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# Kentucky Seed Improvement Association & Kentucky Foundation Seed Project

www.kyseed.org

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# KSIA Seed Commodity Committee

Robert Geneve	University of Kentucky	Grass and Forage Legumes
Tim Phillips	University of Kentucky	Grass and Forage Legumes
Chad D. Lee	University of Kentucky	Small Grains
Dave Van Sanford	University of Kentucky	Small Grains
Todd Pfeiffer	University of Kentucky	Soybean, Corn & Sorghum
Robert Miller	University of Kentucky	Tobacco
Robert Pearce	University of Kentucky	Tobacco
Kenny Seebold	University of Kentucky	Tobacco

## **Crops Eligible for Certification**

## Second Page of Crops

**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 <sup>th</sup> 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.



## Kentucky Seed Certification Standards

### SMALL GRAINS

Wheat, Barley, Oats and Rye

#### I. Classes of Seed Eligible for Certification

- A. **Foundation Seed** shall be the progeny of breeder or foundation seed.
- B. **Registered Seed** shall be the progeny of breeder or foundation seed.
- C. **Certified Seed** shall be the progeny of breeder, foundation or registered seed.  
Production from certified seed is not eligible to be re-certified.

For varieties eligible for certification, see page 3 of the General Certification Standards.

II. **Land History Requirements** – A small grain crop shall be planted on land on which the 1st crop grown was of another kind or was planted with a class of certified seed of the same variety. A crop will not be eligible for certification if planted on land on which the same kind of crop (example: wheat following wheat) was grown the previous year, unless the previous crop was grown from a class of certified seed of the same variety.

NOTE: Double-cropping seed production fields (example: wheat/soybeans/wheat) does not change the above land history requirements.

#### III. Field Standards

##### A. **Field Inspection**

1. Seed crop field inspections shall be after the crop is fully headed, so that varietal or crop mixtures can be determined.

2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation**

1. Wheat, Barley, Oats – A field producing foundation class seed which is planted in rows shall be separated from fields of any small grain by an unplanted or mowed strip of at least 10 feet in width to prevent mechanical mixtures or the occurrence of out-crossing. A field producing registered or certified seed which is planted in rows shall be separated from fields of any small grain by an unplanted or mowed strip at least 10 feet in width to prevent mechanical mixtures. If the inspected field or bordering fields are broadcast planted, then the isolation distance must be at least 30 feet.

2. 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 same chromosome number. Isolation between diploid and tetraploid rye shall be at least 15 feet if planted in rows and 30 feet if broadcast.

**C. Specific Requirements**

<u>Factor</u>	<u>Maximum Permitted</u>		
	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
Other Varieties and Off-types	0.02% (1/5000)	0.03% (1/3333)	0.05% (1/2000)
Other Kinds of Small Grain	0.01% (1/10,000)	0.01% (1/10,000)	0.05% (1/2000)
Rye in Other Small Grain	None	None	None
Hairy Vetch	None	None	5 plants/Acre
Loose Smut*			
Inspected Field	-----	0.02% (1/5000)	0.10% (1/1000)
Bordering Fields (up to 660 feet from inspected field)	-----	0.10% (1/1000)	0.20% (1/500)

\* If the above limits for loose smut are exceeded in the inspected field or bordering fields of small grain, seed harvested from the inspected field must either:

1. Be treated with a recommended systemic fungicide seed treatment that is labeled for the control of loose smut before certification tags could be issued, or

2. Be subjected to an embryo loose smut test. Seed standards for maximum loose smut content must be met before certification tags could be issued.

All foundation seed of wheat, barley and oats must be treated with a recommended systemic fungicide seed treatment that is labeled for the control of loose smut.

#### IV. Seed Standards

<u>Factor</u>	<u>Class of Seed</u>		
	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
Pure Seed (minimum)	98.00%	98.00%	98.00%
Inert Matter (maximum)	2.00%	2.00%	2.00%
Total Other Crop Seed (maximum)			
for Wheat, Barley, Rye	0.02%	0.05%	0.10%
for Oats	0.04%	0.10%	0.20%
Other Varieties (maximum)			
for Wheat, Barley, Rye	0.02%	0.05%	0.10%
for Oats	0.04%	0.10%	0.20%
Other Small Grain (maximum)*	0.01%	0.01%	0.05%
Rye and Hairy Vetch (maximum)	1/lb	1/lb	2/lb
Total Weed Seed (maximum) **	0.02%	0.02%	0.03%
Noxious Weed Seed (maximum)	None	None	None
Germination (minimum)			
for Wheat, Barely, Oats	85.00%	85.00%	85.00%
for Rye	75.00%	75.00%	75.00%
Loose Smut (maximum) ***	--	0.50%	1.00%

\* Total other small grain allowed: foundation 2 per lb; registered 3 per lb; certified 5 per lb.

\*\* Total weed seed content shall not exceed 10 seeds per lb.

\*\*\* Embryo loose smut test is required if field standards for loose smut are exceeded and seed is not treated with appropriate seed treatment.

Kentucky Seed Certification Standards

S O Y B E A N S

I. Classes of Seed Eligible for Certification

- A. **Foundation Seed** shall be the progeny of breeder or foundation seed.
- B. **Registered Seed** shall be the progeny of breeder or foundation seed.
- C. **Certified Seed** shall be the progeny of breeder, foundation or registered seed.  
Production from certified seed is not eligible to be re-certified.

For varieties eligible for certification, see page 3 of the General Certification Standards.

II. Land History Requirements

- A. Soybeans shall be grown on land where the immediate previous crop was:
  - 1. Of another kind, or
  - 2. Planted with a class of certified seed of the same variety, or
  - 3. Planted with a variety having a contrasting pubescence color.

Soybeans which are double-cropped after small grain are eligible for certification, regardless of the soybean variety planted the previous crop year.

B. The following table lists the pubescence color of soybean varieties commonly used in Kentucky. In fields that are conventionally tilled (not double-cropped) and follow soybeans planted in the immediate previous crop year, only a soybean variety of contrasting pubescence color will be eligible for certification.

Brown or Tawny Pubescence

CF 461  
Charleston  
Clifford  
Delsoy 4710  
Delsoy 4900  
Macon  
Manokin  
Pennyrile  
Pharaoh  
Stressland  
TN 4-86

Gray Pubescence

CF 475  
CF 492  
Calhoun  
Essex  
Hollady  
Hutcheson  
KS 4694  
KS 5292  
Stafford  
TN 5-85

### III. Field Standards

#### A. **Field Inspections**

1. Foundation seed fields shall be inspected at the time of flower blossom and leaf fall to check for varietal mixtures.
2. Registered and certified seed fields shall be inspected at least once either at the time of flower blossom or leaf fall to check for varietal mixtures.
3. Fields containing noxious weeds, or other weeds which produce seed that cannot readily be separated from soybean seed, or seed-borne diseases can be cause for field rejections if severe enough.
4. If a field is harvested before field inspection, the it automatically becomes ineligible for certification.
5. Herbicide resistant varieties will be inspected at the appropriated time or interval to evaluate herbicide resistance.

**B. Isolation** - Soybean fields inspected for certification shall be separated by a strip at least 5 feet in width from any other soybeans planted in rows or within 30 feet of fields broadcast planted.

#### C. **Specific Requirements**

<u>Factor</u>	<u>Maximum Permitted</u>		
	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
Other Varieties and Off-types*	0.05% (1/2000)	0.10% (1/1000)	0.20% (1/500)
Corn or Sunflower Plants Bearing Seed	None	None	None
Black Nightshade	5 plants/Acre	5 plants/Acre	5 plants/Acre
Balloonvine	None	None	None

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\* Other varieties shall be considered to include off-type plants and plants that can be differentiated from the variety that is being inspected.

#### IV. Seed Standards

<u>Factor</u>	<u>Class of Seed</u>		
	<u>Foundation</u>	<u>Registered</u>	<u>Certified</u>
Pure Seed (minimum)	98.00%	98.00%	98.00%
Inert Matter (maximum)	2.00%	2.00%	2.00%
Total Other Crop Seed (maximum)	.20%	.30%	.60%
Other Varieties (maximum) */ **	.10%	.20%	.50%
Black/Brown Haybeans (maximum)	None	None	None
Corn/Sunflower Seed (maximum)	None	None	None
Total Weed Seed (maximum) ***	0.05%	0.05%	0.05%
Noxious Weed Seed (maximum)	None	None	None
Purple Moonflower, Cocklebur and Balloonvine (maximum)	None	None	None
Morning-glory	None	None	None
Black Nightshade and Ground Cherry (maximum)	None	None	None
Germination (minimum)	80.00%	80.00%	80.00%

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

\*\* An untreated sample must be submitted for genetic purity evaluation.

\*\*\* Total weed seed content shall not exceed 10 seeds per pound.

**B. Herbicide Resistance Testing** – A sample of conditioned seed must be tested for herbicide resistance prior to the issuance of certification tags for herbicide resistant varieties.

## Kentucky Seed Certification Standards

### H Y B R I D   C O R N

#### I. **Explanation of General Standards as Applied to Corn Hybrids**

A. The General Seed Certification Standards as adopted are basic and, together with the following specific standards, constitute the standards for certification of hybrid seed corn.

B. Hybrid Corn seed may be any one of the following and can be planted for any use except seed production:

1. A single-cross, i.e. a first generation cross between two inbred lines.
2. A double-cross, i.e. the first generation of a cross between two single crosses.
3. A three-way cross, i.e. the first generation of a cross between a single-cross and inbred line.
4. A top-cross, i.e. the first generation of a cross between an inbred line and an open-pollinated variety, or the first generation of a cross between a single-cross and an open-pollinated variety.

#### II. **Classes and Sources of Certified Seed**

A. Only the class “certified” is recognized in hybrid corn.

B. A hybrid to be certified must be produced from certified foundation seed.

#### III. **Land Requirements**

There are not requirements as to the previous crop, but the land must be free of volunteer corn plants.

#### IV. **Field Standards**

A. **Inspection** – At least 3 field inspections shall be made by the Association during the pollinating period. Inspections will be made without previous notice to the grower. When the previous crop was corn, at least one additional inspection shall be made to verify that the field is sufficiently free of volunteer plants from the previous crop.

