are:

Annual bluegrass	<u>Poa annua</u>
**Bentgrasses (creeping, colonial, velvet)	<u>Agrostis</u> spp.
**Bermudagrass, Giant bermudagrass	<u>Cynodon</u> spp.
**Meadow fescue	<u>Festuca pratensis</u>
Orchardgrass	<u>Dactylis glomerata</u>
**Redtop	<u>Agrostis gigantea</u>
**Rough bluegrass	<u>Poa trivialis</u>
**Tall fescue	<u>Festuca arundinacea</u>
Timothy	<u>Phleum pratense</u>
Velvetgrass	<u>Holcus lanatus</u>

\*\* May be included as a labeled component of a mixture when in excess of 5.0% of the whole. **Note Exemptions:** This regulation does not apply to restricted noxious weed seeds in grasses or mixtures clearly labeled for pasture, forage, hay, or spoilbank reclamation usage.

#### F. Seed-Borne Diseases and Seed Treatment

Every field for which certification is requested shall show evidence that reasonable precaution has been taken to control seed-borne diseases. The field at time of inspection shall not contain injurious seed-borne plant diseases beyond established tolerances specified in the individual crop seed standards. New diseases may create a need for new standards before they can be published. In such situations, the Seed Certification Program shall impose such standards as are deemed to be in the best interest of Virginia Certified seed. When seed of a variety without resistance to a seed-borne disease has been subjected to possible infection by disease, it is desirable that such seed be treated with a recommended seed treatment.

#### G. Inspection of Harvested Seed

Harvested lots of seed from inspected fields may be inspected at any time by representatives of the Seed Certification Program. Evidence that any lot of seed has not been protected from contamination which affects genetic purity, or is not properly identified, shall be cause for rejection of the seed for certification. Bins and other storage facilities must be labeled or marked to indicate crop, variety, and class. Office records on identification of seed in storage must indicate variety, class, grower, approximate quantity and storage.

#### H. Bulk Shipment of Certified Seed for Conditioning

When any class of certified seed is being transported in bulk for conditioning, a Bulk Transfer form must be completed and filed with the Seed Certification Program. This form identifies the certifying agency, the crop and variety, class of seed, lot number, quantity, conditioner, etc. This form is also to be used to record change of ownership of seed.

## VI. CONDITIONING OF SEED

- A. All seed to be certified in Virginia must be conditioned at facilities which are inspected and approved for conditioning certified seed. The seed may be conditioned by the grower on his own equipment or by an approved custom or commercial conditioner provided inspections by the Seed Certification Program determine that genetic purity and identity can be maintained during all handling of certified seed at the facility including storage, conditioning and labeling.
- B. Conditioners of all classes of certified seed shall meet the following requirements:
1. Facilities must be available that can condition seed without introducing admixtures. The conditioner shall be responsible for proper cleaning of facilities to prevent contamination of certified seed delivered for conditioning
  2. Identity of the seed must be maintained at all times.
    - a. Certified seed being delivered for conditioning must be adequately identified by the grower. All unconditioned certified seed stored in bins or other areas on the premises must be labeled or marked to indicate variety and class.

At the time of bagging of conditioned certified seed, each bag of seed shall have permanently marked on it the variety and lot number. The use of a stencil or stamp is recommended, but any means of permanently marking bags is acceptable. Once marked on the bag, a lot number may not be removed or marked out and another lot number substituted for it.
    - b. Each bin or container of bulk conditioned seed which is ready for sale or which is being transferred to storage for sale must be labeled with the form Virginia Bulk Registered or Certified Seed Label and Inventory which must be obtained from the Seed Certification Program.
  3. Records of all operations relating to certification must be complete and adequate to account for all incoming seed and final disposition of seed.

Conditioners shall permit inspection by the Seed Certification Program of all records pertaining to certified seed.
  4. Conditioners shall designate an individual who shall be responsible for performing the duties required by the Seed Certification Program.
- C. Seed lots of the same variety and seed class may be blended and the seed class retained. If lots of different classes are blended, the lowest class shall be applied to the resultant blend.
- D. The Seed Certification Program shall have the authority, without prior notice, to inspect facilities used to condition certified seed to determine that the facilities and handling of the seed comply with the requirements of Section VI, Conditioning of Seed. Any conditioner who fails to meet these requirements shall forfeit his right to condition certified seed until deficiencies are corrected.
- E. If Virginia certification labels are to be issued on seed which was field-approved in Virginia, but is to be conditioned in another state, the conditioner must supply the Seed Certification Program proof of conditioning plant approval by the seed certifying agency of the state in which the plant is located.

