

GENERAL SEED CERTIFICATION STANDARDS FOR KENTUCKY

(Applicable To All Crops Certified)

I. Official Certifying Agency

In accordance with the Kentucky Seed Law (KRS 250.170-250.230), the Director of the Agricultural Experiment Station, University of Kentucky, has designated Kentucky Seed Improvement Association (KSIA) as the official seed certifying agency for Kentucky. KSIA is a nonprofit corporation composed of and directed by seed producers and conditioners, and financed by membership, inspection and tag fees. Seed certification is conducted by KSIA in close cooperation with faculty and staff of the Foundation Seed Project and Department of Agronomy, University of Kentucky.

II. Purpose of Seed Certification

Seed Certification provides an orderly means of maintaining and making available to the public high quality seeds and propagating materials of superior plant varieties, so grown and distributed as to insure genetic identity and purity. Kentucky certified seed must also meet minimum standards for germination, mechanical purity and freedom from certain diseases and troublesome weeds.

III. Definitions

A. **Variety** – An assemblage of cultivated individuals which are distinguished by any characters (morphological, physiological, cytological, chemical or others) significant for the purposes of agriculture, and which retain their distinguishing features when reproduced or reconstituted.

B. **Other Variety** – Other varieties shall be considered to included plants or seed of the same kind that can be differentiated from the variety that is being inspected, but shall not include variations which are environmental or characteristic of the variety as defined by the breeder.

C. **Off-types** – Off-types are plants or seed which do not conform to the description of the characteristics of the variety as supplied by the breeder or sponsoring institution or organization.

D. **Variant** – Seeds or plants which are:

1. Distinct within the variety but occur naturally in the variety
2. 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.
3. Recognized as a part of the variety when released. Variants are not to be considered as Off-types. Plant breeder should identify variants in the variety description upon release.

E. **Seed Conditioning** – Separating impurities from seed such as inert matter, other crop seed and weed seed. In addition, a seed conditioner may scarify, size and/or apply a seed treatment before packaging and labeling seed for sale.

F. **Protected Variety** – A “protected” variety is one for which a breeder or sponsoring organization has filed application for protection with the U.S. Plant Variety Protection Office.

G. **Farming Unit** – That agricultural land, together with improvements, livestock, tools and other equipment used in its operation, which is operated and managed from a central location, usually by one individual.

H. **Mechanical Standards** – In this sense, mechanical refers to all requirements in the seed standards other than genetic requirements.

IV. **Membership**

The Association shall consist of grower members, conditioner members, and associates. Any application for membership or associate status can be accepted or rejected by the KSIA Board of Directors for such factors as the applicant’s integrity, his interest in seed production and conditioning, his ability as a quality seed grower, and his facilities for the production, care and storage of seed.

A. **Grower Member** – Any individual, firm, corporation or partnership which applies for seed to be certified by KSIA may be considered for grower membership in the Association. Upon acceptance by the Board of Directors and payment of the annual \$100 membership fee, each grower member shall have one vote on all Association business submitted to a vote of the membership. Membership fees should be submitted with the first application for membership and field inspection submitted each calendar year and must be paid by August 1 of each year to remain an active member. A non-resident of Kentucky who is producing Kentucky certified seed may be considered for grower membership.

B. **Conditioner Member** – Any seed conditioner who wishes to condition Kentucky certified seed can be considered for conditioner membership pending the inspection and approval of their seed conditioning plant. Fees for conditioner membership are \$200 annually. Dues are payable at the time of application for conditioning plant approval.

C. **Associate** – Any resident or non-resident of Kentucky, who is engaged or connected with the production, conditioning or marketing of seed or other agricultural products (such as a contract seed producer, seed dealer, bulk retailer, etc) may be considered by the Board of Directors as a KSIA associate upon payment of the annual \$50 fee. Associates have no vote in the business of the Association, but may attend and participate in the meetings of the Association, serve on various committees and receive mailing or other information as approved by the Board of Directors.

