

GENERAL SEED CERTIFICATION STANDARDS

APPLICABLE TO ALL CROPS

These General Standards are applicable to all crops eligible for certification and with the Specific Standards for the crop to be certified, shall constitute seed certification standards of the Tennessee Crop Improvement Association.

I. PURPOSE OF SEED CERTIFICATION

- A. The purpose of seed certification shall be to maintain and make available to the public, through certification, high quality seeds and propagating materials of superior crop plant varieties so grown and distributed as to insure genetic identity and purity.
- B. Genetic purity and identity are the primary concerns of seed certification. Therefore, seed certification is a planned procedure to maintain genetic purity and identity of crop varieties.
- C. Quality factors such as germination, pure seed, inert matter, other crop seed, weed seed, and moisture are important. Laboratory analysis for these factors is required, but shall not be cause for rejection provided the seed meets the requirements of the Tennessee State Seed Regulations, except the Association reserves the right to reject for certification any seed found to be unreasonably poor in quality (germination, pure seed, inert matter, other crop seed, weed seed, moisture, and damage by insects, disease, and weathering). The applicant may appeal such rejections to the Board of Directors.

II. MEMBERSHIP

Membership in the Tennessee Crop Improvement Association is required of each applicant for certification. Associate membership is open to all persons or firms engaged in agricultural work who are actively interested in crop improvement.

Persons not holding membership in the Association within the past five years are required to furnish the names and addresses of three persons, one being the bank representative with whom he does business, from whom the Association may obtain letters of recommendations.

III. ELIGIBILITY REQUIREMENT FOR CERTIFICATION OF CROP VARIETIES

- A. A variety shall be eligible for certification if it has been approved as meriting certification by another member agency of the Association of Official Seed Certifying Agencies, an appropriate National Review Board or the Certification Committee of the Tennessee Crop Improvement Association.

B. The Certification Committee of Tennessee Crop Improvement Association may consider the eligibility for certification of any variety which is not eligible under Section III. A, above only if the originator, developer, owner or agent requests certification and makes available:

1. The name of the variety. This name must be the established name if the variety has previously been marketed.
2. A statement concerning the variety's origin and the breeding procedure used in its development.
3. A detailed description of the morphological, physiological, and other characteristics of the plants and seed that distinguish it from other varieties.
4. Evidence of performance of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety.
5. A statement delineating the geographic area or areas of adaptation of the variety.
6. A statement on the plans and procedures for the maintenance of stock seed classes including the number of generations through which the variety may be multiplied.
7. The description of the manner in which the variety is constituted when a particular cycle reproduction or multiplication is specified.
8. 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.
9. A sample of seed representative of the variety as marketed.

The sample size shall be that required for a submitted sample in the current issue of the Rules of Testing Seeds for the Association of Official Seed Analysis.

IV. DEFINITION OF OTHER VARIETIES AND OFF-TYPES

- A. Other varieties shall be considered to include plants or seeds 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 as defined by the breeder.
- B. Off-types are plants or seeds which do not conform to the description of the characteristics of a variety as supplied by the breeder.

V. RESTRICTION ON NUMBER OF VARIETIES

Except as restricted under commodity standards, a certified seed grower may produce as many varieties of any crop as he deems necessary.

VI. CLASSES AND SOURCES OF CERTIFIED SEED

- A. The three classes of seed recognized by the Association in seed certification are: Foundation, Registered and Certified. Breeder's seed is seed or vegetative propagating materials directly controlled by the originating or, in certain cases, the sponsoring plant breeder or institution and shall be the source for the initial and recurring increases of Foundation seed.

1. Foundation Seed:

Foundation seed shall be seed stocks so handled as to most nearly maintain specific genetic purity and identity. Production must be carefully supervised and approved by the Association and/or the Agricultural Experiment Station.

2. Registered Seed:

Registered seed shall be the progeny of Foundation seed so handled as to maintain satisfactory genetic purity and identity. This class of seed must be of a quality suitable for the production of Certified seed.

3. Certified Seed:

Certified seed shall be the progeny of Foundation or Registered seed, except as provide for in Section VII., so handled as to maintain satisfactory genetic purity and identity.

- B. All three of the above classes of seed must meet minimum standards for genetic purity based upon field inspection and laboratory analysis and tests as set forth under the Certification Standards for the specific crop if offered for sale as certified.

C. Applicant's Planting Stock¹

All seed eligible for Registered class to be used as planting stock must meet GENETIC PURITY standards. As long as GENETIC PURITY standards are met an applicant may use the seed for his own production of Certified seed. All seed not meeting quality seed standards must be labeled (tagged) showing the actual analysis of the lot. The tag will carry the statement "NOT FOR SALE-PLANTING STOCK ONLY", the seed lot(s) are only eligible for re-certification by the applicant-member whose membership number appears on the tag.

¹ The term applicant as used in this publication refers to the individual or concern whose name appears on the application for membership and field inspection.

VII. LIMITATION OF GENERATIONS

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

- A. Recertification of the Certified class may be permitted when no Foundation seed is being maintained.
- B. The production of an additional generation of the Certified class may be permitted on a one-year basis only, when an emergency is declared prior to the planting season by an official seed certifying agency stating that the Foundation and Registered seed supplies are not adequate to plant the needed Certified acreage of the variety. The additional generation of Certified class seed to meet the emergency need is not eligible for recertification.

VIII. ESTABLISHING SOURCE OF SEED

Only fields planted with Breeder's, Foundation, Registered, or Certified Class of seed in the case of some crops, are eligible for certification. One certification tag from each lot of seed planted shall be submitted. Also, a copy of the invoice is required on all purchased seed stocks showing member's name as purchaser. In the absence of certification tags, other documentary evidence as defined by the Association shall be required.

IX. PRODUCTION OF SEED

A. MAINTAINING GENETIC PURITY AND IDENTITY

Each applicant-member must make every effort to assure that genetic purity and identity are maintained at all stages of certification including seeding, harvesting, conditioning, and labeling of the seed.

B. UNIT OF CERTIFICATION

The unit of certification shall be a clearly defined area which may be divided subject to special regulations for individual crops.

C. HANDLING OF CROP PRIOR TO INSPECTION

1. Removing off-type plants, objectionable crop plants, and weeds as outlined for each crop is desirable prior to field inspection. Isolation corrections and improper field separations when necessary shall be made prior to field inspection. The member must bear the expense of any reinspection.
2. The Association reserves the right to not inspect fields contaminated with weeds or other crops to the extent they interfere with proper field inspection.

D. FIELD INSPECTION

One or more field inspections shall be made by a representative of the Association 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.

E. SEED INSPECTION

Storage Inspection of Seed: One or more inspections of harvested seed from inspected fields may be made by authorized representatives of the Association. Seed found improperly protected from mixture or improperly identified will be rejected from certification.

F. SPECIAL INSPECTION

The Association reserves the right to make intensive inspection anytime deemed necessary to verify genetic identity and purity of the seed. These special inspections may be made in the field during growing season, in the conditioning plant, by special methods in the laboratory or by growing-out tests. Such inspections may be made without prior notice to the member.