**B. Isolation**

1. A specific hybrid to be accepted for certification must be so located that the seed parent is not less than 660 feet from other corn of different color and texture (including all sweet corn). However, for the production of double cross hybrid corn, the distance may be reduced to 410 feet, if the contaminating field is of the same color and texture (sweet corn excepted) as the seed field. However, these distances may be modified when the contaminating field is of the same color and texture (except sweet corn) by the planting of border rows of the pollen parent. The number of border rows is shown in Table A for the production of double cross hybrid corn and in Table B for the production of single or 3-way crosses.

TABLE A

Minimum Distance of Ear-parent from Other Corn	Field Size	
	1-20 Acres	21+ Acres
<u>Feet</u>	<u>Minimum Border Rows Required</u>	
410	0	0
370	2	1
330	4	2
290	6	3
245	8	4
205	10	5
165	12	6
125	14	7
85	16	8
0	--	10



TABLE B  
For Production of Single or 3-Way Cross Hybrid Corn

Number of Acres in the Crossing Field								# Border Rows
<u>0-10</u>	<u>11-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40+</u>	
Distance of the Ear Parent from Other Corn								
Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	
660	645	625	610	595	580	560	545	0
620	600	585	570	550	540	520	500	1
580	560	545	520	510	495	480	460	2
540	520	500	485	470	450	435	420	3
495	480	460	445	430	415	395	380	4
455	435	420	400	385	370	355	340	5
410	395	380	365	345	330	315	295	6
370	355	340	320	300	285	270	255	7
330	315	295	280	265	245	230	215	8
290	270	255	240	225	205	190	175	9
245	230	215	200	180	165	150	130	10
205	190	175	155	140	125	105	90	11
165	150	130	115	100	85	65	50	12
125	110	90	75	60	40	25	20	13
85	70	50	30	20				14
40	30							15

2. Adequate natural barriers are permitted for modifying isolation distance.

3. Differential maturity dates are permitted for modifying isolation distances provided there are no receptive silks in the female parent at the same time as pollen is being shed in the contaminated field.

4. A specific hybrid to be accepted for certification must be so located that the seed parent is not less than 40 rods from the other corn of a different color or texture.

C. **Detasseling** – The following requirements apply only when 5% or more of the seed parent plants have receptive silks.

1. A hybrid will not be accepted for certification if more than 1.0 percent of the seed parent plants have shed pollen on any one inspection or if the total for three inspections on different dates exceeds 2.0 percent.

2. When more than one combination is being grown in the same isolation and the seed parent of one or more of them is shedding pollen in excess of 1.0 percent, all ear parents having 5 percent or more apparently receptive silks at the time will be disqualified, unless adequately isolated from the shedding seed parent.

3. Sucker tassels, portions of tassels or tassels on main plants will be counted when 2 inches or more of the central stem, the side branches or a combination of the two have the anthers extended from the glumes and are shedding pollen.

D. A male sterile ear parent can be used to produce certified hybrid corn seed by either of two methods.

1. Seed of the normal fertile ear parent must be mixed with the seed of the male sterile ear parent of the same pedigree, either by blending in the field at harvest or by size at processing time. The ratio of male sterile ear parent seed to normal ear parent seed shall not exceed 2:1.

2. The pollen parent must involve a certified pollen restoring line or lines, so that not less than one-third of the plants grown from hybrid corn seed produce pollen which appears to be normal in quantity and viability.

E. Other Varieties and Off-type Plants

1. Foundation Single Crosses and Foundation Backcrosses

a. A field in which more than 0.1 percent definitely off-type plants in the pollen parent have shed pollen will not be certified.

b. At the time of the last inspection, the seed parent shall not contain in excess of 0.1 percent definitely off-type plants.

2. Foundation Single Crosses, Foundation Backcrosses and Inbred Lines - Any plant shedding pollen in male sterile rows must be completely destroyed at pollination time to eliminate the possibility of its seed production.

3. Inbred Lines - A field which contains, at any one inspection, more than 0.1 percent of definitely off-type plants that have shed pollen or are shedding pollen when 5.0 percent or more of the plants in the field have receptive silks, shall not be certified.

4. Open-pollinated Varieties - There shall not be more than 0.5 percent detectable admixture with plants of other varieties.

F. **Unit of Certification** – A field or portion of a field may be passed for certification. That portion of a field not meeting the requirements may be harvested in any manner approved by the Kentucky Seed Improvement Association. If a field is harvested before inspection is made, it automatically becomes ineligible for certification.

## V. Seed Standards

Pure Seed, minimum	98.00%
Inert Matter, maximum	2.00%
Weed Seed, maximum	None
Total Other Crop Seed, maximum	0.50%
Other Varieties or Color Mixture, maximum	0.50%
Other Kinds, maximum	None
Germination, minimum	90.00%

Excessive amounts of diseased, insect damaged, cracked or badly scuffed seed will be cause for refusal of certification.

Based upon field evaluations, winter growouts may be required for final certification.

## Kentucky Seed Certification Standards

### CORN-FOUNDATION SINGLE CROSSES

#### I. **Explanation of General Standards as Applied to Single Crosses**

A. The General Seed Certification Standards as adopted are basic and, together with the following specific standards, constitute the standards of certification of foundation single-cross seed corn.

B. The General Standards are further defined as follows to apply specifically to Foundation Single-Crosses:

1. Eligibility Requirements for Certification of Crop Varieties - Foundation single-crosses to be eligible for certification must be produced from approved inbred lines whose source assures their identity.

2. Classes and Source of Certified Seed

a. Only the class certified is recognized.

b. A foundation single-cross shall consist of the first generation of a hybrid between two inbred lines to be used in the production of hybrids containing more than two inbred lines. Advanced generation single-cross seed will be eligible for use in production commercial hybrids when approved by the Kentucky Agricultural Experiment Station and the Association.

3. Seed Inspection - Foundation single-crosses shall be ear-inspected after maturity.

C. Additional Requirements for Fertility Restoring Lines - A fertility restoring line may be substituted for its non-restoring counterpart in a foundation single-cross, provided the fertility restoring line is the same in other observable characteristics as its non-restoring counterpart.

II. **Land Requirements** - The land must be free of volunteer corn plants.

III. **Field Inspections** - At least four field inspections shall be made just preceding and during the pollination period.

#### **IV. Field Standards**

##### **A. General requirements**

1. Unit of Certification - The entire acreage of any one specific foundation single-cross grown by and/or belonging to one applicant must be eligible and must be inspected for certification. All seed from rejected fields or portion of fields must be disposed of so that it cannot be used for production of commercial hybrids.

2. Isolation - A specific foundation single-cross field involving male sterile or fertile material shall be so located that the ear parent is not less than 1000 feet from other corn, except no isolation is required for the increase of hand-pollinated seed. In fertile single-cross seed production, the following exceptions may be considered provided the contaminating field is of the same color and texture:

- a. Adequate natural barriers are permitted to modifying isolation distances.
- b. Different maturity dates may permit modification of isolation distances, provided there are no receptive silks in the ear parent at the time pollen is being shed in the nearby field.

##### **B. Specific Requirements**

1. Detasseling - The following requirements apply when five (5) percent or more of the ear plants have apparently receptive silks:

- a. A foundation single-cross will not be accepted for certification if at any one inspection more than one (1) percent of the ear plants are shedding pollen or if the total number found shedding on any two or three inspections on different dates exceed two (2) percent.

- b. When more than one single-cross is being grown in the same isolation and the ear parent of one or more of them is shedding pollen in excess of one (1) percent, all ears of the ear parents having five (5) percent or more apparently receptive silks at that time will be disqualified.

- c. Sucker tassels, portions of tassels, or tassels on main plants are to be counted when two (2) inches or more of the central stem, the side branches or a combination of the two have the anthers extended from the glumes and are shedding pollen.

2. Male Sterile Parent - Any plant shedding pollen in male sterile rows must be completely destroyed at pollination time to eliminate seed production.

### 3. Off-type Plants

a. A field in which more than one-tenth (0.1) percent definitely off-type or more than two (2) percent doubtful-type plants in the pollen parent are shedding pollen will not be eligible for certification.

b. At the time of the last inspection the ear parent shall not contain in excess of one-tenth (0.1) percent of definitely off-type ears or more than two-tenths (0.2) percent doubtful-type ears with off-colored kernels.

### V. Seed Standards

A. Seed ears of foundation single-cross shall be inspected after maturity. They shall not contain in excess of one-tenth (0.1) percent of definitely off-type ears or more than two-tenths (0.2) percent doubtful-type ears with off-colored kernels.

B. Seed of foundation single-crosses need not meet a minimum pure seed, germination, or grading requirement.

C. The processed shelled grain shall not contain more than one-tenth (0.1) percent off-type kernels or more than two (2) percent doubtful-type kernels.

D. Samples from each lot of single-cross seed carrying the sterile-restorer factor must be grown out to determine its sterility prior to being used in the production of hybrid seed corn.

## Kentucky Seed Certification Standards

### CORN – INBRED LINES

#### **I. Explanation of General Standards as Applied to Inbred Lines**

A. The General Seed Certification Standards as adopted are basic and, together with the following specific standards, constitute the standards for certification inbred lines of corn.

B. The General Standards are further defined as follows to apply specifically to inbred lines of corn:

##### 1. Eligibility Requirements for Certification of Crop Varieties:

a. An inbred line to be eligible for certification must be from a source such that its identity is assured and approved by the Association.

b. An inbred line to be certified shall not be more than two seed increases removed from hand-pollinated seed.

c. A privately controlled inbred line must be distinguishable in appearance from other inbred lines developed by State or Federal Agencies which have been used in regional tests and/or in the production of open-pedigree hybrids or those developed by other private agencies and accepted for certification; or if indistinguishable, a cross between the two lines in question must yield at least 40% more than the average comparable yield of the two parents.

##### 2. Classes and Sources of Certified Seed

a. An inbred line must be a relatively true breeding strain of corn resulting from at least five (5) successive generations of controlled self-fertilization or of backcrossing to a recurrent parent with selection or its equivalent.

b. Only the class certified is recognized.

c. Additional requirements for fertility restoring lines:

(1) A recovered fertility restoring inbred line must have been backcrossed to its recurrent parent with selection for fertility restoration relative to a specific cytoplasmic sterile source for not less than five (5) generations.