NOTE: Acceptance as a conditioner member does not entitle one to certify seed in Kentucky unless he is also accepted as a grower member. Individuals or firms which are both conditioner and grower members will have only one vote on business conducted by the Association.

V. Eligibility Requirements For Certification of Crop Varieties

A. Only those crop varieties that are approved by the Kentucky Agricultural Experiment Station shall be eligible for certification in Kentucky. A variety may be accepted for certification only by meeting one or more of the following criteria:

1. Released by the Kentucky Agricultural Experiment Station
2. Accepted by the appropriate National Variety Review Board
3. Plant Variety Protection granted and/or applied for
4. Approved for certification by another certification agency of the Association of Official Seed Certifying Agencies (AOSCA) **OR**
5. Approved by the Kentucky Agricultural Experiment Station Variety Review Committee.

B. If a crop variety does not meet any of criteria 1, 2, 3 or 4, then requests for approval of such varieties to be eligible for certification should be made in writing to the chairman of the Variety Review Committee. An application form for approval of new crop varieties to be certified must be completed and is available from the KSIA office. Information on the following items must be supplied to the Variety Review Committee if requested:

1. A statement on origin and breeding procedures used
2. A detailed description of morphological, physiological and other important characteristics of the plants and seed that distinguish it from other varieties
3. Evidence of performance including comparative yield data, insect and disease resistance, and other factors supporting the field performance or identity of the variety. Such performance tests may be conducted by private agencies or Agricultural Experiment Stations, and shall include appropriate check varieties.
4. A statement on the suggested area of adaptation and purposes for which the variety will be used. This should include all states and areas within states where the variety had been tested and is expected to be recommend and merchandised.
5. The procedure to be used for the maintenance of stock seed classes, including the number of generations through which the variety is to be multiplied.

At the time a new variety is accepted for certification, a sample of breeder seed shall be presented to the Seeds Commodity Committee of the Kentucky Agricultural Experiment Station. This sample will be retained as a control sample for use in verifying trueness of variety for future stock seed releases used for certified seed production.

VI. Classes and Sources of Seed

A. **Four classes of seed** are recognized in seed certification:

1. Breeder Seed – Breeder seed is that limited amount of seed directly controlled by the originating or sponsoring plant breeder, institution, or firm which supplies the source of seed for increases of foundation seed. Breeder seed is under the direct supervision and control of the plant breeder or designated agency and is not available to the general public.

2. Foundation Seed (white tag) – Foundation seed shall be the progeny of breeder seed (or in special case, the progeny of foundation seed), so handled as to most nearly maintain specific genetic purity and identity as designated by the official seed certifying agency. Foundation seed shall be the source of the registered and/or certified seed classes.

3. Registered Seed (purple tag) – Registered seed shall be the progeny of breeder or foundation seed, so handled as to maintain satisfactory genetic purity and identity as designated by the official seed certifying agency. Registered seed shall be the source of the certified seed class.

4. Certified Seed (blue tag) – Certified seed shall be the progeny of breeder, foundation, or registered seed so handled as to maintain satisfactory genetic purity and identity as designated by the official seed certifying agency. Certified seed cannot be used as a seed source for additional production of certified seed except under provisions 1 and 2, section B, chapter VI.

B. **Limitation of Generations** – The number of generations through which a variety may be multiplied shall be limited to that specified by the originating plant breeder or owner of the variety and shall not exceed two generations beyond the foundation seed class with the following two exceptions:

1. Re-certification of the certified class for older crop varieties may be permitted when no foundation seed is being maintained.

2. The production of an additional generation of the certified class of seed may be permitted on a one-year basis only when an emergency is declared prior to the planting season by the official seed certifying agency stating that foundation and registered seed supplies are not adequate to plant the needed certified acreage of the variety. The additional generation of certified seed to meet the emergency need is ineligible for re-certification.

C. **Establishing the Source of Seed**- Seed growers must furnish evidence of the class and source of seed used to plant each crop being considered for certification. An official tag and invoice showing the amount of seed purchased is required.