X. HARVESTING AND HANDLING

A. All field inspected seed eligible for certification shall be handled in such manner as to maintain genetic purity and identity. Combines, grain boxes, bins, elevating equipment, conditioning equipment and any other equipment used in harvesting and handling such seed shall be thoroughly cleaned prior to handling and conditioning such seed and again between either different varieties or different kinds of crops. The Association reserves the right to reject for certification any field inspected seed not properly identified or handled in such manner as may jeopardize the purity.

B. All field inspected seed eligible for certification shall be conditioned on equipment as follows, except by prior approval of the Association.

1. Applicant - member's own equipment
2. Equipment of an Approved Conditioner
3. In addition to 1 and 2 above, all soybeans must be run over spiral separators.

Approved conditioners are listed in the Tennessee Certified Seed Directory. Additional lists will be furnished upon request.

XI. SEED CONTAINERS

All certified seed shall be packaged in new, printed bags or packets. Each bag or packet of seed within a lot shall be identified by lot number and variety name. The member must confirm and concur in the statements printed on the bags and packets.

Bags and packets described below under A and B must be purchased in compliance with T.C.I.A.'s published Bag Purchasing Policy which will be furnished upon request.

A. BAGS: THE FOLLOWING TYPE BAGS MAY BE USED

1. Bags carrying only Association trademark.
2. Bags carrying the Association trademark on one side and a private trademark on the other side. The private trademark and other printed matter on the bags must be approved by the Association.
3. Bags carrying only a private trademark. The private trademark and other printed matter on the bags must be approved by the Association.

B. PACKETS: SMALL SEEDS - THE FOLLOWING PACKETS MAY BE USED

1. Packets carrying only the Association trademark.
2. Packets carrying the Association trademark and a private trademark. The private trademark and other printed matter on packets must be approved by the Association.

XII. PREPARING SEED FOR OFFICIAL SAMPLING - OTHER THAN SEED SAMPLED IN BULK

- A. Seed eligible for certification must be conditioned and bagged in approved bags before requesting official samples to be drawn. For sampling seed in bulk, see Section XXII, H. 2, page 15.
- B. Maximum number of bags permitted per lot. Bags must be stacked so that each bag may be stenciled as to lot number and variety.

CROP	MAXIMUM WEIGHT PER/BAG	MAXIMUM WEIGHT PER/LOT
Corn	56 lbs.	22,500 lbs.
Wheat	60 lbs.	96,000 lbs.
Soybeans	60 lbs.	96,000 lbs.
Barley	48 lbs.	76,800 lbs.
Oats	64 lbs.	64,000 lbs.
Rye	56 lbs.	89,600 lbs.
Cotton	50 lbs.	40,000 lbs.
Grasses, Clover & Lespedeza	50 lbs.	20,000 lbs.

AN ADDITIONAL 10 % IS PERMITTED IN A LOT ONLY TO COMPLETE THE LAST LOT OF A VARIETY.

XIII. SAMPLING SEED

- A. A representative sample of each seed lot shall be drawn in accordance with the Rules for Testing Seeds of the Association of Official Seed Analysts. All samples shall be drawn by a bonded inspector of the Association on request from a member or his representative. See current Certified Seed Directory for inspector list.
- B. The member or his representative must be present at the time of sampling to provide necessary information.
- C. Samples shall be forwarded by the inspector to the Approved Seed Laboratory of the member's choice. An observation sample shall be forwarded by the inspector to the Association office.
- D. Resampling Seed:
 - 1. Seed lots failing to meet the Seed Standards on the first analysis report may be reconditioned and retested, except, soybean seed lots failing to meet Seed Standards because of the presence of balloon vine. In some cases, a complete analysis including germination may be required on reconditioned seed.

The analysis of the reconditioned seed shall be the official analysis for determining whether or not the seed meets certification requirements.
 - 2. Seed lots failing to meet the Seed Standards for factors other than those where "none" are permitted may be resampled without reconditioning and be retested only for the factor(s) failing to meet the standards. In such instances an average of all analysis of a given lot of seed will be used to determine whether or not the seed meets certification requirements. The last analysis only will be used if it exceeds Federal tolerances for the preceeding tests.

XIV. SEED TESTING

Official seed analysis and tests shall be made by a seed laboratory approved by the Association. Approved seed laboratories shall be supervised by a Registered Seed Technologist.

XV. FINAL CERTIFICATION

Final certification is based upon the results of field inspection and seed analysis.

XVI. TAGS AND LABELS

All classes of seed sold as certified must have the official certification tag or label of the Association affixed to each container clearly identifying the certifying agency, the lot number, membership number, variety name, kind of crop and class of seed. These tags shall be attached to containers in a manner that prevents removal and reattachment without tampering being obvious.

A. CERTIFICATION TAGS AND LABELS: The certification tag or label attached to the container serves as evidence of the genetic purity and identity of the seed therein. All certification tags and labels are preprinted bearing information required by the Tennessee Seed Law and shipped prepaid by the Association.

B. ORDERING TAGS

1. SEED LOTS THAT HAVE MET ALL CERTIFICATION REQUIREMENTS:

- (a) Request for tags to be printed and shipped promptly upon completion of the laboratory analysis may be made to the inspector at the time the seed is sampled; or,
- (b) Tags may be requested anytime after completion of the laboratory analysis but prior to the next normal planting season for the crop. Information to be submitted with the request shall include variety, lot number, class of seed, number of tags and the member's name and address.

2. ADVANCED - TAG ORDERS: Applies Only to Approved Conditioners Qualifying for this Privilege:

Such approved conditioners may order tags for seed lots in advance of sampling and laboratory analysis provided approval is granted by the Association. Seed lots bearing advanced - tags shall not be exposed for sale until the member has received a copy of the results of the official analysis reports from the Tennessee Crop Improvement Association clearly indicating the seed lots have met both the certification requirements and the analysis data printed on the tags.

- (a) Information to be submitted with Advanced - Tag Order shall include variety, lot number, class of seed, number of tags, weight per bag, analysis date and the member's name and address. T.C.I.A. Order Forms shall be used and are available upon request.

3. **BLUE - TAG BAG:** The "Tennessee Certified Blue - Tag Bag" refers to a valve filled bag with the "Tennessee Certified Blue - Tag" and the seed analysis imprinted on the bag at the time of manufacture.

Members who may qualify for the use of this privilege must meet the following requirements:

- (a) Be a T.C.I.A. Approved Seed Conditioner who has a Bonded Plant Inspector, equipment for valve filling bags and an automatic sampler.
 - (1) Applicant must have previous experience and satisfactory performance as a T.C.I.A. Approved Conditioner.
 - (2) Applicant must have office facilities and personnel adequate to keep the required accountability records for these bags.
- (b) Application must be on file 60 days prior to the desired date for placing a bag order. This permits for T.C.I.A. inspection to determine eligibility and for applicant to receive written notice of approval. Upon approval the applicant will be visited by a representative of T.C.I.A. for proper orientation and will be provided printed detailed regulations and forms.

4. **BULK - CERTIFICATION OF THE CERTIFIED CLASS OF WHEAT SEED - SEED NOT PACKAGED IN BAGS**

Members who qualify for the use of this privilege must meet the following requirements:

- (a) Be a T.C.I.A. approved seed conditioner who has been T.C.I.A. approved to condition wheat for the two (2) previous consecutive years and who has a bonded plant inspector.
 - (1) Member must demonstrate an acceptable procedure for handling bulk - certified seed to assure that genetic purity and identify are maintained throughout all seed movement from receiving, storage through final dispersal.

