



WISCONSIN SEED CERTIFICATION STANDARDS

Wisconsin Crop Improvement Association Inc
554 Moore Hall, UW
1575 Linden Drive
Madison, Wisconsin 53706-1514

Office.....(608) 262-1341
Seed Laboratory(608) 262-0165
FAX Number(608) 262-0210
E-Mailwcia@mailplus.wisc.edu
Web Site<http://www.wcia.wisc.edu>

TABLE OF CONTENTS – BY SUBJECT

GENERAL SEED CERTIFICATION STANDARDS		Page
Abbreviations		1
Blending		6
Bulk Certification.....		9
Certification – Purpose of		1
Certifying Agency		1
Certification Systems		3
Classes of Certified Seed as Provided by AOSCA.....		1
Classes of Certified Seed in Wisconsin		1
Conditioning Requirements		6
Confidentiality Policy		1
Container Requirements		7
Definitions.....		12,19,43
Eligibility of Varieties for Certification		3
Establishment and Revision of Standards.....		11
Fees		11
Field Inspection		5
Foundation Seed Stocks.....		11
Interagency Certification.....		10
Lots.....		6
Labeling.....		6
OECD		3
Producers		3
Production Fields.....		5
Rebagging.....		7
Seed Inspection		7
Seed Law Compliance.....		12
Seed Sampling		7
Tagging Records		11
Transferring Unconditioned Seed		5
COMMODITY STANDARDS		
Alfalfa.....		13
Birdsfoot Trefoil		15
Bluegrass		17
Canola and Rapeseed.....		18
Hybrid Corn		19
Field Beans.....		23
Field Peas		24
Lupine		26
Perennial Ryegrass.....		27
Red Clover.....		29
Small Grain		30
Soybeans		32
Sunflower		34
Timothy		36
Native Species.....		37

GENERAL SEED CERTIFICATION STANDARDS

CERTIFYING AGENCY

The Wisconsin Crop Improvement Association is the official seed certifying agency in Wisconsin as set forth in the Wisconsin Seed Law, Sec. 94.40, Wisconsin statutes. The Wisconsin Crop Improvement Association is a non-profit organization incorporated under Wisconsin laws.

PURPOSE OF SEED CERTIFICATION

Certification of complete quality identifies seeds as to variety, varietal purity, and mechanical quality.

Certification of varietal purity only identifies seed as to the variety and varietal purity. It does not substantiate mechanical quality.

CONFIDENTIALITY POLICY

All documentation and information generated by the services of the Association shall be kept confidential between the Association and its individual members/customers, except as necessary under USDA, OECD and DATCP agencies regulations.

ABBREVIATIONS

The following abbreviations are used in these regulations:

- AOSCA – Association of Official Seed Certifying Agencies
- Association – The Wisconsin Crop Improvement Association
- College – The University of Wisconsin-Madison College of Agricultural and Life Sciences
- OECD – Organization for Economic Cooperation and Development
- USDA – United States Department of Agriculture

AOSCA CLASSES OF CERTIFIED SEED

Four classes of seed are recognized in seed certification under the Federal Seed Act: Breeder, Foundation, Registered and Certified. These classes are defined as follows:

A. Breeder Seed

Breeder seed is seed directly controlled by the originating or sponsoring plant breeder, institution, or firm. Breeder seed is the source for the production of seed of the other classes of certified seed.

B. Foundation Seed

Foundation seed is the progeny of Breeder or Foundation seed handled so as to maintain specific genetic identity and purity. Production must be supervised and approved by the certifying agency.

C. Registered Seed

Registered seed is the progeny of Foundation seed handled so as to maintain specific genetic identity and purity. Production must be approved by the certifying agency.

D. Certified Seed

Certified Seed is the progeny of Foundation or Registered seed handled so as to maintain satisfactory genetic identity and purity and approved by the certifying agency.

WISCONSIN CLASSES OF CERTIFIED SEED

A. Certification Classes

For seed certification purposes, Wisconsin recognizes only the Breeder, Foundation, and Certified classes. The Certified class of seed cannot be produced from the Registered class of seed in Wisconsin. See "Foundation Seed Requirement" (page 11).

B. Quality Classes

1. First Quality

First quality seed is labeled with a blue colored certification tag with the red "W" logo.

2. Second Quality

Second quality seed is labeled with a blue colored certification tag with a blue outline of Wisconsin insignia and the words Certified No. 2.

The General Certification requirements for both quality classes are the same. The commodity seed standards for both quality classes are defined for each individual crop.

First Quality Tag



Second Quality Tag



OECD CERTIFICATION

The Association is authorized by the United States Department of Agriculture to certify under the OECD schemes for varietal certification of seed moving in international trade.

PRODUCERS

A. **Eligibility.** Any person or organization producing seed in Wisconsin or in counties bordering Wisconsin is eligible to obtain seed certification service, provided they comply with:

- 1 - The Association Seed Certification Standards
- 2 - All agreements made with the Association
- 3 - All agreements entered into with the College.

Any person who has not previously produced certified seed (new producer) may be limited in acreage and number of varieties produced during his first year of certified seed production.

All new producers are required to attend an informational meeting prior to beginning production.

B. **Responsibility.** It is the responsibility of each Association member to know and abide by the Association Seed Certification Standards and procedures and to report irregularities or violations.

Production and distribution of certified seed which is genetically pure and has high mechanical quality depends upon the integrity of the producer.

The certification tag heading reads, "DISTRIBUTOR'S SEED LABEL." This means that the grower, conditioner and/or labeler of the seed are solely responsible for the accuracy of the certification label information.

The inspections, checks and tests conducted by the Association can only minimize the opportunity for carelessness and deception.

The Board of Directors may act on any case where a producer violates the seed certification standards and procedures of the Association. Action taken by the Board of Directors may result in suspension of certification service to a producer for a specified time period.

C. **Eligibility for New Public Variety Releases.** The production of certified seed of a new public variety during the first year following its distribution by the

College, is restricted to established producers of the crop involved. These producers must have had previous experience and satisfactory records in the production of Wisconsin certified seed of the crop involved and be otherwise qualified. The specific criteria for distribution of each new public release is established by the Association Directors and the College.

VARIETIES ELIGIBLE FOR CERTIFICATION

Acceptance Procedures. Only those varieties and inbreds that are accepted by the Association as meriting certification in accordance with the criteria published in the AOSCA Certification Handbook, Chapter 1, Section II and in the Federal Seed Act Section 201.68 (a-i) shall be eligible for certification. Application for certification of new varieties and inbreds not previously certified must be made to the Association.

For those crops where National Certified Variety Review Boards exist, it is recommended that varieties and inbreds be submitted to the respective review boards for determining their merit for certification. Application forms for requesting variety and inbred certification eligibility are available from the Association office.

CERTIFICATION SYSTEMS

A. **Certification for Complete Quality Tag.** The certification tag will be labeled for both varietal and mechanical seed quality factors.

B. **Certification for Varietal Purity Tag Only.** Breeders or owners of private varieties or varieties for which a "Plant Variety Protection Certificate" has been granted or application for protection has been submitted to the USDA, Agriculture Marketing Service, Plant Variety Protection Office, may request certification for varietal purity only.

In these cases, seed mechanical quality factors such as germination, weed seed content, etc., are waived. The certification tag will clearly state that the seed is certified for genetic purity only and no seed analysis information shall appear on the certification tag.

C. **Two Tag Certification System.** Varieties may be certified using a two tag certification system. Producers wanting to certify under the two tag system must so indicate in writing to the Association.