Seed Source Certificate – A seed source certificate may be issued by KSIA to a member in lieu of registered seed tags if the following requirements are met:

1. The seed was produced from a field planted with foundation seed.

2. The seed is to be used as a source of registered seed for the production of certified seed *only* by the member to whom the seed source certificate is issued.

3. The seed producing field has been fully inspected and passed all field genetic requirements for registered seed.

4. The seed produced has been laboratory tested and passed all seed genetic requirements for registered seed.

Seed Source Certificates are invalid if the seed is sold.

Members desiring to use the seed source certificate as proof of seed source for the production of certified seed must notify the KSIA office (at the time of application for field inspection) and provide the following information:

1. Field inspection report
2. Seed laboratory report
3. Bushels or pounds in the seed lot
4. Bushels or pounds of seed to be planted

A seed source certificate will be issued for the amount of seed to be planted. The fee for a seed source certificate will be \$.18 per bushel.

VII. Substandard Seed

KSIA ordinarily recognizes only seed that has met or exceeded all published certification standards, both genetic and mechanical standards. However, KSIA will issue certified or registered seed tags bearing the designation "SUBSTANDARD" for seed that has passed all certification requirements, except for mechanical seed standards as outlined in the specific certification standards for each crop. Substandard tags will be issued only if requested and the seed must have met the following requirements:

A. All field inspection requirements must be met.

B. All genetic purity requirements must be met.

C. All minimum requirements as established by the Kentucky Seed Law must be met.

Exception: Substandard tags will not be issued for barley seed which fails to meet the loose smut requirements or for tall fescue seed which fails to meet the endophytic fungus requirements as stated in the specific requirements for each crop.

Substandard tags may be issued for the foundation, registered and certified classes of seed and for all varieties and crops eligible for certification. The substandard tag will consist of a regular certification tag with the word “SUBSTANDARD” printed on it and the reason for as follows:

- Low Germination
- Excess Crop
- Excess Inert
- Excess Weed

Substandard tags will not be issued for seed that is substandard for more than one mechanical factor.

VIII. Application for Certification

Applications for certification must be submitted on official application forms obtainable from the KSIA office or County Agricultural Agents. All seed fields to be inspected must be listed individually on the application form. One foundation tag, registered tag or seed source certificate from each lot of seed planted in each seed field must accompany the application as proof of seed source. Only grower members, not conditioner members, can apply for seed certification in Kentucky.

A. **Deadline Dates** – Applications should be filed with the KSIA office by the following dates:

<u>CROP</u>	<u>DATE</u>
Grasses	May 1
Small Grain (Barley)	April 15
Small Grain (Wheat, Oats, Rye)	May 1
Corn	June 15
Sorghum	July 1
Lespedeza	July 1
Crownvetch	July 1
Tobacco	July 1
Red clover	July 15
Soybeans (planted before June 15)	July 1
Soybeans (planted after June 15)	August 1

Biotech Varieties:

Applications for field inspections of herbicide-resistant varieties must be submitted to the KSIA office within one week of planting, and KSIA must be notified within 48 hours of herbicide spraying.

B. **Late Applications** – Applications received for certification after the above deadline dates for each crop will be charge a late fee of \$.25 per acre with a \$50.00 minimum charge.

C. **Cancellations** – Field inspection applications can be cancelled, except on new variety releases, if the applicant feels the applied fields will not produce seed eligible for certification. No inspection fees will be assessed providing the cancellation is received by the KSIA office in sufficient time to avoid a field inspector’s trip to the cancelled fields.

IX. **Field Standards**

A. **Field Inspection** – Field inspections will be made of applied fields as outlined in the specific requirements for each crop. Field inspectors will be required to secure the signature of the applicant on field inspection reports. If a field is harvested before the field inspection is completed, that crop automatically becomes ineligible for certification.