## F. Approved Conditioners

1. Conditioners who desire to condition certified seed for other growers in Virginia must apply annually for Approved Conditioner classification. Conditioners desiring to apply for Approved Conditioner classification for the first time should request application blanks from the Seed Certification Program.
2. Inspections. Plants applying for approved classification will be inspected at the time of the initial application, whenever the individual responsible for performing these duties changes, or when the Certification Agency determines the need. The times of inspections are to be at the discretion of the Seed Certification Program. Approved conditioner classification shall remain in effect for one year providing subsequent inspections do not disclose deficiencies which result in loss of the classification. If, during inspection, deficiencies are noted that prevent the facility from being granted the approved classification, the owner will have 30 days to correct the deficiencies before losing the approved classification. Consideration will be given to correction of deficiencies that would require more than 30 days because of need for mechanical or engineering changes. If approved status is lost as the result of deficiencies not corrected, reinstatement must be accomplished by filing a new application and paying another inspection fee. At the end of the year during which a facility has retained its Approved status, the Seed Certification Program will notify the conditioner of the need to file an application for renewal.
3. Inspection Fee. The annual fee for approved conditioner classification shall be payable at the time application is filed. The fee will cover all inspections for one year if, during the course of the year's inspections, the facility retains its approved classification. If a facility loses its approved classification as the result of deficiencies noted during inspections and the conditioner desires to correct the deficiencies and request reinstatement to approved status, he must file a new application and pay the fee again.
4. Listing of Approved Conditioners.  
The Seed Certification Program shall publish semi-annually and mail to seedsmen and growers the list of Approved Certified Seed Conditioners in Virginia.
5. Loss of Approved Conditioner Classification may result from: Failure to meet conditioning requirements of this section, VI. Conditioning of Seed. Under these circumstances reinstatement of the approved classification may be accomplished as indicated under F. 3. Inspection Fee. Should loss of Approved Conditioner classification be appealed to the Seed Certification Program and not be resolved amicably, the complainant may appeal to the Virginia Crop Improvement Association Board of Directors. In which case, the President of the Board will appoint a committee with Board representation and representative members of the seed industry to study the matter and make recommendations to the Board.

## VII. LOT SIZE, SAMPLING, SEED TESTING

- A. A maximum quantity of seed permitted, per lot and size of sample required, for a purity and germination test is as follows:

Crop	Maximum Lot Size	Sample Size
Peanuts	500 bags or 25,000 lbs.	2 lbs.
Small Grains	3,000 units or bushels, whichever is less	2 lbs.
Soybeans	3,000 units or bushels, whichever is less	2 lbs.

Note: Varietal purity determination is not possible on seed which has been treated with some pesticides. If a pesticide is to be used which coats or colors the seed, a sample of the conditioned, untreated seed must be submitted for purity analysis and a sample of the conditioned, treated seed must be submitted for the germination test.

- B. Before sampling, seed lots will be cleaned and ready for sale, except for labeling. Sampling of conditioned seed for certification may be accomplished by any of several approved methods, but the primary consideration should be that the sample is as representative of the seed as possible. The signature of the applicant for certification is affidavit that he and the conditioner of his seed are familiar with and will draw samples for certification in accordance with one of the following approved sampling methods:
1. If seed is sampled during conditioning, the most representative sample can be obtained with an automatic sampling device in the flow of conditioned seed or by taking a small portion of seed by hand from the top of each bag before it is closed. When conditioning of a lot is complete (see maximum lot size, item A) the seed taken from each bag should be thoroughly mixed and a sample of the seed required for testing (see size of sample required, item A) taken from this seed.
  2. If seed is sampled after conditioning and closing of bags, a probe or trier long enough to reach all areas in the bag shall be used for free flowing seed. When sampling closed bags in quantities of one to six bags, a sample shall be composed of a core from each bag for a total of at least five cores for each sample. For lots of more than six bags, sample five bags plus at least 10% of the number of bags in the lot. Regardless of lot size, it is not necessary to sample more than thirty bags.
  3. If seed is sampled after conditioning and is to remain in bulk it shall be sampled by inserting a long probe into the seed at well distributed points throughout the bulk. Sufficient seed must be obtained from the bulk conditioned seed to provide the same number of samples required from the seed as if it were being bagged. (See VII, A.).
  4. Note: Federal Seed Act Regulations require maintenance of a complete record on each lot, including a sample representing each lot transported or delivered for transportation in interstate commerce. Records and samples are to be kept for three (3) years, except that any sample may be discarded one (1) year after the entire lot has been disposed of by the person transporting or delivering the seed for transportation in interstate commerce. It is advisable to retain a sample regardless of where the seed is sold.