- (b) Annual application must be on file prior to July 15, this permits T.C.I.A. inspection to determine eligibility and for the applicant to receive written notice of approval. Upon approval the applicant will be visited by a T.C.I.A. representative for proper orientation and will be provided printed, detailed regulations and forms.
 - (c) Seed sold in bulk must be accompanied by a "Bulk Retail Sale Certificate", T.C.I.A. Form 21 which identifies the certifying agency, kind of crop, variety, class of seed, lot number and other information including laboratory analysis of the seed lot.
- C. The member must confirm and concur in all information on the tags and labels. It is the responsibility of the member to properly affix the tags and labels to the containers of the corresponding seed lot approved for certification.
- D. The following colors shall be used for tags for the respective classes of seed under certification.
- 1. Foundation (Breeders when tagged)White
 - 2. Registered.Purple
 - 3. CertifiedBlue
- E. Seed shipped into other states may require sealing. The responsibility for meeting this requirement will be assumed by the seller of the seed. Contact T.C.I.A. office for detailed information.

XVII. COMPLYING WITH FEDERAL AND STATE SEED LAW

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

XVIII. APPLICATION FOR CERTIFICATION

- A. Application for field inspection may be made by anyone who has planted seed eligible for certification. Application forms will be provided upon request. Letters, phone calls and oral requests shall not be regarded as an application for field inspection.

Crops listed under B-2, below with the same application filing date and the stage of maturity will permit inspection on the same trip may be included on one application form. The application calls for vital information and must be completed in its entirety.

B. Dates for Filing Applications: Applications should be on file with the Association not later and preferably before the following dates. Applications will not be accepted after these dates from persons who have not been an active member within the past five years.

1. Applications must be filed with the order for Foundation seed when purchased from Tennessee Foundation Seeds, Inc..
2. Applications covering increase from stocks other than Foundation seed purchased from TFS, Inc. are due as follows:
 - (a) Bermudagrass April 1
 - (b) Small grain, other grasses, and clover April 15
 - (c) Hybrid corn June 1
 - (d) Cotton, soybeans, tobacco, and lespedeza July 10

C. Member's Responsibility: Applications for membership and field inspection should be in the Association office by the above dates. Late applications are accepted at the discretion of the Association; if accepted, a penalty fee shall be applied to each application. Effort will be made to complete inspection of crops covered by late applications. However, the Association cannot be responsible since time may not permit the work to be accomplished prior to harvest of the crops.

D. An application may be withdrawn if the value of the crop is destroyed by causes beyond the member's control. Inspection fees will be refunded provided, the Association office receives notice in time to advise the inspector prior to his visit to the member's farm.

XIX. FEES

A. Membership Fee: The membership fee is \$15.00 and shall be paid annually.

B. Operating Fees: Contact Association office for current service fees.

XX. BAGGED SEED CARRYING T.C.I.A. TRADEMARK FAILING TO MEET CERTIFICATION REQUIREMENTS

The Association trademark on face and/or back of bags containing seed that failed to meet certification requirements shall be defaced. The disclaimer clause "Certification Void without Association Tag", printed on the bag does not relieve the member of this responsibility.

XXI. BAGGED SEED CARRYING T.C.I.A. TRADEMARK MEETING CERTIFICATION REQUIREMENTS BUT SOLD AS NON - CERTIFIED (seed not bearing the certification tag)

The Association trademark on face and/or back of bags of seed that met certification requirements but sold as non-certified, no certification tags attached, shall be defaced. The disclaimer clause, "Certification Void without Association Tag", printed on the bag does not relieve the member of this responsibility.

XXII. REGULATIONS FOR APPROVED PLANTS CONDITIONING SEED FOR CERTIFICATION IN TENNESSEE

A. ELIGIBILITY

Seed eligible for certification in Tennessee may be conditioned by a T.C.I.A. approved conditioner.

B. APPLICATION FOR APPROVAL

Conditioners who wish to condition seed eligible for certification in Tennessee shall apply annually to the Tennessee Crop Improvement Association for membership, inspection and approval of their plant. The Required and Recommended Equipment for individual crops will be furnished by the Association on request along with an official application blank.

C. INSPECTION FEE

An annual inspection fee of \$25.00 will be charged for each inspection. No refund of inspection fees are made.

D. PERSONNEL

No plant shall be approved which in the opinion of the Association does not have capable, trained or experienced personnel for efficient operation of the plant.

E. FACILITIES

1. Before a plant is approved to condition seed eligible for certification, it must be determined that the plant is equipped with the necessary machinery and other facilities. In addition to General Requirements and Facilities listed below, Required and Recommended Equipment for individual crops will be furnished upon request.

2. General Requirements and Facilities:
 - (a) Adequate building - A building that will provide ample space and machinery, storage and working area is necessary.
 - (b) Storage bins - A sufficient number of bins of adequate size to handle the normal flow of seed are required. Bins shall be so constructed to permit thorough cleaning.

The construction and location shall also provide ample protection against mixture of seed lots.
 - (c) Elevators and conveyors - Construction and arrangement must permit thorough and complete cleaning.
 - (d) Blending facilities - A specific floor area, blending bins or a batch mixer, enabling the conditioner to blend seed to maximum uniformity within a lot are desirable.
 - (e) Cleanliness - The plant shall be kept reasonably clean during conditioning season. All torn bags and loose seed shall be kept off the floor. The walls and ceilings shall be kept free of any foreign materials that may harbor contaminating seed.

F. HANDLING OF SEED DURING CONDITIONING

Seed eligible for certification must be handled at all times so as to prevent contamination or mixture.

1. Unconditioned seed whether it is held in bins or bags shall be properly labeled at all times to show the following:
 - (a) Applicant - member's name and address
 - (b) Crop and variety
 - (c) Class of seed
 - (d) Bin number
2. Unconditioned seed, properly identified, shall be stored separately from all other seed and under conditions which will prevent mixing.
3. Before conditioning seed eligible for certification, all equipment including conveyors, screens and machines which the seed is to pass over or into must be thoroughly cleaned.
4. All conditioned seed must be bagged in new, printed bags. Bags must be printed with either of the following: Association's trademark only, approved private trademark only, or both of these trademarks. Bags carrying the Association Trademark only are available through T.C.I.A. office.

5. All conditioned, bagged seed must be stored in separate stacks according to the applicant - member, variety and class and be properly labeled at all times. "Properly labeled" means the tagging of each stack showing information as required under f-1, above.
6. All bagged screenings shall be tagged or stenciled to insure identity. Do not stack with the conditioned seed.

G. RECORDS

The conditioner shall keep complete and adequate records of all seed received in the plant, as well as conditioning records and records of the disposition of the seed. Such records shall consist of at least the following and shall be retained as required by Federal and State Law.