Each seed lot of varieties to be certified under the two tag system must be tested by the producer or by a seed laboratory of his choice and meet all

mechanical quality and varietal purity seed certification standards. The producer is responsible for analysis tag labeling.

Samples for each seed lot must be sent to the certification laboratory. To be eligible for certification, each seed lot tested by the Association must meet first quality mechanical seed quality standards within the tolerances listed.

Under the two tag system, the certification tag will carry the red "W" and only list the variety name and kind and the lot identification number.

D. Conditioner Printing of Certification Tags

1. Authorized only for the certified class of seed when using the one or two tag certification system or the varietal purity only certification system.
2. Tags must be printed by a computer printer located on the site of the conditioner's facility.
3. Conditioners must have completed five consecutive years of conditioning Wisconsin Certified seed before they can apply for the privilege of printing certification tags.
4. Individual applications for the privilege of conditioner printing of certified seed tags must be made to the Association manager in the form of a written letter.
5. Granting of permission to print tags will be made by the manager based on the following criteria:
 - a. On site review of conditioner records to verify that a daily seed cleaning log of varieties processed, the year grown, field numbers, lot numbers and lot container counts are kept.
 - b. On site verification that the computer printing equipment can handle the tag paper stock and that the printing style and location on the certification tag conforms with the tags printed by the Association.
 - c. Review of the conditioner's Association certification records to assure a history of:
 - (1) 100% correct variety identity as determined by laboratory varietal purity tests and field growouts over the previous

two certification seasons.

- (2) being within tolerance for varietal mixtures as determined by field growouts over the previous two certification seasons.
 - (3) submitting representative samples as determined by comparing the mechanical quality factors of the owner-samples against the Association inspector check samples for the previous certification season.
 - (4) following all Wisconsin certification standards and procedures.
6. If any one of the criteria (in subsection c) is not met after the conditioner has been authorized to print tags, his privilege will be revoked and he must complete a minimum of one full certification cycle, in which there were no errors or rule violations, prior to resubmitting for the right to print certification tags.
 7. Procedures:
 - a. Serial numbered certification tags will be shipped in increments of 4,000 to eligible conditioners.
 - b. A tagging and sealing record form is provided by the Association office and must be filled out and signed. The original copy must be mailed to the Association office with the owners seed sample.
 - c. One sample tag of each seed lot for which tags are printed must be sent to the Association office with the owner's seed sample.
 - d. All tags which are damaged, misprinted or wasted must be accounted for and returned to the Association office along with the tagging and sealing record.
 - e. An on site inventory of the conditioner's unprinted certification tags will be conducted annually by an Association inspector.
 - f. All records pertaining to certification and all certification tags are to be available at all times for inspection by an Association inspector during normal conditioner office hours.

PRODUCTION FIELDS

- A. **Definition.** A production field is the unit of certification for field inspection purposes.

A production field is the area occupied by any one variety for which a separate inspection record is required and which is not separated by over 40 feet from the balance of the field.

A variety planted in contour strips for erosion control is considered as one field.

Production fields can be on land owned, rented, or otherwise controlled by the producers.

- B. **Producer Responsibility.** Producers must insure that each field used for the production of certified seed complies with the certification standards for the crop being grown.

Producers who have production fields grown for them by “contract growers” shall assume responsibility for any acts of such contract growers which affect compliance with certification standards.

- C. **Labeling.** Each production field must be identified as to variety by posting a Foundation seed tag or a sign at the field entrance, by a notation on a farm field map or by a written description.

- b. All equipment involved with planting, harvesting, storing, cleaning or handling was or will be thoroughly and completely cleaned to maintain genetic purity of the seed.
- c. The identity of the seed will be maintained from harvest to the time it leaves the applicant’s possession.

B. Inspection Procedures

1. Each production field must be inspected and approved prior to harvest by an Association inspector.
2. Any production field that is severely infested with weeds of any kind so as to make it obviously not useable for seed production shall be rejected.
3. If a field does not comply with the certification requirements, and if the lack of compliance can be corrected by the producer, then such a field will have a “corrections required” status. The field can be subsequently reinspected after corrections are made at a time set by the inspector in consultation with the producer.

If the field is harvested prior to reinspection, it is not eligible for certification.

4. On site reinspection for the isolation of one field from another field may be substituted by the use of a photograph and signed affidavit at the discretion of the certification manager.

FIELD INSPECTION

A. Application for Field Inspection

1. “Application for Field Inspection” forms are due in June.
2. There can be no joint “Application for Field Inspection” by two or more producers for a crop in an individual production field.
3. One certification tag, for each seed stock lot planted, must be submitted with the application for field inspection.
4. The producer’s signature on the “Application for Field Inspection” is affidavit that:
 - a. The information submitted on the application concerning field number, variety, acres planted, bushels planted, seed stock lot number and previous crops grown is correct.

TRANSFERRING UNCONDITIONED SEED

- A. **General.** Producers may sell and transfer unconditioned seed to a buyer who agrees to complete certification of such seed.
- B. **Transfer Certificate and Agreement.** The producer is responsible for insuring that a copy of the “Transfer of Seed Pending Certification” certificate is filed with the Association. This copy must be on file before seed samples from transferred seed will be processed in the lab.

The transferring of seed to an out-of-state buyer involves interagency certification and prior arrangements for making such transfer shall be made with the Association.

CONDITIONING REQUIREMENTS

- A. **Definition.** Conditioning pertains to all procedures (drying, cleaning, treating, bagging, storage, labeling, etc.) which a lot of seed is subjected to in preparing it for marketing.
- B. **General.** Seed shall be so conditioned that it complies with the seed quality standards provided for specific crops. Such conditioning may be performed by the producer or a contracted conditioner who has suitable equipment and is otherwise qualified.
- C. **Designated Responsible Individual.** Conditioners shall designate an individual who shall be responsible to the certifying agency for the performance of duties involved in the certification procedures such as labeling, record keeping, quality control, etc.
- D. **Seed Conditioning Facilities.** Conditioning facilities shall be designed and operated to insure that seed is conditioned without introducing mixtures. Equipment shall be of a design which allows it to be effectively and completely cleaned. Equipment shall be operated in a manner which produces a product of high mechanical quality.
- E. **Records**
 - 1. Records of all operations relating to conditioning and certification shall be complete and adequate to account for all incoming seed and final disposition of seed. This includes records on the amount of seed harvested, date of harvest, where stored, date and order of lots conditioned, and lot size.
 - 2. Records showing final disposition of each seed lot are encouraged.
 - 3. Conditioners shall permit inspection by the certifying agency of all records pertaining to all classes of certified seed.

BLENDING

Blending regulations are stipulated in the individual Commodity Standards.

SEED LOTS

- A. **Lot Definition.** A lot of seed is a definite quantity of seed, identified by a lot number, each container of which is uniform within permitted tolerances (Part 201 - Federal Seed Act Regulations) for the factors

appearing on the labels.

- B. **Uniformity.** Each lot of seed must be sufficiently uniform throughout so that its condition can be dependably determined by proper sampling.
- C. **Maximum Lot Sizes**

Threshed small grains	2,000 bushels
Small seeded legumes and grasses	22,000 pounds
Corn	88,000 pounds
Soybeans	55,000 pounds

In all cases, smaller lots are acceptable.
- D. **Sampling.** One seed sample must be submitted from each lot of seed to the Association laboratory for testing.