(2) Proof of the fertility restoring ability of the line will be supplied by the originator.

(3) A fertility restoring line may be substituted for its non-restoring counterpart in a foundation single-cross, provided the fertility restoring line is the same in other observable characteristics as its non-restoring counterpart.

3. Seed Inspections – Inbred lines shall be ear-inspected after maturity.

II. **Land Requirements** – The land must be free of volunteer corn.

III. **Field Inspections** – At least four field inspections shall be made. One inspection shall be made just preceding and the other during the pollination period.

IV. **Field Standards**

A. **General Requirements**

1. Unit of Certification – The entire acreage of any one inbred line grown by and/or belonging to one applicant must be eligible and be inspected for certification. All seed from rejected fields or portions of fields must be disposed of, so that it cannot be used for seed purposes.

2. Isolation - An increase field of a male sterile or fertile inbred line must be so located that it is not less than 1000 feet from any other kind of corn. In case of fertile inbred line increase, the following exceptions may be considered provided the contaminating field is of the same color and texture.

a. Adequate natural barriers are permitted for modifying isolation distances.

b. Different maturity dates may modify isolation distances, provided there are no apparent receptive silks in the inbred line at the time pollen is being shed in the nearby field.

B. **Specific Requirements**

1. A field which contains at the time of any one inspection more than one-tenth (0.10) percent of definitely off-type, more than two (2) percent of doubtful-type plants that have shed pollen, or where five (5) percent or more of the plants in the isolation have apparently receptive silks shall not be eligible for certification.

2. Sucker tassels, portions of tassels and tassels on main plants will be counted when two inches or more of the exposed central stem, the side branches, or a combination of the two have the anthers extended from the glumes and are shedding pollen.

3. Any plant shedding pollen in male sterile rows must be completely destroyed at pollinating time to eliminate its seed production.



V. **Seed Standards**

A. Inbred lines shall be inspected on the ear after harvest. At that time they shall not contain more than one-tenth (0.1) percent of definitely off-type ears, nor more than two (2) percent of doubtful-type ears. The shelled processed grain shall not contain more than one-tenth (0.1) percent of off-type kernels, nor more than two (2) percent of doubtful-type kernels.

B. Inbred lines need not meet a minimum pure seed, germination or grading requirements.

Kentucky Certification Standards

S O R G H U M

Forage and Syrup Sorghums

I. Classes of Seed Eligible for Certification

- A. **Foundation Seed** shall be the progeny of breeder or foundation seed.
- B. **Certified Seed** shall be the progeny of breeder or foundation seed.  
Production from certified seed is not eligible to be re-certified.

II. Land History Requirements

- A. **Foundation Seed Fields** – A field to be eligible for the production of foundation seed must not have grown the same species during the immediate crop year prior to seeding, except if planted to breeder seed of the same variety and certification was completed.
- B. **Certified Seed Fields** – A field to be eligible for the production of certified seed must not have grown the same species during the immediate crop year prior to seeding, except if planted to breeder or foundation seed of the same variety and certification was completed.

For varieties eligible for certification, see page 4 of the General Certification Requirements.

III. Field Standards

A. **Field Inspection**

- 1. Seed crop field inspections shall be after the crop is fully headed so that varietal or crop mixtures can be determined.
- 2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

B. **Isolation** – For the production of foundation seed, it must be at least 990 feet from any other variety. For the production of certified seed, it must be at least 660 feet from any other variety.

#### IV. Specific Requirements

	<u>Foundation</u>	<u>Certified</u>
Definite Varietal Mixture, maximum	1: 50,000 or 0.002%	1: 20,000 or 0.005% *
Doubtful Varietal Mixture, maximum	1: 20,000 or 0.005%	1: 1,000 or 0.10% **
Head Smut, maximum	1: 10,000 or 0.01%	1: 10,000 or 0.01%
Kernel Smut, maximum	1: 2,500 or 0.04%	1: 2,500 or .04%

\* Must be removed from the field before harvest and a cutback of all plants within the radius of five feet of such plants must be made.

\*\* Must be removed from the field before harvest but no cutback will be necessary.

#### V. Seed Standards

	<u>Foundation</u>	<u>Certified</u>
Pure Seed, minimum	98.00%	98.00%
Inert Matter, minimum	2.00%	2.00%
Other Varieties, maximum	None	None
Other Crop Seed, maximum	0.01%	0.08%
Total Weed Seed, maximum	0.10%	0.10%
Noxious Weeds and Morning Glory*	None	None
Germination, minimum	80.00%	80.00%

\* Noxious weeds in Kentucky are: quackgrass, dodder, Sorrel buckhorn, corncockle, Wild onion, Canada thistle, Oxeye daisy, Johnsongrass, Giant foxtail, Annual bluegrass, balloonvine and Purple moonflower.

## Kentucky Seed Certification Standards

### T O B A C C O

#### I. Classes of Seed Eligible for Certification

- A. **Foundation Seed** shall be the progeny of breeder or foundation seed.
- B. **Certified Seed** shall be the progeny of breeder or foundation seed.

For varieties eligible for certification, see page 4 of the General Certification Standards.

#### II. Land History Requirements

Care should be taken to select a field free of diseases. A new plant bed must be used each year, unless the bed is properly treated with a soil sterilant prior to seeding.

#### III. Field Standards

##### A. **Field Inspection**

- 1. Tobacco seed field inspections shall be made when the crop is in the bud stage or later.
- 2. Pollen may be collected and male sterile may be pollinated prior to inspection, but failure to meet isolation and/or varietal purity requirements may necessitate pollen disposal or seed head destruction.
- 3. Seed pods picked or seed heads harvested prior to inspection automatically become ineligible for certification.

##### B. **Isolation**

- 1. Self-pollinated Varieties - Fields producing any class of seed shall be separated by either of these methods:
  - a. 150 Feet
  - b. Protected from cross-pollination by bagging
  - c. Separated by 4 rows of male sterile tobacco not to be used for seed purposes
  - d. In fields where 2 or more self-pollinated varieties of the same type are grown side by side, four rows of each variety between the two varieties shall be allowed to bloom and set seed but shall not be harvested for seed.

Isolation between varieties of different types shall be at least 1320 feet.

## 2. Hybrid Parents

Male Fertile (Pollen Producing Parent) – These varieties shall adhere to the following isolation requirements:

- a. Varieties producing pollen of the same type shall be separated by at least 50 feet.
- b. Protected from cross-pollination by bagging
- c. Separated by 4 rows of male sterile tobacco not to be used for seed purposes
- d. In fields where 2 or more self-pollinated varieties of the same type are grown side by side, four rows of each variety between the two varieties shall be allowed to bloom and set seed but shall not be harvested for seed.

Male Sterile – These varieties shall adhere to the following isolation requirements:

- a. Varieties of the same type shall be isolated from all the pollen producing plants by at least 150 feet, with the exception of the fertile parent used to pollinate the male sterile of a cross
- b. Male sterile varieties of the same type require no isolation from each other.
- c. Different types of male steriles must be separated by at least 660 feet.
- d. Male sterile varieties and pollinators of different types must be separated by at least 1320 feet

**C. Care of Field Crop** - Care shall be taken at all times to prevent the mixing of seeds, plants and pollen during seeding, transplanting and pollinating. Plants of other varieties, including Off-types, must be destroyed as soon as found.

**D. Diseases** – Plants affected with Tobacco Ringspot Virus must be destroyed as soon as found. Plants affected with Tobacco Mosaic Virus must be destroyed or identified and isolated as soon as found. Parent lines of TMV resistant hybrid varieties that have plants exhibiting symptoms of TMV virus will not have to be destroyed.

#### IV. Seed Standards

##### A. **Raw Seed**

	<u>Foundation</u>	<u>Certified</u>
Pure Seed, minimum	99.00%	99.00%
Total Other Crop, maximum	0.01%	0.01%
Other Varieties, maximum	0.01%	0.01%
Other Kinds, maximum	0.01%	0.01%
Total Weed Seeds, maximum	None	None
Inert Matter, maximum	1.00%	1.00%
Germination, minimum	80.00%	80.00%

##### B. **Pelleted or Primed Pelleted Seed**

1. All pelleted or primed pelleted seed must have met the standards as stated in (Section IV – A) prior to that process.
2. 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.)
3. Seed must be retested for germination after the process of pelleting or pelleting & priming.
4. Primed tobacco seed is only eligible for sale within five months of the germination test date, excluding the month of the date.

#### V. Seed Conditioning

- A. All certified tobacco seed must be conditioned by a KSIA approved seed conditioner.
- B. Injury to the seed coat should be avoided to insure maximum germination.
- C. All labeling on preprinted certified tobacco seed packets must be approved by KSIA each prior to marketing seed.
- D. Each package of raw tobacco seed shall have printed on it the percentage of pure seed (purity), inert matter and germination. The lot number, date of germination and the name of the grower must also be shown on the package.
- E. Each package of pelleted or primed pelleted tobacco seed shall have printed on it the percentage of pure seed (purity), inert matter, coating material, germination and number of seed per packet.
- F. It is recommended that as seed lots are pelleted or pelleted & primed, the seed lot designation must be at least one number or letter different from the originating lot number.

## Kentucky Seed Certification Standards

### TALL FESCUE

#### I. Classes of Seed Eligible for Certification

##### Eligible Varieties:

KY 31  
Kenhy  
Johnstone

##### Eligible Classes of Seed:

Foundation, Certified  
Foundation, Certified  
Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production three successive seed years following the year of establishment. After eligibility to produce foundation seed has expired, fields will be eligible to produce certified seed as described in Section B.

B. **Certified Seed** is produced by sowing foundation seed. Fields sown with foundation seed may be harvested for certified seed production five successive seed crop years following the year of establishment. No more than two seed production years may elapse between the production of certified seed crops. For KY 31 fields older than 5 years, certification eligibility may be extended annually if a field is tested and found to be genetically and mechanically pure, for a maximum of three additional years.