- C. The Seed Certification Program and its designated representatives shall have the authority, without prior notice, to sample conditioned certified seed while the seed is on the premises of, or remains the responsibility of, the seedsman whose name appears on the certification labels or bulk sale certificate. The producer or conditioner, depending on location of the seed, is expected to stack and store conditioned certified seed to permit reasonable access for random sampling of the lots available in accordance with procedure outlined in B. 2 and 3 of this section of standards. "Reasonable access" as used herein is interpreted as being afforded access to sample at random a representation of the lots of certified seed in a warehouse or other facility without causing undue inconvenience to the conditioner or producer.
- D. Analysis and tests of seed samples shall be conducted by the Division of Product and Industry Regulations of the State Department of Agriculture and Consumer Services any official Association of Official Seed Analysts (AOSA) seed laboratory, or by any approved commercial seed laboratory staffed with a Registered Seed Technologist (RST). Applicants who utilize the services of an outside laboratory other than VDACS Laboratory are required to submit an identical two (2) pound sample to the VDACS for comparison analysis, including varietal identity. Additional crop specific requirements may be implemented by the Virginia Certifying Agency. Guidelines indicating size of sample, sampling procedures, schedules, reporting procedures, and related factors will be established and administered by the official Certifying Agency.
1. Each applicant whose fields meet certification standards will be furnished "Official Sample" stickers which must be attached to certified seed samples submitted to the VDACS for testing. The detailed "Official Sample" analysis must be performed on certified seed samples to determine that seed standards of the Certification Program are met. Samples should be submitted in moisture proof bags if seed count is desired.
  2. Where to Send Sample:  
VA Dept. of Agriculture & Consumer Services Seed Lab  
600 North 5<sup>th</sup> Street, Room 232  
Richmond, Virginia 23219  
(804) 786-8795                      (804) 371-7790 FAX
  3. Note: It is a violation of the Virginia Seed Law to offer seed for sale or distribution before it has been analyzed in accordance with the provisions of the Virginia Seed Law.

## **VIII. GENETIC PURITY TEST**

In an effort to provide consumers with the highest quality genetically pure seed, the VDACS Seed Laboratory will conduct a varietal purity test on all certified seed lots where testing methods are available and practical.

## IX. LABELING

### A. Bag and Bulk Bin Labels

1. All classes of certified seed offered for sale shall have the official certification label or bulk bin label properly affixed to each bag or container. Each certification label or accompanying document for seed sold in bulk must identify the agency, lot or identification number, variety name, kind name, and class of certified seed. Even if all standards have been met, seed will not be considered certified unless properly labeled.  
  
All information the grower is required to provide to complete certification must be on file with the Seed Certification Program before certification labels or bulk bin labels will be issued.
2. The certification label or bulk bin label attached to each bag or container serves as evidence of the genetic purity, identity, mechanical purity and germination of the seed contained therein. The following colors of labels shall be used to designate classes of seed:
  - a. White for Foundation class.
  - b. Purple for Registered class.
  - c. Blue for Certified class.
3. Certification labels, containers with the certification label printed on the container, or bulk bin labels must be obtained from the Seed Certification Program or approved prior to purchase by the Seed Certification Program. An accounting of all certification labels and preprinted containers must be maintained and reported to the Certification Program.

Proper attachment of labels or bulk bin labels shall be the responsibility of the person for whom the seed is being certified. Labels must be attached only to the lot of seed actually sampled and tested and for which the labels or bulk bin labels were specifically issued. The lot number on the label must be the same as the lot number on the bag. (See VI. B. 2. b)

When requested, certification labels will be issued prior to conditioning provided the grower realizes that the Virginia Seed Law requires testing of the seed before it can be offered for sale or distribution. If certification labels are attached to seed during conditioning, but the seed when analyzed does not meet certification standards, the labels must be removed and returned to the Seed Certification Program. If certified seed is sampled in the seed trade by the Virginia Department of Agriculture and a STOP ORDER is issued against the seed, the certification labels must be removed and returned to the Seed Certification Program.