1. Applicant - member's name and address
2. Crop and variety
3. Class of seed
4. Quantity of seed received
5. Quantity of seed returned to grower

H. SAMPLING

1. Seed Conditioned and Bagged in Approved Bags

A representative sample of each lot shall be drawn in accordance with the Rules for Testing Seeds of the Association of Official Seed Analysts. Approved conditioning plants that do not have a bonded Association Inspector employed in the plant, notify the nearest T.C.I.A. area inspector or the T.C.I.A. office. See current Certified Seed Directory for inspector's name and phone number. In addition to having the seed properly identified, other necessary information shall be furnished to the inspector at time of sampling.

2. Sampling Seed in Bulk

All crops except corn may be sampled in bulk by bonded inspectors of the Association employed in Approved Conditioning plants. Specific approval and instructions for procedure must be requested and received from the Association prior to sampling seed in bulk.

I. INSPECTION

Approved conditioners shall permit an authorized representative of the Association to inspect the plant and conditioning records of seed eligible for certification at any time.

J. APPROVAL AND REVIEW OF APPLICATIONS

Approval may be granted or refused at the discretion of the Board of Directors of the Tennessee Crop Improvement Association. Approval may be withdrawn by the Board of Directors based on inspection reports or other investigations indicating the conditioner has become negligent or is engaging in practices contrary to the purpose of the Association or its rules and regulations.

K. CERTIFICATE OF APPROVAL

Certificates of approval are issued annually dated from July 1 - June 30.

XXIII. RESAMPLING, RETESTING AND RETAGGING SEED HELD FOR A CERTAIN PERIOD OF TIME

The owner of Tennessee certified seed is responsible for resampling, retesting and retagging seed after the germination date expires. The owner must remove the analysis on the perforated end of the certification tag. He must then attach an analysis tag bearing all required information including the new germination and test date.

XXIV. A member who, either willfully or otherwise, causes certification tags to be affixed to seed that does not meet all certification requirements of the Association is fully responsible by State Law for misrepresentation and damages resulting from such mislabeling and may be expelled from the Association.

XXV. TENNESSEE NOXIOUS WEEDS

A. PROHIBITED

Field Bindweed	(Convolvulus arvensis)
Hedge Bindweed	(Convolvulus sepium)
Crotalaria	(Crotalaria spectabilis)
Johnson Grass	(Sorghum halepense)
Nut Grass	(Cyperus rotundus & C. esculentus)
Sorghum Almum	(Sorghum almum)
Thistle, Canada	(Cirsium arvense)
Balloon Vine	(Cardiospermum halicacabum)
Sicklepod	(Cassia obtusifolia)
Itchgrass	(Rottboelia exaltata)

B. RESTRICTED OR LIMITED

Chest	(Bromus secalinus)
Chess	(Bromus commutatus)
Cocklebur	(Xanthium spp)
Corncockle	(Agrostemma githago)
Darnel	(Lolium temulentum)
Dock	(Rumex spp)
Dodder	(Cuscuta spp)
Giant Foxtail	(Setaria faberi)
Horsenettle	(Solanum carolinense)
Wild Mustard or Turnips	(Brassica spp)
Wild Onion or Garlic	(Allium spp)
Plantain, Buckhorn	(Plantago lanceolata)
Quack Grass	(Agropyron repens)
Sorrel, Sheep	(Rumex acetosella)
Plumeless Thistles, including Musk Thistle, Nodding Thistle and Curled Thistle	(Carduus spp)
Annual Bluegrass	(Poa annua) - Lawn & Turf Seed Only

XXVI. SUBSTANDARD 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 were adhered to. Therefore, the Certification Committee shall have the authority to interpret and change any certification standard other than those affecting genetic purity or the reputation of certified seed as may be necessary to meet emergency situations. The certification tags or labels and analysis tags or labels attached to such seed shall clearly state in what respect the seed fails to meet certification standards.

XXVII. APPEALS - REJECTED FIELDS AND SEED LOTS

In the event a member disagrees with a rejection based upon field inspection or a rejection of a seed lot for reasons other than varietal mixture he may appeal to the Certification Committee for reconsideration. This appeal must be in writing to the Association office. Appeals will be considered without applicant identity.

XXVIII. TRANSFER OF OWNERSHIP OF FIELD APPROVED SEED - INTRASTATE

Transfer of ownership of field approved seed, cleaned or uncleaned, may be made from the member - grower to another Active T.C.I.A. member - grower of a like crop, or a T.C.I.A. approved conditioner limited to the crops for which they were approved.

The procedure listed below must be followed if the seed is to remain eligible for certification.

- A. The transfer of ownership of field approved seed retaining eligibility for certification applies to the first buyer only.
- B. The seed must be moved directly from the member - grower location to the location of the conditioning facilities.
- C. Seed produced by more than one member - grower may not be blended.
- D. Seed shall be handled at all times in such manner as to maintain genetic identity and purity.
- E. The member - grower and the purchaser must file with the Association a Report of Transfer of Field Approved Seed from T.C.I.A. member to T.C.I.A. member. These reports are to be filed immediately upon movement of the seed from the member - grower. Transfer forms are available upon request.
- F. Conditioning, Bagging, Sampling and Testing: Completing certification of such seed shall be under the same regulations as apply to seed offered for certification by the member - grower of the seed.
- G. Certification tags or labels covering such seed shall carry the membership numbers of both the member - grower and the purchaser of the seed. Seed is not recognized as certified until it is properly bagged, tested and tagged with the certification tag.

XXIX. INTERAGENCY CERTIFICATION

Interagency certification is the participation of two or more member agencies of the Association of Official Seed Certifying Agencies in performing the services required to certify the same lot(s) of seed. The method and standards employed in each step of interagency certification are those used when certification is completed by a single agency with the following exceptions:

- A. In the absence of Tennessee Seed Standards, the standards of the agency who field inspected the seed crop shall be applied provided they meet the minimum standards of the Federal Seed Certification Standards and AOSCA.

- B. Seed recognized for interagency certification shall be received in containers carrying official certification labels or other evidence of its eligibility from another certifying agency including the following:
 - 1. Variety, kind and class of seed
 - 2. Amount of seed - pounds or bushels
 - 3. Inspection or lot number traceable to a certifying agent's records
- C. T.C.I.A. member - grower and approved conditioners may apply to the Association for interagency certification which shall be limited to the crops for which they have been approved.
- D. In addition to complying with Section XVI., each tag or label used in interagency certification shall be serially numbered or carry the certification identity number and name of state where the seed was grown, the variety, kind and class of certified seed.

TENNESSEE CROP IMPROVEMENT ASSOCIATION

TCIA REGULATIONS FOR APPROVED BULK RETAILING OF CERTIFIED SEED

- I. A. The purpose for Bulk Retailing Regulations is to establish procedures by which certified seed can be sold in bulk (not bagged) for use when seeding is done with spreaders, trucks, buggies, airplanes and etc.

Bulk Retailing of certified seed is permitted by individuals or firms who have been approved as Bulk Retailers by Tennessee Crop Improvement Association. This approval is made on an annual basis and may be withdrawn at any time by TCIA, see Section II., J. Applications for approved bulk retailing are available upon request from TCIA office.

B. ELIGIBILITY OF SEED

Only the Certified Class of certified seed is eligible to be Bulk Retailed in Tennessee. Seed moving in Bulk Retail channels may be sold only twice:

- (1) from an Approved Conditioner to the Approved Bulk Retailer.
- (2) from Approved Bulk Retailer to the consumer who will plant the seed.