#### II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports. A separate listing giving the total number of acres in each field and seeding dates (including month and year) must also be supplied with field maps.

#### III. Land History Requirements

A. **Foundation Seed Fields** – A field to be eligible for the production of foundation seed must not have grown or been seeded to the same species (any tall fescue) during the immediate 5 years prior to seeding.

B. **Certified Seed Fields** – A field to be eligible for the production of certified seed must not have grown or been seeded to the same species (any Tall fescue) during the immediate 2 years prior to seeding.

**IV. Field Standards**

**A. Field Inspection**

1. Seed crop field inspections for all varieties will be after heading but before harvesting.

2. New seedlings of Tall fescue varieties must also be field inspected within 60 days after planting.

3. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** - The following isolation requirements shall be met when any Tall fescue is in bloom at the same time as the inspected variety:

*Minimum Isolation Distance \**

for a **border strip of the following distance** mowed prior to inspection \*\*

<b>For Border Strip of:</b>	<b>0 Feet</b>	<b>9 Feet</b>	<b>15 Feet</b>
<i>Foundation Class</i>			
<i>Minimum Isolation =</i>	<i>900 Feet</i>	<i>600 Feet</i>	<i>450 Feet</i>
<i>Certified Class</i>			
<i>Minimum Isolation =</i>	<i>165 Feet</i>	<i>100 Feet</i>	<i>75 Feet</i>

\* When different classes of seed of the same variety are being grown on the same or adjacent fields, the isolation requirements may be reduced to 25% of that shown in the above table.

\*\* Border removal applies only to fields of five acres or more. Due to the pollen barrier created by the border strip, it is important that this strip not be mowed prior to completion of bloom.

**C. Specific Requirements**

<b>Factor</b>	<b>Maximum Permitted</b>	
	<b>Foundation</b>	<b>Certified</b>
Inseparable Other Crops	0.10% (1/1000 Plants)	1.0% (1/100 Plants)
Other Varieties and Crops	0.10% (1/1000 Plants)	1.0% (1/100 Plants)



V. Seed Standards

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	98.50%	98.50%
Inert Matter (maximum)	1.50%	1.50%
Total Other Crop Seed (maximum)	0.20%	1.00%
Other Varieties (maximum)	0.10%	1.00%
Other Grass Species (maximum)	0.10%	0.50%
Total Weed Seed (maximum)	0.30%	0.50%
Objectionable Weed Seed (maximum)	40 per lb	80 per lb
Germination (minimum)	80.00%	80.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

Prohibited Objectionable Weed Seed

Canada thistle ( <i>Cirsium arvense</i> )	Dogbane ( <i>Apocynum</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Quackgrass ( <i>Agropyron repens</i> )	Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )
Corncockle ( <i>Agrostemma githago</i> )	Pale (smooth) dock ( <i>Rumex altissimus</i> )
Dodder ( <i>Cuscuta</i> spp.)	Sorrel ( <i>Rumex acetosa</i> )
Giant foxtail ( <i>Setaria faberii</i> )	Bladder campion ( <i>Silene cucubalus</i> )
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	White top ( <i>Cardaria</i> spp.)
Wild onion ( <i>Allium canadense</i> )	Hedge bindweed ( <i>Convolvulus sepium</i> )
Field bindweed ( <i>Convolvulus arvensis</i> )	Toadflax ( <i>Livaria</i> spp.)

Permitted Objectional Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Buckhorn plantain ( <i>Plantago lanceolata</i> )	Wild carrot ( <i>Daucus carota</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Curly dock ( <i>Rumex crispus</i> )

## B. Tall Fescue Endophyte Infection of Seed

The following requirements for maximum allowable levels of seed infected with Tall Fescue Endophyte are mandatory for the Johnstone variety and optional for all other varieties.

<u>Factor</u>	<u>Foundation Class</u>	<u>Certified Class</u>
Percent of Seed Infected with Tall Fescue Endophyte (maximum)	1.00%	2.00%

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Testing for Tall fescue endophyte content must be done using the staining test approved by KSIA. Seed testing laboratories performing the test and the test procedure to be used must be approved by the KSIA office.

## Kentucky Seed Certification Standards

### T I M O T H Y

#### I. Classes of Seed Eligible for Certification

Eligible Varieties:

Clair

Eligible Classes of Seed:

Foundation, Registered, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production three successive years following the year of establishment. After eligibility to produce foundation seed has expired, fields will be eligible to produce registered seed as described in Section B and/or certified seed as described in Section C.

B. **Registered Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for registered seed production three successive seed crop years following the year of establishment. After eligibility to produce registered seed has expired, fields will be eligible to produce certified seed as described in Section C.

C. **Certified Seed** is produced by sowing foundation or registered seed. These fields will be eligible to produce certified class seed indefinitely, as long as no more than two season elapse between the production of certified seed crops.

#### II. Application for Certification

A map of each field production certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports. A separate listing, giving the total number of acres in each field and seeding dates (including month and year) must also be supplied with field maps.

#### III. Land History Requirements

A. **Foundation Seed Fields** – A field to be eligible for the production of foundation seed must not have grown or been seeded to the same species during the immediate five years prior to seeding.

B. **Registered Seed Fields** – A field to be eligible for the production of registered seed must not have grown or been seeded to the same species during the immediate two years prior to seeding except if planted to breeder or foundation seed of the same variety.

C. **Certified Seed Fields** – A field to be eligible for the production of certified seed must not have grown or been seeded to the same species during the immediate two years prior to seeding except if planted to foundation or registered seed of the same variety.

IV. **Field Standards**

A. **Field Inspection**

1. Seed crop field inspections for all varieties will be after heading but before harvesting.

2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

B. **Isolation** – The following isolation requirements shall be met when any timothy is in bloom at the same time as the inspected variety:

*Minimum Isolation Distance \**

for a **border strip of the following distance** mowed prior to inspection \*\*

<b>For Border Strip of:</b>	<b>0 Feet</b>	<b>9 Feet</b>	<b>15 Feet</b>
<i>Foundation Class</i>			
<i>Minimum Isolation =</i>	<i>900 Feet</i>	<i>600 Feet</i>	<i>450 Feet</i>
<i>Registered Class</i>			
<i>Minimum Isolation =</i>	<i>300 Feet</i>	<i>225 Feet</i>	<i>150 Feet</i>
<i>Certified Class</i>			
<i>Minimum Isolation =</i>	<i>165 Feet</i>	<i>100 Feet</i>	<i>75 Feet</i>

\* When different classes of seed of the same variety are being grown on the same or adjacent fields, the isolation requirements may be reduced to 25% of that shown in the above table.

\*\* Border removal applies only to fields of five acres or more. Due to the pollen barrier created by the border strip, it is important that this strip not be mowed prior to completion of bloom.

**C. Specific Requirements**

Factor	Maximum Permitted		
	Foundation	Registered	Certified
Other Varieties and Off-types	0.10% (1/1000 Plants)	1.00% (1/100 Plants)	2.00% (1/50 Plants)

**V. Seed Standards**

Factor	Class of Seed		
	Foundation	Registered	Certified
Pure Seed (minimum)	97.00%	97.00%	97.00%
Inert Matter (maximum)	3.00%	3.00%	3.00%
Total Other Crop Seed (maximum) ***	0.20%	1.00%	1.00%
Other Varieties (maximum)	0.10%	1.00%	1.00%
Other Grass Species (maximum)	0.10%	0.10%	0.25%
Total Weed Seed (maximum) *	0.30%	0.30%	0.50%
Objectionable Weed Seed (maximum) **	80 per lb	80 per lb	80 per lb
Germination (minimum)	80.00%	80.00%	80.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

\*\*\* Up to 3% alfalfa, alsike, Red clover and White clover or in combination, may be permitted in either class.

Prohibited Objectionable Weed Seed

Canada thistle ( <i>Cirsium arvense</i> )	Dogbane ( <i>Apocynum</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Quackgrass ( <i>Agropyron repens</i> )	Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )
Corncockle ( <i>Agrostemma githago</i> )	Pale (smooth) dock ( <i>Rumex altissimus</i> )
Dodder ( <i>Cuscuta</i> spp.)	Field bindweed ( <i>Convolvulus arvensis</i> )
Giant foxtail ( <i>Setaria faberii</i> )	Bladder campion ( <i>Silene cucubalus</i> )
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	White top ( <i>Cardaria</i> spp.)
Wild onion ( <i>Allium canadense</i> )	Hedge bindweed ( <i>Convolvulus sepium</i> )
Wild garlic ( <i>Allium vineale</i> )	Toadflax ( <i>Livaria</i> spp.)

Permitted Objectional Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Buckhorn plantain ( <i>Plantago lanceolata</i> )	Wild carrot ( <i>Daucus carota</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Curly dock ( <i>Rumex crispus</i> )
Sorrel ( <i>Rumex acetosa</i> )	

Kentucky Seed Certification Standards

KENTUCKY BLUEGRASS

I. Classes of Seed Eligible for Certification

Eligible Varieties:

Kenblue

Eligible Classes of Seed:

Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A foundation field may be harvested for foundation seed five years immediately following the year of seeding.

B. **Certified Seed** is produced by sowing foundation seed. These fields will be eligible to produce certified class seed for seven years, as long as no more than two seasons elapse between the production of certified seed crops.

II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number of the map and that same field number will be entered subsequently on all field inspection reports. A separate listing giving the total number of acres in each field and seeding dates (including month and year) must also be supplied with field maps.

III. Land History Requirements

A. **Foundation Seed Fields** – A field to be eligible for the production of foundation seed must not have grown or been seeded to the same species during the immediate five years prior to seeding.

B. **Certified Seed Fields** – A field to be eligible for the production of certified seed must not have grown or been seeded to the same species during the immediate year prior to seeding, except if planted to foundation seed of the same variety.

#### IV. Field Standards

##### A. Field Inspection

1. Seed crop field inspections for all varieties will be after heading but before harvesting.

2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – A seed field to be eligible for the production of foundation seed must be isolated from any other strain or strains of the same species in bloom at the same time by 60 feet. A seed field to be eligible for the production of certified seed must be isolated from any other strain or strains of the same species in bloom at the same time by 16 feet.