4. The certification label shall be attached to the container in a manner which prevents easy removal and re-attachment without tampering being obvious.
  - a. With fabric bags or open top paper bags, it is recommended that the label be sewn on or in the top of the bag.
  - b. With valve filled paper bags and plastic bags or containers (including metal), it is recommended that the labels be glued to the container with an adhesive which prevents removal without destroying the label.
  - c. The label may be printed directly on the container, if control of such containers can be maintained by the certifying agency.

- d. Closing of paper, plastic and metal containers will vary. The most satisfactory method is that of cementing the closure with an adhesive (glue, pressure-sensitive, thermo-plastic, etc.) which prevents entry to the container without leaving noticeable evidence of such tampering. Cementing the certification label over the enclosure is recommended where practicable.
5. If reconditioning of a lot of certified seed becomes necessary for any reason, certification labels attached to it may not be reused.

**B. Bags**

1. All classes of certified seed offered for sale shall be bagged in new bags.  
Official Note: It is a violation of the Virginia Seed Law to offer for sale or distribution in official certification bags and bearing no official certification label, seed that fails to meet Virginia Certification Standards.

**X. SALE OF CONDITIONED SEED IN BULK**

- A. Conditioned Virginia Registered and Certified classes of seed may be sold in bulk by growers who are approved Virginia certified seed conditioners or growers with their own conditioning equipment.
- B. All field, seed and labeling standards applying to bagged seed shall apply to bulk Registered and Certified seed.
- C. Only one sale of bulk Registered or Certified seed is permitted.
- D. Each bin or container of bulk conditioned seed which is ready for sale or which is being transferred to storage for sale must be labeled with a Virginia Bulk Registered or Certified Seed Label and Inventory form. This form must be obtained from the Seed Certification Program. One copy is to be attached to the bin or container, one copy is to be maintained by the Conditioner in his files, and one copy is to be provided the Seed Certification Program.
- E. Whenever a sale is to be made from bulk conditioned seed a copy of the form, Bulk Conditioned Seed Sale Certificate for Virginia Registered or Certified Seed, must be obtained from the Seed Certification Program, completed, signed and issued to the purchaser to accompany the seed at the time of purchase. One copy must be retained in the conditioner's files, and one copy must be mailed to the Seed Certification Program.
- F. Conditioned seed to be sold in bulk must be sampled in accordance with sampling procedure specified in VII. B. 3.

**XI. CARRYOVER SEED**

If you use a one tag system, you will need to submit a sample of each carryover lot of seed to the State Seed Laboratory for germination. A copy of the old tag, along with a copy of the new germination report is then sent to the Virginia Crop Improvement office with your order for new tags.

## **XII. SUB-STANDARD SEED IN EMERGENCIES**

It is recognized that certain lots of seed that may be desirable for the advancement of crop improvement would be lost if regular Certification standards are adhered to. Therefore, 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. Such an emergency may be declared by the State Certified Seed Board if evidence indicates that such procedure is desirable and necessary.

## **XIII. COMPLYING WITH STATE AND FEDERAL SEED LAWS**

The Certifying agency shall implement Certification and, insofar as practicable, enforce Certification Standards; however, each grower, producer, or handler of any class of Certified seed shall be responsible for compliance with all requirements of Certification as well as all requirements of the Virginia Seed Law and the Federal Seed Act. Sale of any class of Certified seed intentionally in violation of any of the foregoing may serve as a basis for revoking the responsible party's right to grow, produce, or sell classes of Certified seed.

## **XIV. GROWER OR VENDOR RESPONSIBILITY**

- A. The grower or vendor whose name appears on the certification label or bulk sale certificate guarantees to the first buyer that the seed to which the label is attached, or which the bulk sale certificate accompanies, is a part of the lot designated on the label or bulk sale certificate and is a part of the lot(s) of seed represented by samples which have met all requirements for certification.
- B. Responsibility for compliance with certification requirements for seed to which a certification label or bulk sale certificate is attached and responsibility for proper use of certification labels for bulk sale certificates rests, in all cases, with the seedsman whose name appears on the label or bulk sale certificate.