If more than two sales are made, the seed is automatically ineligible for certification and Bulk Retailing as certified seed. For seed received from another state see Section II, Page 4.

C. APPLICATION AND INSPECTION

To insure inspection of the facilities before planting time, the Application for Bulk Retailing must be received by TCIA office prior to July 15. An inspector of TCIA will arrange to inspect the facilities after the application has been received. All procedures for transporting, storing, dispensing and record keeping will be reviewed during this inspection. The applicant must demonstrate a satisfactory means of maintaining genetic purity and identity of bulk certified seed from receiving to final dispersal. Any certified seed received prior to inspection and approval will be ineligible for Bulk Retailing as certified seed and for further certification. One individual at each approved Bulk Retail Outlet will be approved by TCIA as the person responsible for Bulk Retailing of certified seed.

The inspection fee is \$50.00 per location/crop and a \$25.00 reinspection fee per trip, per location. This fee will entitle Approved Bulk Retailer to become a Associate Member of TCIA.

The approval period extends for September 1 to August 31, of the next year.

II. REQUIREMENTS FOR APPROVED BULK RETAILERS

A. EQUIPMENT

Each retailer must demonstrate an acceptable procedure for handling bulk certified seed to assure that genetic purity and identity are maintained throughout all seed movement from receiving and storage to final dispersal.

A separate storage bin (hopper-bottom desirable) must be available for each variety that will be sold in bulk. These bins must be constructed to allow complete cleaning and inspection. These bins must be cleaned and emptied prior to inspection and before any bulk certified seed is received. **All augers, conveyors, blenders, trucks, buggies and any other equipment must be cleaned before they are used to handle bulk certified seed.** It is recommended, if possible, that one blender be designated for bulk certified seed only.

B. LABELS FOR BINS

All bins containing certified seed will be clearly and conspicuously identified as to bin number, crop, variety, lot number, complete analysis and variety protection information. A crop and variety label will be attached to bin by TCIA Inspector upon approval and must remain at all times while certified bulk seed is being stored in bin. An analysis label will be posted at the time a shipment of certified bulk seed is received from an Approved Conditioner.

C. RECORDS

A current set of records must be maintained by each Approved Bulk Retailer for all movement of certified seed into and out of their facilities for each variety sold.

A Certificate of Bulk Transfer of Conditioned Seed (TCIA Form # 20) must accompany each load of bulk certified seed as it is received at the bulk retailer. This certificate must be kept with the retailer's records and the amount received must be recorded on the Inventory Form (TCIA # 22).

A current inventory of the amount of seed on hand for each bin must be maintained by the retailer. This inventory must be up to date at all times. An Inventory Form (TCIA # 22) will be provided by the TCIA office. Each incoming and outgoing shipment must be recorded on this form.

Each load of Bulk Certified Seed dispensed to the consumer (farmer) must be accompanied by a serially numbered Bulk Retail Sales Certificate (TCIA Form # 21). This form will be filled out in triplicate by the Approved Retailer and assigned as follows:

- Original Copy (Blue) - accompanies each load and is given to the buyer.
- Second Copy (Yellow) - attached to the Bin Inventory form (TCIA #22) and forward to TCIA when final sale is made from the bin.
- Third Copy (White) - remains with TCIA Approved Bulk Retailer.

II. C. RECORDS-continued

Before December 31, of each year an Annual Report, (TCIA Form # 27), for each variety and lot number must be sent to the TCIA office regarding all sales of Bulk Certified Seed. This report will include the number of bushels and lot numbers on all shipments of bulk seed received. It will also include total number of bushels sold and number of Bulk Sale Certificates used. The serial number (s) of all unused Bulk Sales Certificates must be included on this report and all unused certificates returned to TCIA office. This report will accompany a copy of the Bin Inventory Sheet(s), (TCIA #22), and all TCIA copies (yellow) of Bulk Retail Sales Certificates (TCIA #21). Approved Bulk Retailer will retain their copy (white) of Certificate of Bulk Transfer of Conditioned Seed, (TCIA #20). This copy is not required to accompany the Annual Report.

All records and bins are subject to inspection and audit at any time by TCIA Inspectors.

A file sample of each load received from an Approved Conditioner must be retained by the Approved Retailer.

D. RESPONSIBLE PERSON

One person at each Approved Bulk Retailer will be responsible for the bulk retailing procedure. This person is responsible for all record keeping and shall be responsible for seeing that genetic purity and identity are maintained at all times. This person must notify the TCIA office five days prior to changing varieties from the variety originally covered on the application for approval.

If this person leaves the retailer or is transferred from the above duties, approval must be obtained from TCIA office before any certified seed can be received or dispensed by the retailer.

E. APPROVED BULK RETAILER is referred to as one who purchases seed on "Certificate of Bulk Transfer of Conditioned Seed" from TCIA APPROVED BULK CONDITIONER, and one who is a custom bulk fertilizer blender or distributor who sells this certified seed to the consumer (farmer) either for:

1. Blending it with fertilizer and custom spreading.
2. Custom seeding only.

A sign must be posted notifying consumer that blending of seed with fertilizer and/or chemicals may affect purity and/or germination. The seller should not be held liable for any damages that may result and the buyer will sign a release form to that effect.

F. APPROVED BULK RETAILER is permitted to handle more than one (1) certified variety at a time.

It is the sellers responsibility to determine that the vehicle receiving bulk certified seed is clean. If it is not clean, this is to be noted on the bill of sale and Bulk Retail Sale Certificate.

G. MINIMUM SIZE OF BIN APPROVED (500 Bushels)

1. BIN must be completely empty before receiving additional seed of same variety UNLESS the seed is of the same variety and same lot number, in which case, additional seed may be received and added to current inventory in bin.
2. After emptying a storage bin of a seed lot and the bin is to be used for a different variety, the bin must be recleaned and reinspected by TCIA. Notify TCIA office 5 days prior to the date you desire to change varieties.

H. CERTIFIED BULK SEED RECEIVED FROM ANOTHER STATE

Certified Bulk Seed purchased from another state may be eligible for sale in Tennessee provided the certification agencies in both states involved have a prior agreement on the procedures to be followed. It is the responsibility of the Approved Bulk Retailer to notify the TCIA office of any such transactions prior to receiving any bulk seed.

All certified bulk seed moving into Tennessee must have met the following provisions prior to or at the time of the first bulk shipment.

1. Meet TCIA requirements.
2. Payment of fees: tag fee will be invoiced on each bushel of bulk certified seed received into Tennessee.
3. Abide by all other rules of bulk retailing.
4. Receive only from Approved Bulk Conditioner.

I. UNSOLD SEED IN BIN (Bulk Retailer)

Unsold certified seed left over in the bin at the end of the season cannot be carried over and re-tested for recertification.

Unsold seed must be removed from the bin prior to inspection of the facility next season. Inspections will not be required to confirm quantity of unsold seed. Spot inspections are made as routine only.

J. WITHDRAWAL OF APPROVED BULK RETAIL STATUS

The approved status may be withdrawn for any of the following reasons:

1. If upon any inspection the records are found to be out of order.
2. If seed identity is lost or questionable.
3. If seed bins are not properly labeled.
4. Failure to notify TCIA office of changes in varieties being handled.