LABELING

- A. **Production Fields.** Each production field must be identified as to variety either by a field label, farm map or written description.
- B. **Storage Bins.** Storage bins must be labeled with variety identification, field numbers and year produced or this information must be kept in written records.
- C. **Conditioned Seed.**
 - 1. Each container of conditioned seed must be labeled with the variety, the year produced, field number, and the specific lot designation.
 - 2. When seed is sized each container must further be labeled with the grade size designation.
 - 3. Labeling information can be imprinted on the container or on a lot tag which is attached to the seed container.
 - 4. Seed that is not properly identified will not be sampled for certification seed testing.
- D. **Certification Tags.** Seed which qualifies for certification can be labeled with Association certification tags. Tags on seed which fails to meet seed certification standards must be removed and returned to the Association. The minimum information required on a certification tag is: agency name, lot number, variety name and kind and class of certified seed. Tags must be attached to containers in a manner that prevents removal and reattachment without tampering being obvious.

SEED CONTAINER REQUIREMENTS

- A. **Bag.** Acceptable bags are those which are sound, clean, and bear no identification or information other than that which applies to the seed in the bag.

Unacceptable bags are those which:

1. Are turned inside out, unsound or dirty.
2. Are printed with trademarks or other printing which refers to products other than seed as being contained in the bag.
3. Have printing that refers to kinds and varieties of seed other than those contained in the bag.
4. Originally contained a different variety or kind of seed.

Bags are to be machine closed.

- B. **Bulk Containers.** See Bulk Certification Standards (Page 9).

REBAGGING

Certified seed may be rebagged. Such seed is eligible for relabeling provided it still meets certification standards.

Certification tags cannot be re-used.

SEED INSPECTION

- A. **General Responsibility.** All certification sampling and labeling shall be done under the supervision of an Association inspector or by other methods approved by the Association Board of Directors. The owner of the seed is to provide the inspector with assistance in sampling and labeling.

Samples collected by approved samplers will be tested by the Association to see if they meet the various seed certification quality requirements, and the results of such tests will be reported to the owner of the seed.

- B. **Laboratory Seed Tests.** Official laboratory tests for labeling Wisconsin certification tags are those made by the Association laboratory or by a laboratory which is authorized by the Certification Manager.

- C. **Certification Tags.** Seed which qualifies for certification can be labeled with Association certification tags. Tags on seed which fails to meet seed certification standards must be removed and returned to the Association.

- D. **Carryover Seed.** Seed that has been certified and carried over from one season to another will, upon request of the owner, be resampled, retested, and if eligible, will be recertified.

Seed carried over without being previously certified will be certified provided that the seed is dependably identified, that the production records are verifiable and that it meets the certified seed quality requirements.

SEED SAMPLING REQUIREMENTS

- A. **Sample Submission Requirement.** A representative sample of each conditioned seed lot from approved fields must be submitted to the Association certification laboratory.

A sample is not representative of a seed lot unless it is taken from the containers in which the seed will be offered for sale or it is taken during the filling of these containers.

- B. **Authorized Samplers and Check Sampling.**

1. Association inspectors shall take seed samples by probing conditioned seed containers.
2. Producer/Conditioners may be authorized to take seed samples during the conditioning of the seed which they own or are custom conditioning.

Producers/Conditioners are not authorized to probe conditioned seed containers unless they are sampling carryover seed.

3. Check Sampling – When seed lots are sampled by producers/conditioners, an Association inspector will check sample a minimum of one lot in each ten lots for each variety and field involved.

If the germination and purity tests for a check sample, when compared to the test results from the producer/conditioner sample drawn from the same lot, fall below the tolerances set up in part 201 of the Federal Seed Act Regulations, the check sample will

be considered the official sample. If certification tags have already been issued for that lot, they must be returned to the Association.

The Seed Certification Manager may withhold the privilege of producer/conditioner sampling if representative samples of the seed lots are not being received by the certification laboratory.

C. **Container Arrangement.** Bags must be arranged so that the inspector has access to each bag in each lot when sampling.

D. **Sample Size**

	Grams	Pounds
Corn, small grains, soybeans, field peas & field beans	500	1.1
Red Clover, birdsfoot trefoil & alfalfa	100	0.25
Grasses	60	0.20

E. **Sample Envelopes.** Space is provided on the sample envelopes to list the information necessary for the laboratory to process each sample.

All appropriate spaces on the front and back of the envelope must be filled in.

The laboratory test information spaces on the envelope will be filled in by the certification laboratory.

F. **Moisture Samples**

1. Moisture tests are required on all new crop small grain seed lots until November 1 of the crop year.
2. All new crop corn, soybean, field bean and field pea seed samples require a moisture test through June 1 of the next crop year.
3. All seed lots requiring a moisture test must be placed in plastic lined sample envelopes.

G. **Sampler Responsibility.** The space on the sample envelopes marked "Sampled by" must contain the signature of the sampler. This signature is affidavit that the seed in the sample envelope was drawn in accordance with the Association's approved sampling procedures and that all information on the sample envelope is correct.

H. **Approved Sampling Procedure**

1. Sampling Procedures in General

- a. Proper sampling is extremely important to insure that a seed sample is representative of the entire lot. A representative sample will enable reliable test results to be obtained and thus assure correct labeling of the seed lot.
- b. To secure a representative sample, equal portions shall be taken from evenly distributed parts of the quantity of seed to be sampled.
- c. As the seed is sampled, all portions of seed shall be examined when being taken from each individual container.

If there appears to be a lack of uniformity, the portions shall not be combined, but shall be retained separately for laboratory analysis.

If the portions appear uniform, they shall be combined to form a composite sample for each lot.

- d. Mix the composite seed sample in a bucket or similar container thoroughly before pouring into a properly labeled sample envelope.

You may have more seed than is needed for filling the envelope. Put at least the minimum amount of seed required in the sample envelope ensuring that enough space is allowed for closing.

2. Sampling Seed in Containers

- a. Probe one bag out of each group of ten bags for each lot. Regardless of the lot size, never less than 6 bags shall be sampled unless there are less bags in the lot.
- b. Non-free flowing seed – Certain grasses and other seeds difficult to sample with a probe or trier, shall be sampled by thrusting the hand into the bag or bulk and withdrawing representative portions. The hand is inserted in an open position and the fingers are held closely together while the hand is being inserted. After insertion, the hand is closed and a portion is withdrawn.

- c. Free flowing seed – A probe or trier long enough to sample all portions of the bag or bulk should be used. Insert the probe or trier into the container and remove a small portion of the seed. Holes made in paper bags can be closed with official Association adhesive probing tape. Threads can be broken at the top where the bag is sewn together, if necessary.
3. Sampling During Conditioning
- a. Sampling during conditioning must be done so that the composite sample contains portions of cleaned seed from each bag in the lot. Approved methods are:
 - (1) Automatic mechanical devices which intermittently draw a representative, composite sample as each seed lot is conditioned.
 - (2) Portions of cleaned seed drawn intermittently by hand as seed is conditioned to form a composite representative sample for each lot.

BULK SEED LOT CERTIFICATION

- A. **General.** Bulk seed lot certification involves the certification of seed which is stored in containers with capacities larger than 3 bushels.
- B. **Eligibility.** Only the Certified class of seed may be certified in bulk lots. Producers and wholesale buyers must have received prior approval from the Certification Manager.
- C. **Sales Limitation.** Bulk seed is limited to a maximum of two sales only. These sales constitute the movement of bulk lotted seed from an approved producer to a retail consumer or through an approved wholesale buyer to a retail customer.
- D. **Lot Size.** Maximum lot sizes for sampling are listed on page 6. Bulk containers which hold more than the maximum must be sub-lotted for testing purposes. Certification approval will be based on the lowest laboratory test when a container is sub-lotted.
- E. **Sampling.** All bulk seed lots must be sampled by the producer while filling the bulk container and check sampled by an Association inspector.