##### C. Specific Requirements

Factor	Maximum Permitted	
	Foundation	Certified
Other Varieties and Off-types	0.10% (1/1000 Plants)	2.0% (1/50 Plants)

#### V. Seed Standards

##### A. Specific Requirements

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	90.00%	90.00%
Inert Matter (maximum)	10.00%	10.00%
Total Other Crop Seed (maximum) ***	0.20%	1.00%
Other Varieties (maximum)	0.10%	2.00%
Other Grass Species (maximum)	0.10%	0.25%
Total Weed Seed (maximum) *	0.30%	0.50%
Objectionable Weed Seed (maximum) **	None	80 per lb
Germination (minimum)	75.00%	75.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.



\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

\*\*\* Up to 3% of alfalfa, alsike, Red clover and White clover or in combination, may be permitted.

#### Prohibited Objectionable Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Dogbane ( <i>Apocynum</i> spp.)
Canada thistle ( <i>Cirsium arvense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )
Quackgrass ( <i>Agropyron repens</i> )	Pale (smooth) dock ( <i>Rumex altissimus</i> )
Corncockle ( <i>Agrostemma githago</i> )	Sorrel ( <i>Rumex acetosa</i> )
Dodder ( <i>Cuscuta</i> spp.)	Bladder campion ( <i>Silene cucubalus</i> )
Giant foxtail ( <i>Setaria faberii</i> )	White top ( <i>Cardaria</i> spp.)
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	Hedge bindweed ( <i>Convolvulus sepium</i> )
Wild onion ( <i>Allium canadense</i> )	Toadflax ( <i>Livaria</i> spp.)
Wild garlic ( <i>Allium vineale</i> )	Leafy Spurge ( <i>Euphorbia esula</i> )
Field bindweed ( <i>Convolvulus arvensis</i> )	Pennycress ( <i>Thlaspi arvense</i> )
Perennial sowthistle ( <i>Sonchus arvensis</i> )	

#### Permitted Objectional Weed Seed

Buckhorn plantain ( <i>Plantago lanceolata</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Wild carrot ( <i>Daucus carota</i> )
Curly dock ( <i>Rumex crispus</i> )	

## Kentucky Seed Certification Standards

### ORCHARDGRASS

#### I. Class of Seed Eligible for Certification

For varieties eligible for certification, see page 4 of the General Standards.

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production three successive years following the year of establishment. After eligibility to produce foundation seed has expired, fields will be eligible to produce registered seed as described in Section B and/or certified seed as described in Section C.

B. **Registered Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for registered seed production three successive seed crop years following the year of establishment. After eligibility to produce registered seed has expired, fields will be eligible to produce certified seed as described in Section C.

C. **Certified Seed** is produced by sowing foundation or registered seed. These fields will be eligible to produce certified class seed indefinitely, as long as no more than two seasons elapse between the production of certified seed crops.

#### II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports. A separate listing giving the total number of acres in each field and seeding dates (including month and year) must also be supplied with field maps.

#### III. Land History Requirements

A. **Foundation Seed Fields** – A field to be eligible for the production of foundation seed must not have grown or been seeded to the same species during the immediate five years prior to seeding.

B. **Registered and Certified Seed Fields** – A field to be eligible for the production of registered or certified seed must not have grown or been seeded to the same species during the previous year prior to seeding, except if planted to foundation or registered seed of the same variety.

**IV. Field Standards**

**A. Field Inspection**

1. Seed crop field inspections for all varieties will be after heading but before harvesting.
2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – The following isolation requirements shall be met when any orchardgrass is in bloom at the same time as the inspected variety:

*Minimum Isolation Distance \**

for a **border strip of the following distance** mowed prior to inspection \*\*

<b>For Border Strip of:</b>	<b>0 Feet</b>	<b>9 Feet</b>	<b>15 Feet</b>
<i>Foundation Class</i>			
<i>Minimum Isolation =</i>	<i>900 Feet</i>	<i>600 Feet</i>	<i>450 Feet</i>
<i>Registered Class</i>			
<i>Minimum Isolation =</i>	<i>300 Feet</i>	<i>225 Feet</i>	<i>150 Feet</i>
<i>Certified Class</i>			
<i>Minimum Isolation =</i>	<i>165 Feet</i>	<i>100 Feet</i>	<i>75 Feet</i>

\* When different classes of seed of the same variety are being grown on the same or adjacent fields, the isolation requirements may be reduced to 25% of that shown in the above table.

\*\* Border removal applies only to fields of five acres or more. Due to the pollen barrier created by the border strip, it is important that this strip not be mowed prior to completion of bloom.

**C. Specific Requirements**

<b>Factor</b>	<b>Maximum Permitted</b>		
	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Other Varieties & Off-types	0.10% (1/1000 Plants)	1.00% (1/100 Plants)	2.00% (1/50 Plants)

V. Seed Standards

Factor	Class of Seed		
	Foundation	Registered	Certified
Pure Seed (minimum)	85.00%	85.00%	85.00%
Inert Matter (maximum)	15.00%	15.00%	15.00%
Total Other Crop Seed (maximum)	0.20%	1.00%	1.00%
Other Varieties (maximum)	0.10%	1.00%	2.00%
Other Grass Species (maximum)	0.10%	0.10%	0.25%
Total Weed Seed (maximum) *	0.30%	0.30%	0.50%
Objectionable Weed Seed (maximum) **	None	40 per lb	40 per lb
Germination (minimum)	80.00%	80.00%	80.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

Prohibited Objectionable Weed Seed

Canada thistle (Cirsium arvense)	Dogbane (Apocynum spp.)
Johnsongrass (Sorghum halepense)	Knapweed (Centaurea spp.)
Quackgrass (Agropyron repens)	Broadleaf (bitter) dock (Rumex obtusifolius)
Corncockle (Agrostemma githago)	Pale (smooth) dock (Rumex altissimus)
Dodder (Cuscuta spp.)	Pennycress (Thlaspi arvense)
Giant foxtail (Setaria faberii)	Bladder campion (Silene cucubalus)
Oxeye daisy (Chrysanthemum leucanthemum)	White top (Cardaria spp.)
Wild onion (Allium canadense)	Toadflax (Livaria spp.)
Wild garlic (Allium vineale)	Leafy spurge (Euphorbia esula)
Field bindweed (Convolvulus arvensis)	Perennial sowthistle (Sonchus arvensis)

Permitted Objectional Weed Seed

Annual bluegrass (Poa annua)	Red sorrel (Rumex acetosella)
Buckhorn plantain (Plantago lanceolata)	Wild carrot (Daucus carota)
Bracted plantain (Plantago aristata)	Curly dock (Rumex crispus)

## Kentucky Seed Certification Standards

### RED CLOVER

#### I. Classes of Seed Eligible for Certification

Eligible Varieties:

Kenland, Kenstar

Eligible Classes of Seed:

Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed will not be eligible to produce foundation seed after two seed crops. A stand of Kenstar Red clover will not be eligible to produce foundation seed during the year of establishment.

B. **Certified Seed** is produced by sowing foundation seed. A field sown with foundation seed will not be eligible to produce certified seed after two seed crops. The seed crops may be produced either in the same or consecutive years. A stand of Kenstar Red clover will not be eligible to produce certified seed during the year of establishment.

C. West of 98 degrees longitude, foundation and certified seed of Kenstar must be produced above 40 degrees latitude.

#### II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports.

#### III. Land History Requirements

A. **Land Requirements** – Foundation seed for the production of certified seed shall be planted only on land on which no Red clover plants of other strains or varieties have grown for at least the preceding three years, during one of which the land must be cultivated or sprayed following no-till farming practices. The land must be free of volunteer plants of the crop kind during the year immediately prior to establishment, and no manure or other contaminating material shall be applied the year previous to seeding or during the establishment and productive life of the stand. Any grazing of livestock that permits distribution of contaminating seed shall not be permitted.

Breeder seed planted for the production of foundation seed shall have the same land requirements as for the production of certified seed, except the land must be free from Red clover plants for five years prior to establishment.

**IV. Field Inspection**

**A. Field Inspection**

1. Seed fields shall be inspected at blossom time.
2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – A field producing certified seed must have the minimum isolation distance from fields of any other variety or fields of the same variety that do not meet the varietal purity requirements for certification as follows:

Minimum distances from a different variety or a non-certified crop of the same kind shall be:

Class	Field Less Than 5 Acres	/	Field More Than 5 Acres
	<i>Minimum Distance</i>		<i>Minimum Distance</i>
Foundation	900 Feet		600 Feet
Certified	165 Feet		165 Feet

\* The isolation distance between classes of the same variety may be reduced to 10 feet, regardless of class or size of field.

**C. Specific Requirements**

Factor	Maximum Permitted	
	Foundation	Certified
Other Varieties*	0.10% (1/1000 Plants)	1.00% (1/100 Plants)

\* Including other species of Red clover

## V. Seed Standards

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	99.00%	99.00%
Inert Matter (maximum)	1.00%	1.00%
Other Crop Seed (maximum) *	0.10%	0.25%
Other Varieties (maximum)	0.10%	0.25%
Sweet Clover (maximum)	9 per lb	90 per lb
Total Weed Seed (maximum) **	0.25%	0.25%
Objectionable Weed Seed (maximum) ***	9 per lb	48 per lb
Total Germination and Hard Seed (minimum)	85.00%	85.00%

\* Including other species of Red clover

\*\* The laboratory is requested to give a count on all permitted weed seed per pound when present.

\*\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

### Prohibited Objectionable Weed Seed

Canada thistle ( <i>Cirsium arvense</i> )	Dogbane ( <i>Apocynum</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Quackgrass ( <i>Agropyron repens</i> )	Horse nettle ( <i>Solanum carolinense</i> )
Leafy spurge ( <i>Euphorbia esula</i> )	Perennial sowthistle ( <i>Sonchus arvensis</i> )
Dodder ( <i>Cuscuta</i> spp.)	White top ( <i>Cardaria</i> spp.)
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	Pennycress ( <i>Thlaspi arvense</i> )
Wild onion ( <i>Allium canadense</i> )	Field bindweed ( <i>Convolvulus arvensis</i> )
Wild garlic ( <i>Allium vineale</i> )	

### Permitted Objectional Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Buckhorn plantain ( <i>Plantago lanceolata</i> )	Wild carrot ( <i>Daucus carota</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Curly dock ( <i>Rumex crispus</i> )
Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )	Pale (smooth) dock ( <i>Rumex altissimus</i> )
Corn Cockle ( <i>Agrostemma githago</i> )	Giant foxtail ( <i>Setaria faberii</i> )

## Kentucky Seed Certification Standards

### ANNUAL LESPEDEZA

#### **I. Classes of Seed Eligible for Certification**

For varieties eligible for certification, see page 4 of the General Standards.