## **XV. PRODUCER RECORDS**

It is the responsibility of each grower of certified seed to maintain an accurate record of all sales including the name of purchaser and address, lot numbers, amount and date. The Seed Certification Program has the right to call for specific sales records and will periodically conduct random examinations of sales records. Failure to supply such records, when requested, or failure to give satisfactory reasons for being unable to supply such records, shall forfeit a grower's privilege to produce certified seed.

## **XVI. INTERAGENCY CERTIFICATION**

- A. Interagency certification is the participation of two or more official certifying agencies in performing the services required to certify the same lot or lots of seed. Virginia Seed Certification Standards or comparable standards of other official seed certifying agencies must be met if the Seed Certification Program is to issue interagency certification labels. This includes the requirement that all certified seed to be labeled by the Seed Certification Program must be analyzed by the Virginia Department of Agriculture Seed Testing Laboratory.
- B. Only those varieties declared eligible for certification by the Seed Certification Program or another official seed certifying agency will be eligible for interagency certification in Virginia.

- C. Seed to be recognized for interagency certification must be received in containers carrying official certification labels, or if shipped for conditioning, carry evidence of its eligibility from another official certifying agency, together with the following information:
  - 1. Variety (if certified as to variety) and kind
  - 2. Quantity of seed (pounds or bushels)
  - 3. Class of Seed
  - 4. Inspection or lot number traceable to the previous agency's records.
- D. Interagency certification labels shall carry the certification identification number and clearly identify the certifying agencies involved, the variety, the kind and class of seed.

**XVII. CERTIFICATION FOR GENETIC PURITY ONLY**

Virginia Certified seed must meet all mechanical and germination standards under Certification, with the provision that those varieties protected through Certification under the Plant Variety Protection Act which fail to meet Certification because of germination or mechanical standards, can be Certified with a substandard label.

## PEANUT GERMINATION STANDARDS

1. General Standards.  
The general standards as adopted in the front of this publication are basic and apply to peanuts.
2. Land Requirements. Registered and certified peanuts shall be planted on land on which the previous crop was of another kind or planted with certified seed of the same variety. Foundation peanuts will not be eligible for certification if planted on land that grows peanuts either volunteer or a planted crop the previous two years unless the preceding crop was grown from certified or registered seed of the same variety. A field which includes an area where peanuts were threshed or where thresher refuse was spread during the preceding year shall not be eligible for certification.
3. Field Standards.
  - a. Field Inspection: At least one field inspection shall be made prior to harvest.
  - b. Isolation: Isolation shall consist of a physical barrier such as a ditch, roadway, fence row, or a ten-foot strip devoid of peanuts or two rows of some other crop.

c. Specific:

### Maximum Permitted in Each Class

Factor	Foundation	Registered	Certified
Other varieties	None	1:500 (0.2%)	1:200 (0.5%)
Other crops	None	None	None

Inspection of the equipment used in drying certified peanuts to see that it is operated according to the following guidelines is required. The thermostat and humidistat used on drying certified peanut seed must be set according to ambient air conditions. If a humidistat is not available or operative, the maximum temperature setting should be 80° F. Even though a humidistat is utilized, the temperature should never exceed 90° F. during the drying process. Natural air should be used in the day unless the relative humidity exceeds 65%, in which case supplemental heat may be necessary. If supplemental heat is needed, never use over 10° to 15° F temperature rise. The airflow rate should be 10 -15 cubic feet per minute per cubic foot of peanuts. The depth for peanuts in the dryer should be limited to about four feet for 30% moisture peanuts; for higher moisture content, the depth should be reduced.

4. Seed Standards:

	Class		
	Foundation	Registered	Certified
Pure Seed (minimum)	97.00%	97.0%	97.0%
Inert Matter (maximum)	3.0%	3.0%	3.0%
Weed Seed (maximum)	None	None	None
Other Crop Seed			
Other kinds (maximum)	.01%	.01%	.02%
Other varieties (maximum)	None	.2%	.5%
Germination (minimum)	85.0%	75.0%*	75.0%*
Bottom Screen Size (minimum)	16/64	16/64	16/64

\* Registered and certified peanut seeds that germinate 85% or higher must be labeled no less than 85% and registered and certified seed that germinates 80-84% must be labeled no less than 80% and those seed that germinate 75-79% must be labeled no less than 75%.

## SMALL GRAIN CERTIFICATION STANDARDS

### 1. General Standards.

The general standards as adopted in the front of this publication are basic and apply to small grain.