F. Storage Facilities

- 1. A separate storage container must be available for each variety that will be sold in bulk.
- 2. All containers must be clearly marked to show variety, year grown, field number and lot or sub-lot numbers.
- 3. All containers must have openings large enough so that an inspector can physically get in and check the inside.
- 4. Openings must be closed to prevent contamination except when seed is being put in or removed.

G. Inspections

- 1. Container inspections must be requested by the producer prior to filling bulk seed lot containers.
- 2. Association inspectors will spot check bulk containers prior to filling and complete reports for each inspection performed.

- H. **Repackaging.** When bulk certified seed is repackaged in smaller containers, which are then offered for sale, a seed sample of each newly created lot must be taken.

These samples are to be sent to the seed lab for storage along with the signed tagging and sealing record for the newly created lot.

I. Seller's Responsibilities

- 1. Handle seed in such a manner as to prevent mixtures, contamination and mechanical damage.
- 2. Supply seed that is representative of the seed tested and approved for certification.
- 3. Determine that a vehicle receiving bulk certified seed is clean. If a vehicle is not clean, it is the seller's responsibility to insure that the vehicle is cleaned out prior to loading.
- 4. Insure that any seed which is removed from the bulk storage bin is not returned for resale.
- 5. Take a seed sample of each load of bulk certified seed sold.

Each seed sample envelope must list the exact quantity of seed sold, be accompanied by weight slips, be sealed at the time of seed transfer and be signed by the purchaser as a verification of the quantity certified.

These samples are to be sent to the seed lab for storage.

J. **Certification Labels.** A certification tag will be issued for each bulk sale container.

A bill of sale, accompanied by a copy of the official certification report or a bulk sale certificate shall also be issued for each bulk certified seed sale.

All unused tags must be returned with a signed copy of the tagging and sealing record.

K. **Buyer's Responsibility.** It is the buyer's responsibility to maintain purity of the seed after it has been loaded into the buyer's vehicle.

L. **Records to be Maintained**

1. Individual weight and sales slips with the following information – buyer name and address, variety, year grown, field number and lot number.
2. A current inventory of bulk seed available for sale by variety, year grown, field number and lot number.

M. **Fees.** CWT charges will be billed upon receipt of the reference seed samples submitted for each sale or repackaging.

INTERAGENCY CERTIFICATION

A. **General.** Interagency certification is accomplished by participation of more than one official certifying agency in performing the services required to certify a lot of seed.

B. Interagency tags will contain the following information:

1. The word Interagency.
2. Class of seed.
3. Variety and kind of seed.

4. Mechanical quality factors if requested.
5. Certifying agencies involved.
6. Lot number.
7. Serial number.

C. **Procedures.**

1. **Previously Certified Seed**

- a. All seed must be received in containers carrying certification tags or labels.
- b. Conditioners are responsible for assembling all containers of certified seed by lot number. These are to be placed so that all certification tags are accessible to an inspector or authorized conditioner representative.
- c. An Association inspector or the authorized conditioner representative is responsible for:
 - (1) Insuring that all seed containers are correctly labeled and are certified.
 - (2) Retaining one certification tag or set of tags (in the case of a two tag system) from each lot of certified seed inspected.
 - (3) Sending the tags along with a signed "Interagency Certification Record" form to the Association Office.
- d. Two copies of the "Interagency Certification Record" will be returned to the conditioner along with the new Interagency certification tags.
- e. Upon completion of tagging the seed, the conditioner will complete the "Interagency Certification Record" and return one copy along with any extra tags and a representative seed sample of the lot to the Association Office.

This is to be done within five days after the seed containers have been tagged.

2. **Seed "In the Process of Certification"**

If seed is received prior to the completion of

certification, the seed must be accompanied by an authorized transfer certificate from an official certifying agency, together with the following information:

- a. Variety and kind of seed.
- b. Quantity.
- c. Certification class for which the seed is eligible.
- d. Identification number traceable to the previous certifying agency's records.

Certification procedures and standards will be followed as outlined in the Association General and Commodity Certification Standards.

Crops for which no Wisconsin Certification Standards are available must meet minimum AOSCA Certification Standards.

FEEES FOR CERTIFICATION

Certification and Membership fees are established by the Board of Directors of the Association. Contact the Association office for current information.

TAGGING RECORDS

All tagging and sealing records must be returned each year to the Association by the following dates:

- Spring grains June 1
- Corn June 30
- Soybeans. July 31
- Winter grains. November 1

ESTABLISHING AND REVISING STANDARDS

The Board of Directors of the Association, in cooperation with the College and the Wisconsin Department of Agriculture, Trade & Consumer Protection, shall establish the seed certification standards of the Association, and such standards may be revised at any time. (Wisconsin Seed law, Section 94.40(3), Wisconsin Statutes).

FOUNDATION SEED STOCKS

A. **Foundation Seed Requirement.** The Certified class of seed under Wisconsin Seed Certification Standards

shall be the progeny of certified Foundation class seed stocks.

Acceptable Foundation seed stocks are those which have been certified by an official certifying agency.

Producers are to obtain certified Foundation seed stocks of available varieties from the College.

Other sources of certified Foundation class seed stocks are other public and private foundation seed stocks organizations and producer increases of private varieties. The certification tags from Foundation class seed stocks used must be retained by the producer for one year.

B. The production of an additional generation of the Certified class may be permitted on a one year basis under emergency conditions with the approval of the originating or sponsoring plant breeder, institution or firm.

C. **Distribution and Use of College Foundation Seed Stocks.** The College, in cooperation with the Association, will supply certified Foundation seed stocks of public varieties to eligible Wisconsin producers subject to the following provisions:

Producers are to submit written application for Foundation seed stocks previous to the closing date set by the College. Applications received previous to such date are known as "Advance Applications" and those received subsequent to such date are known as "Late Applications."

Insofar as its facilities permit, the College will undertake the production of seed for filling approved advance applications, subject to seasonal and any other conditions over which the College has no control. The College assumes no responsibility for late applications and will consider them only so far as the available supplies of Foundation seed stocks permit.

Producers in their first year of production must attend a new producer informational meeting prior to receiving Foundation seed stocks from the College.

Foundation seed stocks supplied by the College are for use by the purchasing producer. College Foundation seed stocks of crops other than hybrid corn shall be transferred only to individuals who agree to complete certification of the seed increase from these stocks.

When Foundation seed is desired for public varieties which are not part of the College Foundation seed program, requests can be made to the College for these varieties. The College will purchase these varieties from other foundation seed stock organizations if they are available.

or reconstituted, and (c) was originally a part of the variety as released. A variant is not an off type.

DEFINITIONS

A. **Inert Matter.** Includes broken or damaged seeds one-half or less their original size, undeveloped weed seeds without embryo or endosperm and any matter other than seeds.

B. **Other Varieties and Off Types.** Other varieties and off types are plants or seeds that do not conform to the characteristics of a variety as described by the breeder. They do not include variations that are characteristic of the variety.