1. **Field Rejection** – Seed fields may be rejected at the time of field inspection when minimum field standards as outlined in the specific requirements for each crop are not met. A field inspector may also reject a field for certification due to unsatisfactory appearance caused by excessive weeds, disease, insect damage, other crops, or any condition which prevents thorough field inspection or reflects unfavorably upon the certification program in Kentucky.

2. **Re-Inspection of Seed Fields** – A field may be rejected subject to re-inspection. The grower may apply for re-inspection after the cause for rejection has been corrected. If a request is made to have a field re-inspected, the applicant must pay an additional fee. This fee will be determined at the time of re-inspection and will be based on actual cost.

B. **Seed Field Boundaries** – Any certified seed field of any crop must have a strip at least 5 feet in width which is mowed, fallow, or planted to some other no-contaminating crop other than the crop being certified. This boundary will separate two self-pollinating varieties of the same crop or two different certified classes of the same variety in the same field. Cross-pollinated crops, grasses, etc, have additional isolation requirements which are outlined in the specific requirements for each crop.

X. **Conditioning Certified Seed**

All seed certified in Kentucky must be conditioned by a KSIA Approved Seed Conditioner. Regulations and procedures for cleaning, sampling, tagging, testing and blending certified seed are discussed in the “KSIA Approved Conditioner Regulations” which are available from the KSIA office.

XI. **Seed Standards: Sampling and Testing**

All seed shall be tested and analyzed in accordance with the procedures prescribed by the most recent edition of “Rules for Testing Seeds” issued by the Association of Official Seed Analysts (AOSA).

A. **Seed Lot Size** – The maximum lot sizes allowed for certified seed are:

- 4000 bushels for small grain, sorghum, soybeans and corn
- 20,000 pounds for all chaffy grasses, Red clover, lespedeza, other small seeded forage legumes, and Bigflower vetch

B. **Sampling Certified Seed** – Samples of all seed lots eligible for certification must be properly sampled and analyzed by a seed testing laboratory approved for testing Kentucky certified seed. The proper method of sampling certified seed is explained in the “KSIA Approved Conditioner Regulations” available from the KSIA office.

Properly drawn certified seed samples must be submitted by the responsible person designated for each approved seed conditioner directly to an approved seed testing laboratory after conditioning for germination and purity analysis. After a laboratory report has been received which meets all certification requirements, a copy of the laboratory report and a sufficient sample of seed from each lots should be mailed to the KSIA office by the responsible person for checking and filing purposes.

When samples of certified seed are submitted for analysis to the Kentucky State Seed Laboratory, Division of Regulatory Services, University of Kentucky, the seed conditioner does not have to submit a copy of the laboratory report and file sample to the KSIA office. However, the sample must be clearly labeled “Certified Seed” and contain the proper amount of seed. After a copy of the laboratory report has been received, the seed conditioner may request certification tags by either writing or calling the KSIA office.

C. **Sample Size** – The minimum weight of seed sample required for either submitting samples to a seed testing laboratory for analysis or to the KSIA office as a file sample are as follows:

<u>Crop</u>	<u>Sample Size</u>
Tall fescue, timothy, orchardgrass KY. Bluegrass, other chaffy grasses, Red clover, Korean lespedeza, Sericea lespedeza, crownvetch, other small seeded legumes	5 ounces (approximately 150 grams)
Hybrid corn, barley, oats, rye, wheat, sorghum, soybeans, Bigflower vetch	2 pounds (approximately 900 grams)
Tobacco	1/12 th ounce (approximately 1 tsp)

D. **Maintaining File Samples** – The KSIA office will maintain file samples of all Kentucky certified seed for two years. Seed conditioners shall also maintain their own file samples of certified seed to comply with the Kentucky Seed Law and Federal Seed Act.

XII. Labeling Certified Seed

Each container of certified seed moving into retail channels must have a complete analysis tag containing the information required by the Kentucky Seed Law and regulations thereunder. Interstate movement of certified seed must meet the labeling requirements as outlined in the Federal Seed Act.