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production two successive seed crop years, including the year of establishment.

B. **Registered Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for registered seed production two successive seed crop years, including the year of establishment.

C. **Certified Seed** is produced by sowing foundation or registered seed. If foundation seed is sown, seed produced by naturally reseeding crops in the two years immediately following the seeding year is eligible for the certified seed. When registered seed is sown, seed produced during the seeding year and the first reseeding year is eligible for certification as certified seed. Seed produced from certified seed cannot be certified.

#### **II. Application for Certification**

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports.

#### **III. Land History Requirements**

A variety will not be eligible for certification if planted on land where lespedeza (other than a crop eligible for certification and of the same variety) has had the opportunity to mature seed during the previous five years for the foundation class and three years for the registered or certified classes. Such land must have been in cultivation for two years (foundation) and one year (certified) prior to planting. The land must be free of volunteer plants of lespedeza during the year immediately prior to establishment. No manure or other contaminating material shall be applied during the year previous to seeding or during the establishment and productive life of the stand.



#### IV. Field Standards

##### A. **Field Inspection**

1. Seed fields shall be inspected at least once prior to harvest.
2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

B. **Isolation** – The field shall be bounded by a strip at least 10 feet wide that is not in Annual lespedeza.

##### C. **Specific Requirements**

Factor	Maximum Permitted		
	Foundation	Registered	Certified
Other Varieties *	1 : 1000	1 : 400	1 : 100
Other Crops	0.10%	0.10%	0.10%

\* Including other species of lespedeza

#### V. Seed Standards

Factor	Class of Seed		
	Foundation	Registered	Certified
Pure Seed (minimum)	98.00%	98.00%	98.00%
Inert Matter (maximum)	2.00%	2.00%	2.00%
Other Crop Seed (maximum)	0.20%	0.50%	1.50%
Other Varieties (maximum) *	0.10%	0.25%	0.50%
Weed Seed (maximum) **	0.50%	0.50%	0.50%
Objectionable Weed Seed (maximum)***	45 per lb	45 per lb	45 per lb
Total Germination & Hard Seed (minimum)	80.00%	80.00%	80.00%

\* Including other species of lespedeza

\*\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table. Nine (9) seeds of Giant foxtail will be allowed per pound.

### Prohibited Objectionable Weed Seed

Canada thistle ( <i>Cirsium arvense</i> )	Dogbane ( <i>Apocynum</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Quackgrass ( <i>Agropyron repens</i> )	Horse nettle ( <i>Solanum carolinense</i> )
Corncockle ( <i>Agrostemma githago</i> )	Perennial sowthistle ( <i>Sonchus arvensis</i> )
Dodder ( <i>Cuscuta</i> spp.)	Bladder campion ( <i>Silene cucubalus</i> )
Leafy spurge ( <i>Euphorbia esula</i> )	Pennycress ( <i>Thlaspi arvense</i> )
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	Wild onion ( <i>Allium canadense</i> )
Field bindweed ( <i>Convolvulus arvensis</i> )	Wild garlic ( <i>Allium vineale</i> )

### Permitted Objectional Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Buckhorn plantain ( <i>Plantago lanceolata</i> )	Wild carrot ( <i>Daucus carota</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Curly dock ( <i>Rumex crispus</i> )
Giant foxtail ( <i>Setaria faberii</i> )	Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )

## Kentucky Seed Certification Standards

### S E R I C E A L E S P E D E Z A

#### I. Classes of Seed Eligible for Certification

Eligible Varieties:

Eligible Classes of Seed:

Appalow

Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production six successive seed crop years, including the year of establishment. After eligibility to produce foundation seed has expired, fields will be eligible to produce certified seed as described in Section B.

B. **Certified Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for certified seed production six successive seed crop years, including the year of establishment. No more than two seasons shall elapse between the production of certified seed crops. Fields planted with certified seed are not eligible for certification.

#### II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number of the map and that same field number will be entered subsequently on all field inspection reports.

#### III. Land History Requirements

A variety will not be eligible for certification if planted on land where sericea lespedeza (other than a crop eligible for certification and of the same variety) has had the opportunity to mature seed during the previous five years for the foundation class and three years for the certified class. Such land must have been in cultivation for two years (foundation) and one year (certified) prior to planting. The land must be free of volunteer plants of sericea lespedeza during the year immediately prior to establishment. No manure or other contaminating material shall be applied during the year previous to seeding or during the establishment and productive life of the stand.

#### IV. Field Standards

##### A. **Field Inspection**

1. Seed fields shall be inspected at least once prior to harvest.
2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – All fields to be certified must have the minimum isolation distance from fields of any other variety or fields of the same variety that do not meet the varietal purity requirements for certification as given in the following table:

<u>Class</u>	<u>Fields less than 5 Acres</u>	<u>Fields 5 or more Acres</u>
Foundation	1320 Feet	1320 Feet
Certified	330 Feet	165 Feet

##### C. **Specific Requirements**

<u>Factor</u>	<u>Maximum Permitted</u>	
	<u>Foundation</u>	<u>Certified</u>
Inseparable Other Crops *	0.20%	0.60%
Other Varieties and Off-types	0.10% (1/1000 plants)	0.40% (1/250 plants)

\* Includes Annual lespedeza such as Kobe and Korean

V. Seed Standards

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	98.00%	98.00%
Inert Matter (maximum)	2.00%	2.00%
Other Crop Seed (maximum)	0.20%	1.50%
Other Varieties (maximum)	0.10%	0.50%
Other Kinds of Lespedeza (maximum)	0.10%	0.50%
Total Weed Seed (maximum)*	0.50%	1.00%
Objectionable Weed Seed (maximum)**	45 per lb	45 per lb
Total Germination & Hard Seed (minimum)	80.00%	80.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present..

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

Prohibited Objectionable Weed Seed – Dodder, Wild onion, Wild garlic, Oxeye daisy, Quackgrass, Johnsongrass, Field bindweed, Canada thistle, Dogbane, Horse nettle, Leafy spurge, Pennycress, Perennial sowthistle, Russian knapweed and Bladder campion

Permitted Objectional Weed Seed – Braced Plantain, Buckhorn plantain, Curly dock, Broadleaf (bitter) dock, Green dock, Sorrel, Wild carrot, Corncockle and Giant foxtail

Kentucky Seed Certification Standards

BIGFLOWER VETCH

I. Classes of Seed Eligible for Certification

Eligible Varieties:

Woodford

Eligible Classes of Seed:

Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production two years immediately following the seeding year.

B. **Certified Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for certified seed production two years immediately following the seeding year. Seed produced from certified seed cannot be certified.

II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number on the map and that same field number will be entered subsequently on all field inspection reports.

III. Land History Requirements - A variety will not be eligible for certification, other than a crop eligible for certification and of the same variety, if planted on land where Bigflower vetch has had the opportunity to mature seed during the previous five years for the foundation and certified classes. The land must be free of volunteer plants of the crop kind during the year immediately prior to establishment. No manure or other contaminating material shall be applied during the year previous to seeding or during the establishment and productive life of the stand.

IV. Field Standards

A. **Field Inspection**

1. A seedling inspection will be made within 60 days after planting for all fields
2. Seed fields shall be inspected at least once prior to harvest.

3. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – The following isolation requirements shall be met when other variety of Bigflower vetch is in bloom at the same time as the variety being inspected.

Class	Minimum Isolation Distance *
Foundation	400 Feet
Certified	400 Feet

The field shall be bounded by a strip at least 10 feet wide that is not producing an inseparable crop.

\* When different classes of seed of the same variety are being grown on the same or adjacent fields, the isolation requirements may be reduced to 25% of that shown in the above table.

**C. Specific Requirements**

Factor	Maximum Permitted	
	Foundation	Certified
Inseparable Other Crops	0.50% (1/200 plants)	1.00% (1/100 plants)
Other Varieties and Off-types	0.10% (1/1000 plants)	1.00% (1/100 plants)

**V. Seed Standards**

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	98.00%	98.00%
Inert Matter (maximum)	2.00%	2.00%
Total Other Crop Seed (maximum)	0.35%	1.50%
Other Varieties (maximum)	0.10%	1.00%
Total Weed Seed (maximum)*	0.10%	0.25%
Objectionable Weed Seed (maximum)**	9 per lb	48 per lb
Germination (minimum)	75.00%	75.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

#### Prohibited Objectionable Weed Seed

Canada thistle ( <i>Cirsium arvense</i> )	Dogbane ( <i>Apocynum</i> spp.)
Johnsongrass ( <i>Sorghum halepense</i> )	Knapweed ( <i>Centaurea</i> spp.)
Quackgrass ( <i>Agropyron repens</i> )	Horse nettle ( <i>Solanum carolinense</i> )
Perennial sowthistle ( <i>Sonchus arvensis</i> )	White top ( <i>Cardaria</i> spp.)
Dodder ( <i>Cuscuta</i> spp.)	Field bindweed ( <i>Convolvulus arvensis</i> )
Oxeye daisy ( <i>Chrysanthemum leucanthemum</i> )	Leafy spurge ( <i>Euphorbia esula</i> )

#### Permitted Objectionable Weed Seed

Annual bluegrass ( <i>Poa annua</i> )	Red sorrel ( <i>Rumex acetosella</i> )
Buckhorn plantain ( <i>Plantago lanceolata</i> )	Wild carrot ( <i>Daucus carota</i> )
Bracted plantain ( <i>Plantago aristata</i> )	Curly dock ( <i>Rumex crispus</i> )
Giant foxtail ( <i>Setaria faberii</i> )	Corncockle ( <i>Agrostemma githago</i> )
Broadleaf (bitter) dock ( <i>Rumex obtusifolius</i> )	Wild garlic ( <i>Allium vineale</i> )
Pale (smooth) dock ( <i>Rumex altissimus</i> )	Wild onion ( <i>Allium canadense</i> )



Kentucky Seed Certification Standards

C R O W N V E T C H

I. Classes of Seed Eligible for Certification

Eligible Varieties:

Emerald  
Chemung, Penngift

Eligible Classes of Seed:

Foundation, Registered, Certified  
Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed may be harvested for foundation seed production two years immediately following the seeding years.