### 2. Land Requirements.

A crop of small grain will not be eligible for certification if planted on land on which a small grain crop was grown the year previous except a crop of the same variety grown from certified seed. In fields double-cropped, neither of the two crops grown in the previous calendar year shall have been the same kind as the crop being inspected, unless they were grown from a class of certified seed of the same variety.

### 3. Field Standards.

a. **Field Inspection:** At least one field inspection shall be made after the crop is fully headed when varietal or crop mixtures can best be determined.

b. **Isolation:**

(1) **Wheat, Oats, Barley, Triticale** - A field shall be separated by a strip of ground adequate to prevent mechanical mixtures. The strip may be either mowed, uncropped or planted to some crop other than the kind being certified.

(2) **Rye** - All rye fields used for the production of certified seed must be isolated by at least 220 yards from the fields of any other variety or varieties of rye or fields of the same variety that do not meet the varietal purity requirements for certification. Isolation between diploid and tetraploid rye shall be at least 15 feet.

c. **Specific:** Maximum Permitted in Each Class

<u>Factor</u>	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
Other Varieties	None	1:5000	1:2000
* Inseparable Other Crops	None	None	10 plants per acre
Inseparable Objectionable Weeds	None except trace of onion	None except trace of onion	None except trace of onion & trace cockle
**Seed-borne Diseases	1:20,000 (.005%)	1:10,000 (0.01%)	1:200 (0.5%)

\*Inseparable other crops shall include crop plants, the seed of which cannot be thoroughly removed by the usual methods of cleaning. No rye in other small grains permitted.

\*\*No tolerance for stinking smut in wheat.

4. Seed Standards:

Factor	Standards for Each Class		
	Foundation Seed	Registered	Certified (minimum)
<u>Pure</u>			
Wheat, Barley	99.0%	99.0%	99.0%
*Oats, Rye	98.0%	98.0%	98.0%
<u>Inert</u>	Matter		(maximum)
Wheat, Barley, Triticale	1.0%	1.0%	1.0%
*Oats, Rye	2.0%	2.0%	2.0%
Weed Seeds	.01%	.02%	.05%
**Objectionable Weed Seeds	1/16 per oz.	1/12 per oz.	1/8 per oz.
***Other Crops	None	None	.05%
Other Varieties	None	.01%	.05%
<u>Germination:</u>			
Barley, Oats	90.0%	90.0%	90.0%
Wheat, Rye	85.0%	85.0%	85.0%
Nematodes	None	None	None

\*The purity standard for oats may be 98% provided not more than 1% of the impurities consist of impurities other than empty glumes.

\*\*May include wild onion bulblets and wild mustard at the rate of not more than 1/16 per ounce for foundation; 1/12 per ounce for registered; 1/8 per ounce for certified. No corn cockle shall be included in this percentage.

\*\*\*Registered small grain may contain .01% of the following other crop seed, red clover, lespedeza, orchardgrass, fescue, timothy and rye grass.

## SOYBEAN CERTIFICATION STANDARDS

1. General Standards.

The general standards as adopted in the front of this publication are basic and together with the following standards constitute the standards for soybeans.

2. Land Requirements. The crop shall not be grown on land on which soybeans were grown the previous year, unless that crop was grown from certified seed of the same variety.

3. Field Standards

a. Field Inspection: At least one field inspection, preferably after the leaves have dropped, shall be made by an inspector of the certifying agency.

b. Isolation:

Fields of soybeans shall be separated from any other variety or uncertified seed of the same variety by a distance of 20 feet or 10 border rows of the inspected crop shall not be harvested for seed.

c. Specific:

Factor	<u>Field Inspection</u>		
	Foundation	Registered	Certified
Other Varieties	1:10,000 (0.01%)	1:1000 (0.1%)	1:400 (0.25%)
Corn and/or Sunflower Plants Bearing Seeds	None	None	2 plants/acre
Total Objectionable Weeds	*TMG	*TMG	*TMG
*Trace morning glory			

4. Seed Standards:

Factor	Standards for Each Class		
	Foundation	Registered	Certified
Pure Seed (minimum)	99.0%	99.0%	98.5%
Inert Matter (maximum)	1.0%	1.0%	1.5%
*Weed Seed (maximum)	.01%	.01%	.02%
Objectionable Weed Seed	None	None	None
Other Crops	None	None	.01%
**Other Varieties	.01%	.1%	.25%
Germination (minimum)	80.0%	80.0%	80.0%

\*Total weed seed shall not exceed ten per pound.