C. **Other Crop.** Total of other varieties and off types and other kinds.

D. **Other Kinds.** Seeds of crops other than the crop represented by the variety being tested.

E. **Purity.** Percent by weight of pure seed (100% minus the percentages of inert matter, weed seed and other crop).

F. **Variety.** The term "variety" means a subdivision of a kind which is distinct, uniform, and stable.

"Distinct" in the sense that the variety clearly differs by one or more identifiable morphological, physiological, cytological, chemical or other characteristics as to which a difference in genealogy may contribute evidence of difference from all prior varieties of public knowledge.

"Uniform" in the sense that any variations are describable and predictable.

"Stable" in the sense that the variety when reproduced or reconstituted will remain unchanged with regard to its essential and distinctive characteristics within a reasonable degree of reliability.

G. **Variant.** A variant is any seed or plant that: (a) is distinct but occurs naturally within a variety, (b) is stable and predictable with a degree of reliability comparable to other varieties of the same kind, within recognized tolerances, when the variety is reproduced

H. **Noxious Weed Seeds in Wisconsin.** As defined by the State Seed Law:

1. Prohibited Noxious Weed Seeds – Prohibited noxious weed seeds include the seeds of:

Common Name	Scientific Name
Canada Thistle	Cirsium arvense
Field Bindweed	Convolvulus arvensis
Leafy Spurge	Euphorbia esula
Quackgrass	Agropyron repens

2. Restricted Noxious Weed Seeds – Restricted noxious weed seeds include the seeds of:

Common Name	Scientific Name
Buckhorn	Plantago lanceolate
Dodder	Cuscuta sp.
Downy Brome	Bromus tectorum
Giant Foxtail	Setaria faberii
Hoary Alyssum	Berteroa incana
Indian Mustard	Brassica juncea
Oxeye Daisy	Chrysanthemum leucanthemum
Perennial Sowthistle	Sonchus arvensis
White Cockle	Lychnis alba
Wild Oats	Avena fatua
Wild Mustard	Brassica kaber
Wild Radish	Raphanus raphanistrum
Yellow Rocket	Barbarea vulgaris

I. **Weed Seeds, Other.** Includes seeds of any plant commonly known as a weed but not designated as prohibited or restricted noxious.

COMPLYING WITH FEDERAL AND STATE SEED LAW

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

ALFALFA

GENERAL FIELD STANDARDS

Length of Stand. The region of adaptation and age of stand both inside and outside the region of adaptation should be those specified by the originating breeder.

Certified seed production outside the region of adaptation may not exceed 6 years unless otherwise specified by the originator or his designee.

Land Requirements. Foundation alfalfa seed must be produced on land on which no alfalfa has been grown for four years; for production of the Certified seed class, the field may not have been planted to alfalfa the previous year.

For all classes of seed, the land must be free from volunteer plants during the year immediately prior to seeding.

No manure or other contaminating materials may be applied during the establishment and productive period of the stand.

Field Inspection. A field inspection will be made each year at the time the seed crop is in bloom, and at such other times as may be necessary to determine varietal purity.

Volunteer Plants. Volunteer plants are cause for rejection or reclassification of a seed field.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	0.1% (1 per 1000 plants)	0.25% (1 per 400 plants)
Sweet clover	None	5 plants/acre
Dodder	None	None
Isolation:		
From alfalfa (other varieties or noncertified seed of the same variety)		
Fields less than 5 acres	900 feet	165 feet
Fields 5 acres or larger	600 feet	165 feet
From other inseparable crops	6 feet	6 feet
From alfalfa (same variety, if planted with certified seed)	10 feet	10 feet
Row Width (minimum)	30 inches	None

SEED QUALITY STANDARDS

Factor	Standards for Each Class		
	Foundation	First Quality	Second Quality
Purity (minimum)	99.00%	99.00%	99.00%
Inert matter (maximum)	0.75%	0.75%	1.00%
Prohibited noxious weed seeds (maximum)	None	None	None
Restricted noxious weed seeds (maximum)	None	10*	45*
Other weed seeds (maximum)	0.10%	0.20%	0.50%
Total other crop seeds (maximum)	0.20%	0.75%	1.00%
Other kinds (maximum)**	0.10%	0.25%	0.50%
Other varieties (maximum)	0.10%	0.50%	1.00%
Sweet clover seeds (maximum)	9*	45*	90*
Germination and hard seed (minimum)	80.00%	80.00%	80.00%

*Seeds per pound

**Includes sweet clover

Two Tag Certification System Mechanical Quality Tolerances: None

ALFALFA - Continued

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include:

Canada thistle
dodder
dogbane
field bindweed
Johnson grass
leafy spurge
perennial sowthistle
quackgrass
Russian knapweed
sheep sorrel
whiteweed

Restricted Weed Seeds include:

buckhorn
downy brome
giant foxtail
hoary alyssum
Indian mustard
oxeye daisy
white cockle
wild mustard
wild oats
wild radish
yellow rocket

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

BIRDSFOOT TREFOIL

GENERAL FIELD STANDARDS

Previous Crops. A seed production field must not have grown birdsfoot trefoil the preceding five years for the Foundation class and two years for the Certified class.

A seed production field must NOT have had any volunteer trefoil plants the preceding year, unless the birdsfoot trefoil crop was of the same variety, the same or higher seed class and passed field inspection for varietal purity.

Manure must not have been applied the preceding three years and must not be applied during the years of certified seed production.

Length of Stand. A stand of birdsfoot trefoil will be eligible to produce Certified seed as long as it meets certification requirements and the variety release statement requirements.

Field Inspection. Each production field, for which certification is requested, must be inspected during the growing season at blossom time.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	2 plants/acre	5 plants/acre
Sweet clover plants	None	5 plants/acre
Isolation:		
From trefoil (other varieties or noncertified seed of the same variety)		
Fields less than 5 acres	900 feet	330 feet
Fields 5 acres or larger	600 feet	165 feet
From trefoil (same variety, if planted with certified seed)	10 feet	10 feet
From other inseparable crops	6 feet	6 feet

SEED QUALITY STANDARDS

Factor	Standards for Each Class		
	Foundation	First Quality	Second Quality
Purity (minimum)	99.00%	98.00%	98.00%
Inert matter (maximum)	1.00%	2.00%	2.00%
Prohibited weed seeds	None	None	None
Restricted weed seeds (maximum)	15*	15*	45*
Other weed seeds (maximum)	0.10%	0.50%	0.50%
Total other crop seeds (maximum)	0.20%	2.00%	2.00%
Other kinds (maximum)**	0.10%	1.00%	1.00%
Other varieties (maximum)	0.10%	1.00%	1.00%
Sweet clover seeds (maximum)	None	25*	25*
Germination and hard seeds (minimum)	80.00%	80.00%	80.00%
Germinable seeds (minimum)	45.00%	45.00%	45.00%

*Seeds per pound

**Includes sweet clover

Two Tag Certification System Mechanical Quality Tolerances: None

BIRDSFOOT TREFOIL - Continued

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include:

Canada thistle
dodder
field bindweed
leafy spurge
quackgrass
sheep sorrel
bedstraw
dogbane
horse nettle
pennycress
perennial sowthistle
Russian knapweed
white top

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

Restricted Weed Seeds include:

buckhorn
downy brome
giant foxtail
hoary alyssum
Indian mustard
oxeye daisy
white cockle
wild mustard
wild oats
wild radish
yellow rocket
bracted plantain
docks (bitter, green & smooth, curly)
wild carrot

BLUEGRASS

GENERAL FIELD STANDARDS

1. A field to be eligible for the production of Foundation seed must not have grown or been seeded to the same species during the previous five years.
2. A field to be eligible for the production of Certified seed must not have grown or been seeded to the same species during the previous three years except to the same variety of the same or a higher seed class that passed field inspection for certification.
3. The certifying agency will determine the length of time fields will be eligible for certification.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties (maximum)	None	1 per 50 plants
Isolation from the same species ¹	60 feet	15 feet
Isolation from other inseparable crops	6 feet	6 feet

¹ When different classes of seed of the same variety are being grown on the same or adjacent farms, the isolation requirements may be reduced to 25% of these distances.