II. J. WITHDRAWAL OF APPROVED BULK RETAIL STATUS-continued

5. Failure to notify TCIA office that the person designated as the "responsible person" is leaving or is being transferred from that position.
6. Failure to issue Certificate with each retail sale.
7. Failure to report sales by December 31 of each year.
8. Non-cooperative attitude by the person designated as being responsible for bulk retailing.
9. Violation of TCIA Certification Standards and/or By-Laws, or any conduct materially detrimental to the Association.

If the approved status is withdrawn, the unused Bulk Sale Certificates must be surrendered to the TCIA office. The certified bulk seed remaining in the bins will be disposed of in a manner approved by TCIA. Withdrawal of approved bulk retailer status may be appealed to the TCIA Board of Directors.

SMALL GRAIN SEED CERTIFICATION STANDARDS

(WHEAT, OATS, BARLEY, RYE, AND TRITICALE)

I. APPLICATION AND AMPLIFICATION OF GENERAL CERTIFICATION STANDARDS

The General Seed Certification Standards as adopted by the Association are basic and together with the following standards constitute the standards for certification of wheat, oats, barley, rye, and triticale.

II. SEEDING

Custom spreading of seed is permitted with the member being solely responsible for the inspection and cleaning of the seeding, blending and all handling equipment before first being used where a certified seed crop is involved and, reinspected and cleaned between different varieties of the same kind of crop.

III. LAND REQUIREMENT

Small grain seed will not be eligible for certification if planted on land that produced the same kind of crop the previous year unless the crop was of the same variety and grown from certified seed.

IV. FIELD INSPECTION

At least one field inspection shall be made after the grain is fully headed.

V. FIELD STANDARDS

A. General

1. Unit of Certification

(a) A field is the unit of certification. At inspection time the field must be separated from fields of other varieties or uninspected fields of the same variety by a distance of 25 feet when the adjoining field was broadcast, or by a distance of 5 feet, a ditch or fence row when the adjoining field was drilled or rowed.

(b) When it is necessary to remove a strip to obtain the required distance the part to be removed must be taken from the field that is to be inspected.

2. Isolation - Rye

A field producing any class of certified seed must be isolated by at least 660 feet from rye fields of any other variety or fields of the same variety that do not meet the varietal purity requirements of the class of seed

inspected and are of the same chromosome number. Isolation between diploid and tetraploid rye shall be at least 15 feet.

B. Specific Requirements

FACTORS	FOUNDATION	REGISTERED	CERTIFIED
		Maximum Permitted	
Other varieties and off-types ²	0.03% (1:3000)	0.05% (1:2000)	0.10% (1:1000)
		Plants Permitted Per Acre	
Inseparable other crops ^{3,4}	None	8	16
Inseparable noxious weeds	None	None	None
		Maximum Permitted	
Disease			
Loose Smut - wheat & barley	0.20% (1:500)	0.50% (1:200)	1.0% (1:100)
Smut - oats ⁵	0.01% (1:10,000)	0.05% (1:2000)	0.10% (1:1000)
Stinking Smut - wheat ⁵	None	None	None
Covered Smut - barley ⁵	None	None	None

² See definition, Item IV. Page 3

³ Inseparable other crops shall include crop plants, the seed which cannot be thoroughly removed by the usual methods of cleaning. Rye and triticale in rye and visa versa are well-known examples. This does not apply to seed of winter grain in spring grain or vice versa.

⁴ The per acre tolerance shall apply to those plants that will be seed bearing at time of harvest.

⁵ If the smut tolerance is exceeded, the seed must be treated before certification can be completed.

VI. SEED TREATMENT

- A. Breeder's or Foundation seed used for the production of Foundation seed, except rye must be treated with a recommended fungicide.
- B. Foundation seed of wheat and barley must be treated for loose smut with a recommended fungicide when requested by the Association to be eligible for certification.
- C. In the case of chemically controllable disease:
 - 1. Oats (all smuts): Foundation seed from fields containing more than 0.01% must be treated with a recommended fungicide to be eligible for certification.
 - 2. Wheat (stinking smut) and Barley (covered smut): Foundation, Registered and Certified seed from fields containing diseased heads must be treated with a recommended fungicide to be eligible for certification.
 - 3. Wheat and Barley (loose smut): Foundation seed from fields containing more than 0.2% must be treated with an approved fungicide to be eligible for certification. Chemical control is currently available and approved for the treatment of seed to be planted for the production of seed.

VII. SEED STANDARDS

FACTORS	STANDARDS FOR EACH CLASS		
	FOUNDATION	REGISTERED	CERTIFIED
Pure Seed	98.0%	Minimum Permitted 98.0%	98.0%
Inert Matter	2.0%	Maximum Permitted 2.0%	2.0%
Weed Seeds:*		Maximum Permitted	
1. Prohibited noxious	None	None	None
2. Restricted noxious ⁶			
(a) wheat, rye & triticale	5 p/lb.	10 p/lb.	10 p/lb.
(b) oats & barley	5 p/lb.	10 p/lb.	15 p/lb.
3. Total noxious & other weeds:			
(a) wheat, rye & triticale	5 p/lb.	10 p/lb.	15 p/lb.
(b) oats & barley	5 p/lb.	10 p/lb.	20 p/lb.
Other Crop Seeds:		Maximum Permitted	
1. Other varieties & off - types ⁷			
(a) wheat, rye, barley & triticale	1 p/lb.	1 p/lb.	10 p/lb.
(b) oats	10 p/lb.	20 p/lb.	40 p/lb.
2. Other Kinds:			
(a) wheat ^{8,10,11} oats ^{9,10,11}	1 p/lb.	2 p/lb.	5 p/lb.
(b) barley ^{10,11} rye ^{10,11} and triticale ^{10,11}	1 p/lb.	2 p/lb.	5 p/lb.
Germination		Minimum Permitted	
1. Wheat, oats, barley, triticale**	85%	85%	85%
2. Rye	80%	80%	80%

* Tennessee Noxious Weeds are listed on Page 16.

** Below Standard Germination 84% - 75%

6 Wild onion permitted: 1 per 2 lbs. in Foundation class, 1 per pound in Registered class and 2 per pound in Certified class.

7 See definition, item IV., Page 3.

8 No rye permitted in Foundation class wheat; 1 rye per pound permitted in Registered class wheat and 2 rye per pound permitted in Certified class wheat.

- 9 No barley permitted in Foundation class oats; 1 barley per pound permitted in Registered class oats and 3 barley per pound in Certified class oats.
- 10 Except for ryegrass, small seeded legumes and grass seed shall be permitted not to exceed 20 per pound.
- 11 Vetch and/or Caley Pea permitted: 1 per 2 lbs. in Foundation class; 1 per pound in Registered class and 2 per pound in Certified class. Where one (1) permitted could be either and where two (2) seed permitted could be either or a combination of the two.

SOYBEAN SEED CERTIFICATION STANDARDS

I. APPLICATION AND AMPLIFICATION OF GENERAL CERTIFICATION STANDARDS

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 soybean seed.