A. **Seed Lot Number** – The Kentucky Seed Law requires that all seed containers be identified by a lot number after conditioning. The lot number may be stenciled or stapled on each container or sewn into the closing seam of a seed bag.

B. **Certification Tag or Label** – The official certification tag or label must be attached to each container of certified seed by the KSIA approved seed conditioner who conditions the seed before the seed is moved from his immediate warehouse. Seed is not considered certified unless an official certification tag is attached to each container

C. **Seed Analysis Information** – The required seed analysis information must also be attached to each container of certified seed by the approved seed conditioner who conditions the seed before the seed is moved from his immediate warehouse. The analysis information can be attached to the certified seed container by one of the following methods:

1. Official Certified Tag – The analysis information can be printed on certification tags by the KSIA office.

2. Official Kentucky Analysis Tag - Official seed analysis tags can be requested from the Division of Regulatory Services, University of Kentucky, for use on certified seed. A certification tag must also be attached.

3. Seed Conditioner's Own Analysis Tag – A KSIA approved seed conditioner may attach his own analysis tag to Kentucky certified seed. A certification tag must also be attached.

If a seedsman attaches his own analysis tag to Kentucky certified seed containers, he is not required to report the sale of this seed to the Division of Regulatory Services, University of Kentucky. This exemption applies only to Kentucky certified seed which has met all KSIA certification requirements and has the certification tag attached to each container.

D. **Date of Germination Test** – The Kentucky Seed Law requires that all seed, including certified seeds, which is sold or offered for sale in Kentucky must have an official germination test no more than nine months old. Certified seed moving interstate must have a germination test no more than five months old as required by the Federal Seed Act. Pelleted tobacco seed must have a germination test date no more than six months from the date of test. If a germination test date expires on Kentucky certified seed, it may be re-certified by obtaining a new seed analysis test which meets all certification requirements. The expired analysis tag must be removed and replaced with a new analysis tag containing the new germination percentage, date of test, and the original seed purity data.

The KSIA Approved Seed Conditioner is responsible for all initial labeling requirements of Kentucky certified seed that he conditions. If a date of germination test expires on Kentucky certified seed, then the seedsman offering that seed for sale is responsible for attaching a current analysis tag to each container of certified seed.

XIII. Bulk Seed Movement and Sale

A. **Bulk Transfer of Certified Seed** – Procedures for bulk transfer of certified seed are contained in the “KSIA Approved Conditioner Regulations” available from the KSIA office.

B. **Bulk Retailing Certified Seed** – Bulk retailing of certified wheat, barley, oats and soybean seed is permitted by individuals or firms who have been approved as “Certified Bulk Retailers” by KSIA. Regulations for bulk retailing of Kentucky certified seed are contained in the “KSIA Approved Conditioner Regulations” available from the KSIA office.

XIV. Inter-agency Certification

Inter-agency certification involves the participation of two or more official state certifying agencies in performing the services required to certify the same lot or lots of seed. The methods and standards employed in each step of the inter-agency certification process are those used when certification is completed by a single agency, with the following exceptions:

A. The agency issuing the labels shall require the seed to meet standards at least equal to the minimum standards of AOSCA for the seed in question.

B. Seed to be recognized for inter-agency certification must be received in containers carrying official certification labels or evidence of its eligibility from another official certifying agency with the following information:

1. Variety and Kind
2. Quantity of Seed (pounds or bushels)
3. Class of Seed
4. Inspection or Lot Number traceable to the previous certifying agency’s records

C. Inter-agency certification tags shall be serially numbered and show the certifying agencies involved, the lot number , variety, kind and class of seed.

Although detailed arrangements may be made between two agencies for the inter-agency certification of a specific lot, it is not necessary to obtain prior approval from the other agency. The agency last having jurisdiction of the seed must keep on file complete information indicating the quantity of seed finally certified, nature of service rendered (recleaning, rebagging or relabeling) and the certification and lot numbers of the seed involved.