SEED QUALITY STANDARDS

Factor	Standard for Each Class	
	Foundation	Certified
Purity (minimum) ¹	95.00%	95.00%
Inert matter (maximum) ¹	5.00%	5.00%
Prohibited weed seeds	None	None
Restricted weed seeds (maximum)	9*	9*
Other weed seeds (maximum)	0.30%	0.50%
Total other crop seeds (maximum)	0.20%	2.00%
Other kinds (maximum)	0.10%	0.25%
Other bluegrass species (maximum)	0.10%	0.25%
Other varieties (maximum)	0.10%	2.00%
Germination (minimum)	75.00%	75.00%

¹ For the variety Merion the standards are: Pure seed (minimum) 92.0%; inert matter (maximum) 8.0%.

*Seeds per pound

Two Tag Certification System Mechanical Quality Tolerances: None

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include all seeds declared to be prohibited noxious in the Wisconsin Seed Law. (See definitions page 12.)

Restricted Weed Seeds include all weed seeds declared to be restricted noxious in the Wisconsin Seed Law. (See definitions page 12.)

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, chaff, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

CANOLA AND RAPESEED

GENERAL FIELD STANDARDS

Previous Crops.

1. Foundation seed fields shall be planted on land which did not produce canola or rapeseed during the previous five years.
2. Certified seed fields must be planted on land which did not produce canola or rapeseed during the previous three years.

Field Inspection. Each production field must be inspected prior to bolting. Fields may also be inspected during the bloom stage.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	1 per 5,000 plants	1 per 2,000 plants
Inseparable other crops	None	5 plants/acre
Inseparable weed plants	None	None
Isolation ¹	1,320 feet	660 feet

¹ Minimum distance from other varieties of rapeseed, canola or mustard, non-certified seed of the same variety, or concentrations of wild mustard. Distance between classes of the same variety shall be at least 10 feet.

SEED QUALITY STANDARDS

Factor	Foundation	Standards for Each Class	
		First Quality	Second Quality
Purity (minimum)	99.00%	99.00%	99.00%
Inert matter (maximum)	1.00%	1.00%	1.00%
Prohibited weed seeds	None	None	None
Restricted weed seeds (maximum)	1*	2*	5*
Other weed seeds (maximum)	5*	10*	15*
Total other crop seeds (maximum)	0.05%	0.25%	0.25%
Other kinds (maximum)	0.01% (1)**	0.01% (2)*	0.01% (5)*
Other varieties (maximum)	0.05%	0.25%	0.25%
Germination (minimum)		90.00%	85.00%

*Seeds per pound

**Seeds per two pounds

Two Tag Certification System Mechanical Quality Tolerances: None

EXPLANATION OF STANDARDS

Prohibited Noxious Weed Seeds include Canada thistle, field bindweed, Indian mustard, leafy spurge, quackgrass, wild mustard, wild oats, wild proso millet, wild radish and yellow rocket.

Restricted Noxious Weed Seeds include buckhorn, dodder, downy brome, giant foxtail, hoary alyssum, oxeye daisy, perennial sowthistle and white cockle.

Velvet Leaf is a restricted noxious weed seed in the Certified class and a prohibited noxious weed seed in the Foundation class.

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, chaff, dead insects, stones or similar matter to be satisfactory in appearance and shall contain no "thistle tops."

HYBRID CORN

DEFINITIONS

Inbred Line. The term “inbred line” means a relatively true-breeding strain resulting from at least five successive generations of controlled self-fertilization or from back-crossing to a recurrent parent with selection, or its equivalent.

Single Cross. The term “single cross” means the first generation hybrid between two inbred lines.

Three-way Cross. The term “three-way cross” means a first generation hybrid between a single cross and an inbred line.

Double Cross. The term “double cross” means the first generation hybrid between two single crosses.

Top Cross. The term “top cross” means the first generation hybrid of a cross between an inbred line and an open-pollinated variety or the first-generation hybrid between a single cross and an open-pollinated variety.

Open-pollination. The term “open-pollination” means pollination that occurs naturally as opposed to controlled pollination, such as by detasseling, cytoplasmic male sterility, self-incompatibility or similar processes.

CERTIFIED CLASS HYBRID CORN

General Field Standards

Previous Crops. A hybrid seed production field must not have grown corn of a different color or endosperm type the previous year.

Field Inspections. Field inspections shall be made before, during and at completion of the pollination period. These inspections will be made without previous notification to the grower.

Interplanting. Interplanted pollen parent rows must be destroyed after completion of pollination, prior to seed harvest and verified by field inspection.

Post Control Testing. Final certification of seed lots by grade size may be contingent upon determination of percent hybridization using biochemical or field/greenhouse growout methods.

SPECIFIC FIELD STANDARDS

Isolation:

1. From Corn of the Same Color and Texture

- a. DIRECT EXPOSURE: Isolation requirements from other corn of the same color and texture may be met by distance alone, or by a combination of

distance and pollen parent border rows as specified in the following table.

Minimum distance from other corn to the first seed parent plant (feet)	Minimum number of border rows* Field Size	
	20 acres	20+ acres
660	0	0
570	4	1
490	6	2
410	8	4
330	10	6
270	12	8
210	14	10
150	16	12
90	18	14
<90	24**	16***

*In order to satisfy isolation requirements, the stand of male border rows must be satisfactory and effective. Border rows must be adjacent to the crossing field and shed pollen when the seed parent rows have 5% receptive silks.

**Minimum of 60 feet including border rows.

***Minimum of 40 feet including border rows.

- b. DIAGONAL EXPOSURE: Use the table in "a. Direct Exposure" to determine if border rows are required. When border rows are required, the distances those border rows are to be planted along the sides of the hybrid seed production field are calculated as follows:

660 ft minus the distance to the closest point of the contaminating field divided by 1.4.

- c. Adequate natural barriers are permitted for modifying isolation distance. Each foot of dense woods is equal to 4 feet of open distance.
- d. Differential maturity dates are permitted for modifying isolation distance, provided there are no receptive silks in the female parent at the same time pollen is being shed in the contaminating field.
- e. If the same pollen parent is used in two crossing fields, no isolation distance between the fields is required.

2. From corn of a different color or texture

- a. Hybrid seed fields must not be less than 660 feet from corn of a different color or texture.

Roguing

Definitely off-type or doubtful plants must be removed from a specific field in such a manner that suckers will not develop.

HYBRID CORN - Continued

Off-type plants must be destroyed before pollination in the male rows and before detasseling in the female rows.

A field will be rejected where more than 0.1% (1 per 1000) off-type pollen shedding plants are found in the male rows when 5.0% or more of the seed parent plants in the field have receptive silks.

A field will be rejected where more than 0.1% (1 per 1000) of the seed parent plants are off-types.