II. LAND REQUIREMENT

A. Foundation Class

Soybeans for certification as Foundation Class shall not be grown on land that produced soybeans or cowpeas the previous year unless the soybeans were the same variety and produced for certification as Foundation seed.

B. Registered and Certified Class

Soybeans for certification as Registered or Certified Class shall not be grown on land that produced soybeans or cowpeas the previous year unless,

1. The soybeans produced the previous year were grown from a class of certified seed of the same variety or a variety having a contrasting pubescence color or,
2. Small grain was produced and harvested for grain as an intervening crop.

III. FIELD INSPECTION

A. Foundation Class

Soybeans for certification as Foundation Class shall be inspected twice, once at blossom - time and again after the beans are mature.

B. Registered and Certified Class

1. Soybeans for certification as Registered or Certified Class shall be inspected at least once at blossom - time or after the beans are mature.

IV. FIELD STANDARDS

1. General

- (a) A field is the unit of certification. At inspection time the field must be separated from fields of other varieties or uninspected fields of the same variety by a distance of 25 feet when the adjoining field was broadcast or by a distance of 5 feet, a ditch or fence row when the adjoining field was drilled or rowed.
- (b) When it is necessary to remove a strip to obtain the required distance the part to be removed must be taken from the field that is to be inspected.

2. Inspection of soybeans seeded solid, broadcast or conventionally rowed with less than 18 inch spacings.

- (a) The production to be inspected will NOT always be inspected at normal blossom - time inspection but after plants are mature (dropped leaves). PROVIDED the production is drilled or broadcast back and forth (running parallel) and the inspector has access to at least one end of the field.

EXCEPTION TO (a) ABOVE

The production to be inspected is eligible for certification as REGISTERED OR CERTIFIED CLASS and will be inspected at normal blossom - time inspection. PROVIDED: it is conventionally rowed and spaced NO LESS than 14 inches, with at least 24 inch spaces for tractor wheels and/or walk spaces to make inspection. Not to exceed a maximum of 8 rows between the 24 inch spacings.

B. Specific Requirements

FACTORS	MAXIMUM PERMITTED IN EACH CLASS		
	FOUNDATION	REGISTERED	CERTIFIED
Other varieties and off-types ¹²	0.02% (1:5000)	0.05% (1:2000)	0.2% (1:500)
Corn, cowpea, grain, sorghum, sunflower plants bearing seed at time of harvest	NONE	NONE	2 plants p/acre
Noxious weeds whose seed are inseparable	NONE	NONE	NONE

¹² See definition, Item IV., Page 3.

C. Seed Standards ¹³

FACTORS	STANDARDS FOR EACH CLASS		
	FOUNDATION	REGISTERED	CERTIFIED
Pure Seed (min.) * *	98.0%	98.0%	98.0%
Inert Matter (max.) * *	2.0%	2.0%	2.0%
Weed Seeds:(max.) ¹⁴ *	2 p/lb.	5 p/lb.	10 p/lb.
Prohibited noxious	NONE	NONE	NONE
Restricted noxious (max.) ¹⁵	1 p/2 lb.	1 p/2 lb.	1 p/2 lb.
Other Crop Seeds:			
Other varieties and off - types (max.) ¹⁶	0.10%	0.20%	0.50%
Other kinds (max.) ¹⁷	1 p/lb.	2 p/lb.	2 p/lb.
Moisture (max.)	14.0%	14.0%	14.0%
Germination (min.) * * *	80.0%	80.0%	80.0%

* Tennessee Noxious Weeds are listed on Page 16.

* * Pure Seed (min.) 97.0%
 Inert Matter (max.) 3.0%
 "Below Certification Inert and Purity"

* * * Germination (min.)
 "Below Standard Germ" 79.0% - 75.0%

13 All classes of soybean seed must be run over spiral or gravity separators.

14 Purple moonflower and morning glory are not permitted in Foundation or Registered class seed. The Certified class may contain 1 seed per pound of either purple moonflower or morning glory.

15 Applicable to cocklebur (bur) only.

16 See definition, Item IV., Page 3.

17 Corn, cowpea, grain sorghum and sunflower seed are not permitted in Foundation or Registered class seed. The Certified class may contain 1 seed per pound of either corn, cowpea, grain sorghum or sunflower.

TOBACCO SEED CERTIFICATION STANDARDS

(Including Hybrids)

- I. APPLICATION AND AMPLIFICATION OF GENERAL CERTIFICATION STANDARDS
 - A. The General Seed Certification Standards adopted by the Association are basic and together with the following standards constitute the standards for certification of tobacco seed.
 - B. The General Standards are amplified as follows to apply specifically to tobacco seed.
 1. (Section VI) Classes and Sources of Certified Seed

The production of tobacco seed for certification shall be limited to one generation from Breeder's or Foundation seed. Breeder's or Foundation seed must be grown by an agricultural experiment station or by the originator whose strains are approved by the Association. Breeder's or Foundation seed must be from selected plants protected from cross pollination by bagging.
 2. (Section IX, C) Handling of Crop Prior to Inspection
 - (a) Plants of other varieties including off - type plants must be topped.
 - (b) Plants affected with mosaic disease must be topped.
 - (c) Plants affected with ring - spot disease and the adjacent plants must be topped as soon as found.
 - (d) Seed heads must not be trimmed prior to inspection.
 3. (Section X) Conditioning and Packaging
 - (a) Tobacco seed for certification shall be conditioned on the member's own equipment or that of a TCIA Approved Conditioner.
 - (b) Tobacco seed for certification shall be packaged and labeled by the member, or a TCIA Approved Conditioner.

II. LAND REQUIREMENT

A. Plant Beds

1. A new plant bed must be used each year unless the bed is properly treated with a soil sterilant prior to seeding.
2. Good sanitation practices should be followed at all times in and around the plant bed.
3. Care should be taken to prevent mixture of seed and/or plants around the plant beds and in the fields.
4. Plant beds of different varieties should be separated by at least 10 feet. These beds should be further protected from contamination by surface drainage and erosion.

III. FIELD INSPECTION

At least one field inspection shall be made during the blooming period. In order that this may be done, the application must notify the Association in writing two weeks in advance of the date he expects the tobacco to be in full bloom.

IV. FIELD STANDARDS

A. General

1. Unit of Certification
 - (a) A field or a portion of a field may be inspected for certification provided the area to be certified is clearly defined and the entire field is grown from Breeder's or Foundation seed.
2. Isolation
 - (a) Self - Pollinated Varieties

For the production of certified tobacco seed, the minimum isolation distance is 150 feet between varieties of the same type and 1320 feet between varieties of different types. These distances may be waived when:

 - (1) all plants in the contaminating source are bagged or topped before bloom; or, all seed plants are bagged prior to blooming in the contaminating source.
 - (2) two or more varieties of the same type are being grown side by side in the same field, 4 border rows of each variety between the two varieties shall be allowed to bloom and set seed, but seed from the border rows shall not be harvested.

b. Hybrids

For the production of certified hybrid tobacco seed the minimum isolation distance is 150 feet between male sterile and male fertile plants of the same type and 1320 feet between male sterile and male fertile plants of different types. These distances may be waived when:

- (1) all plants in the contaminating source are bagged or topped before bloom; or, all seed plants are bagged prior to blooming in the contaminating source.
- (2) producing hybrid tobacco seed of the same type, except for L8 lines, where male fertile and male sterile varieties are grown side by side in the same field, 4 border rows of the male sterile varieties adjacent to the male fertile varieties shall be allowed to bloom and set seed but shall not be harvested for seed except when the male fertile plants are to be used as the pollen parents on the adjacent male sterile plants.