B. **Registered Seed** is produced by sowing foundation seed. A field sown with foundation seed may be harvested for registered seed production three years immediately following the seeding year.

C. **Certified Seed** is produced by sowing foundation or registered seed. Fields sown with foundation or registered seed are eligible to produce certified seed as long as the stand remains and provided inspection is made one out of every three years. Fields sown with certified seed cannot be certified.

II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number of the map, and that same field number will be entered subsequently on all field inspection reports.

III. Land History Requirements

A crop of the same kind must not have been grown or planted on the land for five years prior to stand establishment for the production of foundation seed, three years for registered and two years for certified.

The land must be free of volunteer plants of Crownvetch during the year immediately prior to establishment. No manure or other contaminating material shall be applied the year previous to seeding or during the establishment and productive life of the stand.

#### IV. **Field Standards**

##### A. **Field Inspection**

1. Seed fields shall be inspected at least once prior to harvest, preferably at full bloom.

2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – Fields used for the production of registered and certified seed must be isolated from other varieties or strains of Crownvetch or fields of the same variety not meeting varietal purity requirements for certification in accordance with the distance listed below. Distance between fields of certified classes of the same variety may be reduced to 10 feet, regardless of class or size of the field.

Class	Minimum Isolation Distance	
	Field < 5 Acres	Field = 5+ Acres
Foundation	900 Feet	600 Feet
Registered	660 Feet	330 Feet
Certified	330 Feet	165 Feet

##### C. **Specific Requirements**

Factor	Maximum Permitted		
	Foundation	Registered	Certified
Varietal Mixture	0.10% (1:1000)	0.25% (1: 400)	1.00% (1:100)
Sweet Clover (seed bearing)	None	None	80 plants/acre

## V. Seed Standards

Factor	Class of Seed		
	Foundation	Registered	Certified
Pure Seed (minimum)	95.00%	95.00%	95.00%
Inert Matter (maximum)	5.00%	5.00%	5.00%
Other Crop Seed (maximum)	0.10%	0.10%	1.00%
Other Varieties (maximum)	0.10%	0.25%	1.00%
Sweet Clover Seed	None	25 per lb	90 per lb
Total Weed Seed (maximum)*	0.10%	0.20%	0.50%
Objectionable Weed Seed (maximum)**	27 per lb	45 per lb	90 per lb
Germination & Hard Seed (minimum)	65.00%	65.00%	65.00%
Germinable Seed (minimum)	35.00%	35.00%	35.00%

\* The laboratory is requested to give a count on all permitted weed seed per pound when present, as well as noxious Bromus species. The increased cost of this count may be included in the statement of charges for laboratory tests.

\*\* Seeds of certain OBJECTIONABLE WEEDS are prohibited, while others are limited to the maximum amount (singly or in combination) listed in the above table.

### Prohibited Objectionable Weed Seed

Canada thistle (Cirsium arvense)	Dogbane (Apocynum spp.)
Johnsongrass (Sorghum halepense)	Knapweed (Centaurea spp.)
Quackgrass (Agropyron repens)	Horse nettle (Solanum carolinense)
Perennial sowthistle (Sonchus arvensis)	Wild garlic (Allium vineale)
Dodder (Cuscuta spp.)	Field bindweed (Convolvulus arvensis)
Oxeye daisy (Chrysanthemum leucanthemum)	Leafy spurge (Euphorbia esula)
Bladder campion (Silene cucubalus)	Pennycress (Thlaspi arvense)
	Wild onion (Allium canadense)

### Permitted Objectional Weed Seed

Annual bluegrass (Poa annua)	Red sorrel (Rumex acetosella)
Buckhorn plantain (Plantago lanceolata)	Wild carrot (Daucus carota)
Bracted plantain (Plantago aristata)	Curly dock (Rumex crispus)
Giant foxtail (Setaria faberii)	Corncockle (Agrostemma githago)
Broadleaf (bitter) dock (Rumex obtusifolius)	Giant foxtail (Setaria faberii)
	Pale (smooth) dock (Rumex altissimus)

## Kentucky Seed Certification Standards

### CHEMICALLY ASSISTED HYBRID BARLEY AND HYBRID WHEAT

Explanation of General Standards as applied to Chemically Assisted Hybrid Barley and Wheat: The General Seed Certification Standards are basic and, together with the following specific standards, constitute the standards for certification of chemically assisted Hybrid barley and Hybrid wheat.

#### **I. Classes and Sources of Seed**

- A. A commercial hybrid is one to be planted for any use except seed production.
- B. Only the class “Certified” is recognized in the production of a commercial hybrid.
- C. A commercial hybrid must be produced from seedstocks approved by the certifying agency. The female seedstocks may be of the foundation, registered or certified classes.

#### **II. Land History Requirements**

Crossing blocks shall be planted on land on which the last crop grown was of another kind or was planted with a class of certified seed of the female parent. A crop will not be eligible for certification if planted on land on which the same kind of crop (example: wheat following wheat) was grown the previous year, unless the previous crop was grown from a class of certified seed of the female parent. Minimum tillage production practices (example: wheat/soybeans/wheat) does not change the above land history requirements.

#### **III. Field Standards**

##### **A. Isolation**

1. Isolation requirements for seedstocks are those used for the certification of varieties.
2. Commercial Hybrids - A specific hybrid to be accepted for certification must be so located that the seed parent is not less than 330 feet from a contaminating field of wheat of another market class. However, in the case of the same market class as the seed parent, the distance may be modified by the planting of the pollen parent border to be determined with the following table:

## ISOLATION TABLE

Minimum Distance from Contaminating Wheat	Feet of Pollen Border
330 Feet	0
215 Feet	15
275 Feet	25
160 Feet	35
100 Feet	50

Isolation distances may be modified by the certification agency when necessary.

### 3. Interplanted Blocks

a. Interplanted blocks of female seed parent and pollinator shall be separated by an unplanted strip a minimum of one foot in width. Harvest separation distance will be determined by the certifying agency.

b. Pollinator strips shall be clearly identifiable (or marked) in a manner approved by the certifying agency prior to harvest to prevent mechanical mixture.

## B. Inspections

The crossing fields shall be given at least three (3) field inspections, as follows:

1. *Prior to flowering* - bag seed parent heads to determine level of sterility, planting ratios, isolations and off-type plants.

2. *During flowering* - evaluate isolation, off-types, presence of volunteer plants, note apparent nicking problems and possible sterility problems.

3. *After heads begin to assume a mature color* - collect bagged heads for determining hybridization, evaluate Off-types and make disease evaluations.

### 4. Specific Requirements

Factor	Maximum Permitted Certified
Other Varieties and Off-types (Seed Parent & Pollinator)	0.10% (1:1000)
Other Kinds of Small Grain	0.05% (1:2000)
Rye	None
Hairy Vetch	5 Plants/Acre
Loose Smut *	0.10% (1:1000)
Inspected Field	
Bordering Fields	0.20% (1:500)
Up to 600' from Inspected Fields	

\* If the above limits for loose smut are exceeded in the inspected field or bordering fields of small grain, seed harvested from the inspected field must either:

1. Be treated with a recommended systemic fungicide seed treatment that is labeled for the control of loose smut before certification tags could be issued; or

2. Be subjected to an embryo loose smut test. Seed Standards for maximum loose smut content must be met before certification tags could be issued.

**IV. Seed Standards**

<u>Factor</u>	<u>Class of Seed</u>
	Certified
Pure Seed (minimum)	98.00%
Inert Matter (maximum)	2.00%
Total Other Crop Seed (maximum)	0.10%
Other Varieties (maximum)	0.10%
Other Small Grain (maximum)	0.05%
Rye and Hairy Vetch (maximum)	2 per lb
Total Weed Seed (maximum)*	0.03%
Noxious Weed Seed (maximum)	None
Germination (minimum)	85.00%
Loose Smut (maximum)	1.00%

\* Total weed seed content shall not exceed 10 seeds per pound.

\*\* Embryo loose smut test is required if field standards for loose smut are exceeded and seed is not treated with appropriate seed treatment.

**V. Determining Percent Hybridization**

Final certification shall be contingent upon determination of percent hybridization.

- A. Field samples from bagged and unbagged seed parent heads from the production field, or
- B. Other methods which determine the percent hybridization approved by the certifying agency.

Kentucky Certified Seed Standards

CANOLA - WINTER OILSEED RAPE

I. **Classes of Seed Eligible for Certification**

- A. **Foundation Seed** shall be the progeny of breeder or foundation seed.
- B. **Certified Seed** shall be the progeny of breeder, foundation or registered seed.  
Production from certified seed is not eligible to be re-certified.

For varieties eligible for certification, see page 3 of the General Certification Standards.

II. **Land History Requirements**

- A. Foundation seed of canola and rapeseed shall be planted on land which did not produce canola or rapeseed during the previous four years.
- B. Certified seed of canola and rapeseed must be planted on land which did not produce canola or rapeseed during the previous four years.

III. **Field Standards**

- A. Field Inspection – Seed field inspection must be made when the crop is in the early flowering stage.
- B. Isolation

Fields producing foundation class seed must have a minimum isolation distance of 1320 feet from fields of any other variety of the same kind or from a non-certified field of the same variety.

Fields producing certified class seed must have a minimum isolation distance of 330 feet from fields of any other variety of the same kind or from a non-certified field of the same variety.

Required isolation between classes of the same variety is 10 feet.

### C. Specific Requirements

Factor	Maximum Permitted to Ratio of Plants	
	Foundation	Certified
Other Varieties and Off-types	1 : 2000	1 : 500

Canola and rapeseed fields for certification must be practically free from other crop kinds, the seeds of which are difficult to separate from the crop being certified.