Detasseling

1. Detasseling requirements apply only when 5% or more of the seed parent plants have receptive silks.
2. A hybrid seed field or portion thereof will be rejected:
 - a. If more than 1% of the seed parent plants have shed pollen on any one inspection.
 - b. If the percentage of seed parent plants shedding pollen totals more than 2% for all inspection dates.
3. 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%, all ear parents will be disqualified unless adequately isolated from the shedding seed parent.
4. The detasseling of cytoplasmic male sterile seed parents is permitted.
5. Sucker tassels, portions of tassels, or tassels on main plants will be counted as shedding pollen when two inches or more of the central stem, the side branches, or a combination of the two have anthers extended from the glumes and are shedding pollen.

Male Sterile Ear Parent. A male sterile ear parent may be used to produce certified hybrid corn seed by either of the following 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. A minimum of 1/3 of the seed parent rows in each field for which certification is requested must be planted with male fertile seed.

The producer is responsible for the proper blending of each to assure ample pollen production in commercial fields.

2. The male parent must involve a pollen restorer line or lines so that the plants grown from hybrid corn seed produce pollen in ample quantity.

The producer is responsible for the use of a proper pollen restorer line or lines to provide ample pollen production in the commercial fields.

T-cytoplasm male sterile seed parents are not eligible for certification.

FOUNDATION SINGLE CROSS CORN

A Foundation single cross is the first generation hybrid between two inbred lines which is used as a parent for hybrid seed production.

GENERAL FIELD STANDARDS

Previous Crops. The previous crops grown on a production field must not have been corn of another color or endosperm type.

Field Inspections. Field inspections shall be made before, during and at completion of the pollination period. These inspections will be made without previous notification to the grower.

Male Sterile Lines. A male sterile line may be substituted for its fertile counterpart in a Foundation single cross provided the male sterile line is the same in other observable characteristics as its fertile counterpart.

Fertility Restoring Lines. A fertility restoring line may be substituted for its nonrestoring counterpart in a Foundation single cross provided the fertility restoring line is the same in other observable characteristics as its nonrestoring counterpart.

SPECIFIC FIELD STANDARDS

Isolation. No isolation is required for the increase of hand pollinated seed.

A specific production field involving male sterile or fertile material must be located not less than 660 feet from any kind of corn.

The following exceptions apply when the contaminating field is of the same color and texture:

1. Adequate natural barriers are permitted for modifying isolation distances. Each foot of dense woods is equal to 4 feet of open distance.

HYBRID CORN - Continued

- Differential maturity dates may permit modifying isolation distances, provided there are no receptive silks in the seed parent at the time pollen is being shed in the contaminating field.

Roguing. Definitely off-type or doubtful plants must be removed from a specific field in such a manner that suckers will not develop.

Off-type plants must be destroyed before pollination in the male rows and before detasseling in the female rows.

Any plant shedding pollen in male sterile seed parent rows must be destroyed at pollination time to eliminate the possibility of its seed production.

A field will be rejected where more than .02% (1 per 5000) off-type pollen shedding plants are found in the male rows when 5.0% or more of the seed parent plants in the field have receptive silks.

A field will be rejected where more than .02% (1 per 5000) of the seed parent plants are off-type.

Detasseling

- Detasseling requirements apply only when 5% or more of the seed parent plants have receptive silks.
- A Foundation Single Cross seed field or portion thereof will be rejected:
 - If more than 0.5% of the seed parent plants have shed pollen on any one inspection.
 - If the percentage of seed parent plants shedding pollen totals more than 1.0% for three different inspection dates.
- 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 0.5%, all ear parents will be disqualified unless adequately isolated from the shedding seed parent.
- The detasseling of cytoplasmic male sterile seed parents is not permitted.

Ear Inspection. Foundation single crosses shall be ear inspected after maturity, or have genetic purity determined by biochemical methods or growouts based on grade size.

Fields will be rejected if they contain:

- More than 0.1% (1 per 1000) off-type ears.
- More than 0.2% (2 per 1000) ears with off-colored or different textured kernels. The total number of off-type kernels cannot exceed 25 kernels per 1,000 ears.

CORN INBRED LINES

Field, Isolation, Roguing, Ear Inspection. Standards for Foundation single crosses apply.

SEED GRADING

Public hybrids must comply with the Association seed size standards.

Private hybrids, if labeled for grade on the certification tag, must comply with the Association seed size standards or the specifications of a specific contractual agreement.

Seed Sizing Standards

- First Quality.
 - Flats

Seed Sizes* (sixty-fourths of an inch) all subject to tolerances

Width** Max.-Min.	Thickness** Maximum	Length
28 - 24	15	May be any maximum with a minimum of 75% of the maximum.
27 - 23	15	
26 - 22	14	
25 - 21	14	
24 - 20	14	
23 - 19	13	
22 - 18	13	
21 - 18	13	
20 - 17	13	
19 - 16	13	
18 - 16	12	

* Tolerances. For **width** and **thickness** the tolerance is 1/2% larger than the maximum, and 5% smaller than the minimum for all grades. For length the tolerance is 2% longer than the maximum and 2% shorter than the minimum for all grades.

** Seed goes through the maximum screen size and over the minimum screen size.

HYBRID CORN - Continued

b. Rounds.

Seed sizes and tolerances for rounds shall be the same as for flats with two exceptions

- (1) The maximum thickness shall be the same as the maximum width.
- (2) The minimum length shall be 70% of the maximum length.

c. Plateless.

- (1) There are no size requirements for thickness or length.
- (2) The minimum seed width is 16/64 with no maximum.
- (3) The tolerance allows 5% of the seeds to be smaller than the minimum seed width.

(4) Such seed will be labeled as “plateless” for seed size.

2. Second Quality.

Seed sizes for second quality flats and rounds shall be the same as for first quality. The tolerances for second quality shall be twice those for first quality.

MATURITY RATING

The relative maturity rating may be shown on the certification tag.

SEED TREATMENT

It is strongly suggested that all hybrid seed corn be treated with an approved fungicide.

SEED QUALITY STANDARDS

Factor	Foundation	Standards for Each Class	
		First Quality	Second Quality
Moisture (maximum)	14.00%	14.00%	14.00%
Purity (minimum)	99.50%	99.50%*	98.50%*
Inert matter (maximum)	0.50%	0.50%**	1.00%**
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	None	None	None
Total other crop seeds (maximum)	0.03%	0.08%	0.50%
Other kinds (maximum)	None	0.01%	0.02%
Other varieties (maximum)	0.03%	0.07%*	0.50%*
Germination (minimum)		90.00%***	80.00%

*Hybrid seed corn that does not meet the trait genetic purity requirements of the technology owner will not be approved for certification.

**Maximum 1 piece of cob per pound

***Minimum germination for sweet corn is 80%

Two Tag Certification System Mechanical Quality Tolerances: Germination 2.00%; No tolerances for other factors.

EXPLANATION OF STANDARDS

Moisture testing is required for the “new crop” seed until June 1st after the year in which it was grown.

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from chaff, dead insects, stones or similar matter to be satisfactory in appearance.

Seed infested with stored grain insects must be conditioned and treated in such a manner as to destroy all existing larvae and eggs.

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed Law. (See definitions page 12.)

DRY FIELD BEANS

GENERAL FIELD STANDARDS

Previous Crops. A production field must not have grown any class of dry field beans or green beans in any of the preceding two years, or soybeans the preceding year.

Field Inspection. Two field inspections shall be made: the first when pods are filling but the leaves are still green; the second when at least 80% of the leaves have fallen.