When male fertile and male sterile L8 plants are grown in the same field, the isolation distance between the two shall be 150 feet. In no case shall male sterile and male fertile plants be interplanted in the same row.

When two or more self-pollinating varieties or hybrids, except L8 lines, of the same type are grown end to end in the same field, there shall be a two plant skip between the varieties. A distance of 15 feet between the two varieties shall be allowed to bloom and set seed but shall not be harvested for seed.

B. Specific Requirements (Field Standard)

FACTORS	MAXIMUM PERMITTED CERTIFIED CLASS
Other varieties and off - types ²²	None
Diseased plants:	
Mosaic	None
Ring Spot ²³	None

²² See definiton, Item IV., Page 3.

²³ Plants adjacent to the diseased plant must be topped.

V. SEED STANDARDS

A. RAW SEED

FACTORS	STANDARDS FOR CERTIFIED CLASS
Pure Seed (min.)	99.0%
Inert Matter (max.)	1.0%
* Weed Seeds (max.)	0.01%
Prohibited Noxious	None
Other Crop Seeds (max.)	0.01%
Other varieties and off - types ²⁴	0.01%
Other kinds	0.01%
Germination (min.)	80.0%

* Tennessee noxious weeds listed on page 16.

²⁴ See definition, Item IV., Page 3.

B. PELLETED AND/OR PRIMED SEED

All pelleted and/or primed seed has met the standards as stated in Section V. (A.) prior to that process. Pelleted seed will vary in the amount of pure seed and inert material based on the amount of coating material (which must be stated on the certification tag). Seed must be retested for germination after the process of pelleting and/or priming and meet the germination standards in Section V. (A.). Primed tobacco seed must be retested for germination after five months, excluding the month of the test date.

VEGETATIVELY PROPAGATED TURF GRASS CERTIFICATION STANDARDS

I. Application and Amplification of General Certification 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 grasses.
 - B. 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 turf.
 - 4. A map showing the location of each kind and variety must accompany the application for field inspection and certification.
 - 5. The field of each kind and variety must be identified at all times by an appropriate sign and field number.
 - 6. 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 acreage from his own production provided the increase is planted on land under the control of the grower.
NOTE: Size of increase not to exceed ten acres.

II. Land Requirements (Rules covering land prior to planting)

- A. A field to be eligible for the production of Foundation turf must have been inspected four (4) times over a period of one year and found to be free of all perennial grasses and objectionable and noxious weeds on the fourth inspection. The land should be cultivated once in the spring and once in the summer, and remain undisturbed for the balance of the year. NOTE: Where needed, fumigation and/or spraying with a recommended herbicide is required.
- B. A field to be eligible for the production of Registered turf must have been inspected two (2) times and found free of all other perennial grass species and varieties for one year preceding the time of planting.
- C. A field to be eligible for the production of Certified turf must have been inspected (during growing season) twice at approximately six-week intervals and found to be free of all perennial grasses and objectionable and noxious weeds. The land may be cultivated within the first two weeks after the first inspection, but must remain undisturbed for the final four weeks. NOTE: Where needed, fumigation and/or spraying with a recommended herbicide is required.

II. Land Requirements (Rules covering land prior to planting) (continued)

- D. A field to be eligible for the production of Foundation, Registered or Certified sod **may be** thoroughly treated with a recommended soil fumigant and left covered for three (3) days and then uncovered for a **minimum of (3) days prior to planting**. The grower must notify the TCIA office a week prior to treatment so that an inspection date may be scheduled while the area is covered. A second official inspection shall be made six to ten weeks after planting to determine if the land is free of perennial grasses. Soil conditions should be favorable for seed germination and active plant growth during this period.
- E. No animal manures or other material potentially containing seed shall be applied on sod to be entered for certification.
- F. Size of Field: Maximum -
 - a. Foundation *one acre*
 - b. Registered *ten acres*
 - c. Certified *no limit*

III. Field Inspection

- A. Handling the Crop after Planting and Prior to Inspection

A field must be rogued and/or sprayed with recommended herbicides during the growing season to remove (1) other varieties, (2) other perennial grasses, (3) most common weeds, and (4) objectionable and noxious weeds in excess of agency standards. Field inspection shall be made prior to harvest and at the time when varietal mixtures can best be determined. **NOTE:** When spraying, the herbicide will be applied to the area containing the 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)

- Spring ONE (April-May-June)
- Summer ONE (July-August-September)
- Fall ONE (November or December)

IV. Field Standards

- A. General

- 1. Restriction on number of varieties per farm

Only one variety of a kind may be grown for certified turf on a farm except upon prior approval of the certifying agency.

- 2. Unit of Certification

A field or portion of a field may be certified. The portion not meeting the certification standards must be identified and sold as non-certified turf.

IV. Field Standards (Continued)

3. 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 a strip at least six (6) feet wide** to prevent mixing during the growing season and harvesting operation.

B. Specific Requirements

Maximum Plants permitted in each class

<u>Factor</u>	<u>Foundation***</u>	<u>Registered***</u>	<u>Certified***</u>
*Other Varieties	None	1/Acre	5/Acre
**Other Crops	None	None	None
Noxious/Objectionable Weeds	None	None	None

* 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 specific class standard, during field inspection, spot roguing and/or eradication by spot spraying will be permitted to bring turf in line with standards. **REINSPECTION REQUIRED.**

V. Turf Standards (percentages to be determined by count)

Pure living turf (Minimum by count)	90%
Other living plants (Maximum by count)	2%
*Noxious Weeds	None
**Objectionable Weeds	None

* See General Certification Standards for lists of Noxious Weeds.

** Objectionable Weeds: Perennial sedge other than nutsedge (grass) and *Dichondra ssp.*

VI. Instructions and Procedures

1. The initial planting for production of Foundation vegetatively propagated turfgrasses will be in rows not less than 12" apart.
2. All planting, mowing, harvesting and loading equipment must be thoroughly cleaned prior to entering field.
3. Any UPS, Parcel Post or other public carrier shipment of sprigs, sod or plugs shall be in special moisture proof containers which should insure satisfactory delivery of the planting stock.

VI. Instructions and Procedures (Continued)

4. An official certification tag will be attached to each container or pallet of sprigs, plugs or sod. The grower will be responsible for completion of required information on the certification tag. The information to be furnished will be Lot Number, Field Number, Quantity and Date of Digging.

Note: When sod or sprigs are sold in BULK (not in containers or on pallets) an official certification tag with required information will be attached to the invoice representing the total shipment of sod or sprigs.

5. 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 and (e) amount of turf shipped (square feet, cubic feet, bushels, etc.).
6. At the end of the year (November or December) the TCIA Field Inspector will make an inventory of the certification tags on hand and report by class, kind and variety the total amount of certified turf sold. Any grower failing to make appropriate and accurate records available to the inspector shall not be eligible for turfgrass certification in future years.