\*\*Off-colored beans due to environmental factors shall not be considered other varieties. Other varieties shall be considered to include off-type seeds that can be differentiated from the variety that is being analyzed.

## **COOL SEASON AND SEEDED TURF GRASS SOD CERTIFICATION STANDARDS**

### **1. General Standards.**

- a. The general standards as adopted in the front of this publication are basic and apply to turf grass sod.
- b. Only fields planted with Foundation, Registered, or Certified seed that meet sod seed requirements will be eligible for certification. See Section 5 for Seed Standards.
- c. Only those varieties, kinds, or mixtures of kinds of varieties recommended by the Virginia Tech Extension Division will be eligible for certification.
- d. Labeling requirements: All certified sod must have an official certified label accompanying each load, and the label must be attached to the invoice or shipping statement for that load.

### **2. Land Requirements.**

- a. All fields for the production of certified sod must be inspected prior to planting unless they have been producing certified sod.
- b. Have field boundaries designated at the time of inspection.
- c. Fields will need to be free of prohibited noxious weeds and all other perennial grasses.
- d. File with the Virginia Crop Improvement Association the number of acres and kinds of mixtures for all fields intended for certification the year the field is established.
- e. An aerial photo of the farm or other suitable farm plans must be filed with the Virginia Crop Improvement Association.
- f. No animal manures or other material potentially containing seeds shall be applied on sod to be entered for certification.

### **3. Field Standards.**

#### **a. Field Inspection.**

At least one annual field inspection shall be made prior to lifting, and subsequent inspections may be made as needed at the discretion of the inspector. Fields will have to be in a certifiable condition at the time of lifting.

#### **b. Management.**

A field for the production of certified sod must show evidence of good management including weed control, fertilization, and proper clipping.

#### **c. Isolation.**

A certified turf field must be separated from other sod by a strip at least 10 feet wide and maintained free of objectionable weeds. The field must have good general appearance. Poor appearance will be sufficient reason for rejecting the field for certification. Certification can be revoked where certified standards are not maintained.

4. Sod Standards.

The sod must be of uniform density, color, and texture.

Factor	<u>Maximum Permitted in 1000 Square Feet</u>		
	Foundation	Registered	Certified
*Noxious weeds	None	None	None
**Objectionable weeds and perennial grasses	None	None	3
Other varieties	None	1	3

\* Noxious weeds are those listed in the Virginia Seed law as prohibited plus poison ivy, poison oak.

\*\* Orchardgrass, Timothy, Ryegrass, fescue in Kentucky bluegrass, Bentgrass, Bermudagrass, and other hard to control species.

5. Planting Stock Standards.

The seed standards for sod quality grass seed of Kentucky bluegrass, Red fescue and Tall fescue shall be:

All seed must be certified. A seed analysis of all lots of seed used in the mixture must be made by the Seed Laboratory of the Virginia Department of Agriculture and Consumer Services and “Approved for Certified Sod Production.” Only varieties and mixtures as recommended by the Virginia Extension Division will be eligible. Certified seed tags and/or invoices will be required to verify the eligibility of the seed used.

The standards for sod quality grass seed of these species are as follows:

<u>Kind</u>	<u>Purity</u>	<u>Minimum Germination</u>	Maximum*	Lawn & Turf	
			<u>Other Crop Seed</u>	<u>Maximum* Weed Seed</u>	<u>Noxious Weed Seed</u>
Kentucky Bluegrass	98%	85%	0.1%**	0.1%	None
Red fescue	98%	85%	0.1%	0.1%	None
Tall Fescue	98%	85%	0.1%***	0.1%	None

\* Must be free of Canada bluegrass (*Poa compressa*), cheat and chess (*Bromus* spp.), chickweed (*Cerastium* spp. and *stellaria media*), crabgrass (*Digitaria* spp.), foxtail (*Setaria* spp.), goosegrass (*Eleusine indica*), nimblewill (*Muhlenbergia schreberi*), nutsedge (*Cyperus* spp.), panicum (*Panicum* spp.), ryegrass (*Lolium* spp.), smooth brome (*Bromus inermis*).