The presence of wild mustard in seed production fields may be cause for rejection.

It is recommended that not more than one variety of canola and rapeseed be produced under the management of one member.

### IV. Seed Standards

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	99.00%	99.00%
Inert Matter (maximum)	1.00%	1.00%
Weed Seed (Brassica spp. & Raphanus raphanistrum)	1 per lb	5 per lb
Prohibitive Noxious	None	None
Restrictive Noxious	1 per lb	5 per lb
Other Weeds	5 per lb	15 per lb
Total Other Crop Seed (maximum)	0.05%	0.25%
Other Varieties (maximum)	0.05%	0.25%
Other Kinds (maximum) *	0.01%	0.01%
Germination (minimum)	85.00%	85.00%

\* Shall not exceed 1 per pound for foundation and 5 per pound for certified

Seed of all classes of certified seed must be treated with an approved seed treatment fungicide to control Blackleg (*Phoma lingam*) fungus.

For varietal verification purposes, a 125 gram sample of seed from each foundation field must be provided to the Association immediately after harvest. Producers may be required to submit to the Association the results from an approved laboratory indicating the erucic acid and glucosinolate content.



## Kentucky Seed Certification Standards

### TURFGRASS SOD

#### I. Application of Genetic Certification Standards

A. The General Seed Certification Standards as adopted are basic and, together with the following specific standards, constitute the standards for certification of turf grass sod.

B. The Genetic Standards are modified as follows:

Classes of Seed:

1. Foundation sod shall be the vegetative increase of breeder sod or seed.
2. Registered sod shall be the vegetative increase of foundation sod or seed.
3. Certified sod shall be the vegetative increase of foundation, registered, or certified sod or seed. Additional planting stock requirements for varieties of Kentucky bluegrass, Red fescue, Chewings fescue, Tall fescue, and Zoysia are included in Section IV/B.

#### II. Land Requirements

A. A field to be eligible for the production of foundation or registered sod must have been inspected 2 times and found free of all other perennial grass species and varieties for one year preceding the time of planting.

B. A field to be eligible for the production of certified sod must have been inspected prior to planting and found free of all other perennial grasses.

C. 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 undisturbed for 3 weeks, at which time an official inspection shall be made 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.

D. No animal manures or other material potentially containing seeds shall be applied on sold to be entered for certification.

**III. Field Standards**

**A. General**

**B. Isolation** – A field to be eligible for certification of sod must lie isolated from any other perennial grass by a barrier that will prevent encroachment or mechanical mixing during harvesting.

**IV. Sod Standards**

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

Maximum Permitted in 1000 Square Feet

	Foundation	Registered	Certified
Noxious Weeds	None	None	None
Objectionable Weeds *	---	---	---
Other Varieties	None	None	None

\* Kind and amount to be designated by the certifying agency

**V. Planting Stock Standards**

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

Variety	Minimum Purity	Minimum Germ	Maximum Other Crop	Maximum Weed ***
Marion KY bluegrass	96.00%	80.00%	0.10% **	0.02%
Other Varieties KY bluegrass	97.00%	80.00%	0.10% **	0.02%
Red fescue	98.00%	90.00%	0.10%	0.02%
Chewings fescue	98.00%	90.00%	0.10%	0.02%
Tall fescue	98.50%	80.00%	0.10% ****	0.02%
Zoysia	To Be Added			

\* Must be free of ryegrass, orchardgrass, (see exception for Tall fescue), timothy, bentgrass, Big bluegrass, Poa trivialis, Smooth brome grass, Reed canarygrass, bermudagrass and clover. Canada bluegrass in Kentucky bluegrass varieties = maximum .02%. Red fescue and Chewings fescue must be free of Canada bluegrass.

\*\* Other Kentucky bluegrass = maximum 2.0 %

\*\*\* Must be free of dock, chickweed, crabgrass, plantain, Black medic, Annual bluegrass, velvetgrass and noxious weed seeds

\*\*\*\* Orchardgrass seed in Tall fescue seed shall not exceed 20 per pound based on analysis of 50 gram sample.

A sod seed analysis based on a 25 gram sample for noxious, all weed and all crop seed, on a 10 gram Poa annua check shall be the basis of determining seed standards.

## Kentucky Seed Certification Standards

### K U R A C L O V E R

#### I. Classes of Seed Eligible for Certification

Eligible Varieties:

Eligible Classes of Seed:

Rhizo

Foundation, Certified

A. **Foundation Seed** is produced by sowing breeder seed. A field sown with breeder seed will not be eligible to produce foundation seed after three seed crops. A stand of Rhizo Kura clover will not be eligible to produce foundation seed during the year of establishment.

B. **Certified Seed** is produced by sowing foundation seed. A field sown with foundation seed will not be eligible to produce certified seed after five seed crops. A stand of Rhizo Kura clover will not be eligible to produce certified seed during the year of establishment.

#### II. Application for Certification

A map of each field producing certified seed (ASCS or SCS map will suffice) showing field boundaries must be supplied with the application for field inspection when certification of each field is requested for the first time. Each field shall be assigned a permanent field number of the map and that same field number will be entered subsequently on all field inspection reports.

#### III. Land History Requirements

Foundation and Certified Seed shall be planted only on land on which no Kura clover plants of other strains or varieties have grown for at least the preceding five and two years respectively, during one of which the land must be cultivated or sprayed following no-till farming practices. The land must be free of volunteer plants of the crop kind during the year immediately prior to establishment, and no manure or other contaminating material shall be applied the year previous to seeding or during the establishment and productive life of the stand. Any grazing of livestock that permits the distribution of contaminating seed shall not be permitted.

#### IV. Field Standards

##### A. **Field Inspection**

1. Seed fields shall be inspected at blossom time.
2. If a field is harvested before field inspection, then it automatically becomes ineligible for certification.

**B. Isolation** – A field producing certified seed must have the minimum isolation distance from fields of any other variety or fields of the same variety that do not meet the varietal purity requirements for certification as follows:

Minimum distances from a different variety or a non-certified crop of the same kind shall be:

<u>Class</u>	<u>Field &lt; 5 Acres *</u>	<u>Field 5+ Acres *</u>
Foundation	900 Feet	600 Feet
Certified	165 Feet	165 Feet

\* The isolation distance between classes of the same variety may be reduced to 10 feet, regardless of class or size of field.

##### C. **Specific Requirements**

<u>Factor</u>	<u>Maximum Permitted to Ratio of Plants</u>	
	<u>Foundation</u>	<u>Certified</u>
Other Varieties *	0.10% 1 : 1000	1.00% 1 : 100

#### IV. Seed Standards

Factor	Class of Seed	
	Foundation	Certified
Pure Seed (minimum)	99.00%	99.00%
Inert Matter (maximum)	1.00%	1.00%
Other Crop Seed (maximum) *	0.20%	1.00%
Other Varieties (maximum)	0.10%	1.00%
Other Kinds (maximum)	0.10%	0.50%
Sweet Clover (maximum)	9 per lb	180 per lb
Total Weed Seed **	0.25%	0.50%
Total Objectionable Weed Seed (maximum) ***	9 per lb	90 per lb
Total Germination and Hard Seed (minimum)	80.00%	80.00%

\* Including other varieties

\*\* The laboratory is requested to give a count on all permitted weed seed per pound when present.

#### VI. Kura clover seed shall be free of seed of the following weeds:

Bindweed ( <i>Convolvulus arvensis</i> )	Leafy spurge ( <i>Euphorbia esula</i> )
Canada thistle ( <i>Cirsium arvense</i> )	Perennial sowthistle ( <i>sonchus arvensis</i> )
Dodder ( <i>Cuscuta</i> spp.)	Quackgrass ( <i>agropyron repens</i> )
Horse nettle ( <i>Solanum carolinense</i> )	Russian knapweed ( <i>Centaurea</i> spp.)
White top ( <i>Cardaria</i> spp.)	

\*\*\* Seeds of certain other objectionable weeds may be designated by the certifying agency as prohibited, while others may be limited to the maximum amount.

## Kentucky Seed Certification Standards

### GRASSES: VEGETATIVELY PROPAGATED

#### **I. Explanation of General Standards as applied to Vegetatively Propagated Grasses**

A. The General Seed Certification Standards as adopted are basic and, together with the following specific standards, constitute the standards for certification of vegetatively propagated grasses.

B. The General Standards are further defined as follows to apply specifically to vegetatively propagated grasses:

##### 1. Classes and Sources of Certified Seed

a. Foundation stolons or plants will be produced by the Kentucky Foundation Seed Project or by the sponsoring agency.

b. Registered stolons or plants shall be the progeny of foundation sprigs or plants.

c. Certified stolons or plants shall be the progeny of foundation or registered sprigs or plants.

2. Handling of crop prior to inspection – A field must be rogued sufficiently during the growing season to remove any mixture of other varieties of the crop being certified or other undesirable plant mixture that cannot be separated during the packing operations.

#### **II. Land Requirements**

To be eligible for the production of all certified classes of stolons or plants, a field must have been free at planting time of other strains of the same species or objectionable species.

#### **III. Field Inspections**

An inspection must be made during the growing season at a time when there is sufficient growth to make the identification of other varieties of strains possible.

#### IV. Field Standards

##### A. General Requirements

1. Unit of certification – The entire acreage standing at the time of inspection must be subjected to inspection as a unit.

2. Isolation – To be eligible for the certification of stolons or plants, a field must be isolated from any other strain of the same species or other objectionable species by maintain a barrier that will prevent encroachment or mechanical mixing during harvest.

##### B. Specific Requirements

Factor	Maximum Permitted in 1000 Square Feet		
	Foundation	Registered	Certified
Other Varieties (maximum)	None	1	3

#### V. Planting Stock Standards \*

The following planting stock standards must be met (% to be determined by count):

Factor	Foundation	Registered	Certified
Pure Living Sprigs (minimum)		90.00%	90.00%
Other Living Plants (maximum)		2.00%	2.00%
Objectionable Weeds (maximum) **	None	None	None

\* Sod must meet the field standards and be free of plants of objectionable weeds.

\*\* Include all noxious weeds. See “Noxious Weed Seed” Section 4 of Regulations under the Kentucky Seed Law.