\*\* Off-types of Kentucky bluegrass shall not exceed 2% for any one component. Up to 90 Canada bluegrass per pound shall be permitted in Kentucky bluegrass.

\*\*\* Up to 30 ryegrass seed per pound shall be permitted in tall fescue.

Note: In an emergency, and at the discretion of the certifying agency, seed lots failing to meet these standards for other than genetic purity may be used for certified sod production. Use of such lots shall be made only when the certifying agency determines that there exists a serious shortage of seed meeting these standards.

## WARM SEASON VEGETATIVELY PROPAGATED TURF GRASS CERTIFICATION STANDARDS

### 1. General Standards.

- a. The general seed certification standards as adopted by the Association are basic, and together with the following specific standards, constitute the standards for certification of vegetatively propagated turf grasses.

The general standards are modified as follows:

1. Foundation turf shall be the vegetative increase of breeder's turf, or in certain cases, the increase of Foundation turf.
2. \*Registered turf shall be the vegetative increase of Foundation turf.
3. Certified turf shall be the vegetative increase of Registered or Foundation turf.
4. Life of stand: The life of the stand will continue for all classes of vegetatively propagated turf grasses as long as the varietal and mechanical purity for the class is maintained.

\* A grower of Registered turf may increase his acreage of Registered turf from his own production provided the increase is adjacent and planted on land under the control of the grower. The size of such increase is not to exceed a total of ten (10) additional acres.

### 2. Land Requirements.

- a. All fields for the production of certified sod must be inspected prior to planting unless they have been producing certified sod.
- b. Have field boundaries designated at the time of inspection.
- c. Fields will need to be free of prohibited noxious weeds, contaminating grasses, and other crops.
- d. File with the Virginia Crop Improvement Association the number of acres for all fields intended for certification the year the field is established.
- e. An aerial photo of the farm or other suitable farm plans must be filed with the Virginia Crop Improvement Association.
- f. No animal manures or other material potentially containing seeds shall be applied on sod to be entered for certification.

3. Field Inspection.

a. Handling the crop after planting and prior to inspection:

A field must be rogued and/or sprayed with the recommended herbicides during the growing season to remove (1) other varieties, (2) other perennial grasses, (3) most common weeds, (4) objectionable and noxious weeds. Note: When spraying, the herbicide will be applied to the area of mixture plus an 18" border surrounding the outer limits of the visible area of mixture. Spraying will continue until the mixture is eradicated.

b. Time and number of inspections:

1. Foundation, Registered, and Certified (minimum of three inspections required).

4. Field Standards.

a. General.

1. Unit of Certification:

A field or portion of a field may be certified.

2. Isolation requirements:

Plantings of vegetatively propagated turf grasses must be isolated from any other variety and other perennial grasses by an artificial barrier and/or strip at least six (6) feet wide to prevent mixing during the growing season and harvesting operation.

b. Specific requirements.

Factor	Maximum Permitted in Each Class		
	Foundation ***	Registered ***	Certified***
* Other Varieties	None	2 per acre	5 per acre**
** Other Crops	None	None	1 per acre
Noxious/Objectionable Weeds	None	None	None
Other Living Plants	100/acre	200/acre	400/acre

\*Other varieties shall consist of all other varieties of the kind being produced.

\*\* Other crops shall consist of all other kinds and varieties of perennial grasses.

\*\*\* Should other varieties, other crops, and noxious weeds be found in excess of standard during field inspection - roguing and eradication by spot spraying will be permitted to bring turf in line with standards. **Reinspection required and to be made not less than three weeks after rejection. There will be a reinspection fee paid by the producer.**

5. Turf Standards.

\*Noxious Weeds                      None

\* \* Objectionable Weeds        None

\* See General Seed Certification Standards for list of noxious weeds.

\*\* Objectionable weeds: Perennial sedges other than nutsedge (grass) and Dicrondra spp.

## **INSTRUCTIONS AND PROCEDURES**

1. All planting, mowing, harvesting, and loading equipment must be thoroughly cleaned prior to entering the field.
2. An official certificate or tag will accompany each shipment of certified sprigs, sod, or plants.
3. A complete record on the amount of certified turf sales will be maintained and made available to the official certifying agency. The record will include:
  - a. Class of certified turf sold. (Foundation, Registered, or Certified)
  - b. Kind and variety
  - c. Field number
  - d. Date of harvest
  - e. Amount of turf shipped. (square feet, cubic feet, bushels, etc.)