Field Isolation. Fields shall be separated from any other variety, uncertified seed of the same variety, and from other inseparable crops by a distance adequate to prevent mechanical mixture.

Row Width. Fields planted in rows closer than 18 inches are not eligible for certification.

SPECIFIC FIELD STANDARDS

Factor	Standards For Each Class	
	Foundation	Certified
Other varieties	1 per 5,000 plants	1 per 2,000 plants
Inseparable other crops	None	None
Bacterial bean blights	None	1 per 10,000 plants
Common bean mosaic	None	1 per 1,000 plants
Anthraxnose	None	1 per 5,000 plants
Wilt	None	1 per 5,000 plants

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Moisture (maximum)	15.00%	15.00%	15.00%
Purity (minimum)	98.00%	98.00%	98.00%
Inert matter (maximum)	2.00%	2.00%	2.00%
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	None	0.03% (1)*	0.06% (2)*
Total other crop seeds (maximum)	0.04%	0.06%	0.16%
Other kinds (maximum)	None	0.02% (1)**	0.08% (2)*
Other varieties (maximum)	0.04% (1)*	0.04% (1)*	0.08% (2)*
Germination (minimum)		85.00%	80.00%
Bacterial blight infected seed	None	None	None

*Seeds per pound

**Seeds per two pounds

Two Tag Certification System Mechanical Quality Tolerances: None

Recertification of Carryover Seed. The seed is to be sampled after January 1 of the year in which it is to be planted.

Recleaning. When the Association laboratory requires that a lot be recleaned, a germination test is required on the seed sample submitted from the recleaned lot.

EXPLANATION OF STANDARDS

Moisture Testing is required for the "new crop" seed until

June 1st after the year in which it was grown.

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed Law. (See definitions page 12.)

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

FIELD PEAS

GENERAL FIELD STANDARDS

Previous Crops. A seed production field must not have grown field peas during the previous year, unless planted with certified seed of the same variety. A seed production field must not have grown processing peas, soybeans or edible beans the previous year.

Field Inspection. Each production field must be inspected at flowering. Field inspections may also be conducted

at other times when varietal characteristics can be determined.

Field Isolation. Fields shall be separated from any other variety, uncertified seed of the same variety, and from other inseparable crops by a distance adequate to prevent mechanical mixture.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	.02% (1 per 5000 plants)	.075% (1.5 per 2000 plants)
Corn plants bearing seed	None	None
Inseparable other crop plants	None	5 plants/acre
Diseases		
Mosaic (pea seed borne)	None	1 per 10,000 plants
Bacterial blights	None	1 per 10,000 plants
Wilt	None	1 per 10,000 plants
Anthracnose	None	1 per 5,000 plants
Ascochyta diseases	No Standard	No Standard

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Moisture (maximum)	15.00%	15.00%	15.00%
Purity (minimum)	98.45%	98.00%	98.00%
Inert matter (maximum)	2.00%	2.00%	2.00%
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	0.01%	0.03% (1)*	0.06% (2)*
Total other crop seeds (maximum)	0.05%	0.15%	0.20%
Other kinds (maximum)	None	0.05% (1)*	0.10% (2)*
Other varieties (maximum)	0.05% (1)*	0.10% (2)*	0.20% (4)*
Germination (minimum)		80.00%	80.00%

*Seeds per pound

Two Tag Certification System Mechanical Quality Tolerances: Germination 2.00%; No tolerances for other factors.

Recleaning. When the Association laboratory requires that a lot be recleaned, a germination test is required on the seed sample submitted from the recleaned lot.

EXPLANATION OF STANDARDS

Moisture Tests are made on "new crop" seed until June 1st after the year in which it was grown.

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed Law. (See definitions page 12.)

FIELD PEAS - Continued

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no “thistle tops.”

CERTIFIED FIELD PEA AND CERTIFIED OAT MIXTURES

Field pea and oat mixtures may be certified if the following criteria are met:

- All lots of each variety have met field and seed certification standards and are approved for mixing by the Association prior to blending.
- No more than one variety of field pea and one variety of oat are mixed under each mixture designation.
- No blend component shall be less than 15% of the total on a weight basis. Weight records must be kept and be available for inspection by the Association.
- Labeling for mixture components by the producer must fall within the tolerance limits set forth in the Association of Official Seed Analysts “Rules for Testing Seed.”
- A reference sample must be sent to the Association for each blended lot.
- When protected varieties are mixture components, written permission must be received from the owner and a copy must be filed with the Association.
- The mixture components and their percentages on a weight basis must be filed with the Association. The formula for each specific mixture must remain the same for the duration of that mixture designation.

LUPINE

GENERAL FIELD STANDARDS

Previous Crops. A crop will not be eligible for certification if planted where lupines were grown the previous year unless the previous crop was grown from certified seed of the same variety.

Field Inspection. Field inspections shall be made when the field is in full bloom.

Field Isolation. Fields shall be isolated from inseparable other crops by a distance adequate to prevent mechanical mixture.

Lupine fields producing certified seed must be isolated by at least 660 feet from fields of any other variety of lupines or fields of the same variety that do not meet the varietal purity requirements for certification.

SPECIFIC FIELD STANDARDS

Factor	Standards For Each Class	
	Foundation	Certified
Other varieties	1 per 5,000 plants	1.5 per 2,000 plants

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Moisture (maximum)	15.00%	15.00%	15.00%
Purity (minimum)	98.00%	98.00%	98.00%
Inert matter (maximum)	2.00%	2.00%	2.00%
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	None	1*	2*
Total other crop seeds (maximum)	0.10%	0.54%	0.58%
Other kinds (maximum)	0.01%	0.04% (1)**	0.08% (2)*
Other varieties (maximum)	0.10%	0.50% (10)*	0.50% (10)*
Germination (minimum)		85.00%	80.00%

*Seeds per pound

**Seeds per two pounds

Two Tag Certification System Mechanical Quality Tolerances: None

EXPLANATION OF STANDARDS

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed Law. (See definitions page 12.)

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, chaff, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

PERENNIAL RYEGRASS

GENERAL FIELD STANDARDS

Previous Crops. A production field must not have grown or been seeded to any other variety of Perennial Ryegrass during the five previous years for Foundation Class and during the previous two years for the Certified Class unless of the same variety and class. Perennial Ryegrass must be planted in distinct rows. Exceptions must be approved by the Seed Certification Office prior to planting.

Field Inspections.

- Year of establishment seedling inspection. The seedling application must be submitted within 60 days of seeding.
- Annual seed crop inspection for each harvest year.

SPECIFIC FIELD STANDARDS

Class of Seed Produced	Maximum Permitted Other Varieties	Isolation Requirements ^{1,2}	
		Less Than 5 Acres	More Than 5 Acres
Foundation	None	1320 ft.	900 ft.
Certified	1.0%	330 ft.	165 ft.

¹ This distance must be maintained from all varieties of ryegrass, either Annual or Perennial. The only exception is that Diploid Ryegrass varieties do not need to be isolated from Tetraploid Ryegrass varieties, except 15 ft. to prevent mechanical mixture. Linn does not have to be isolated from Oregon Annual Ryegrass.

² Foundation fields of Perennial Ryegrass must be isolated 330 ft. from tall fescue.

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Total ryegrass (minimum)	97.00%	97.00%	97.00%
Crops other than ryegrass (maximum)	0.10%	0.50%	0.50%
Annual ryegrass (maximum)	0.10%	3.00%	3.00%
Total other crop incl. Annual ryegrass (maximum)	0.20%	3.50%	3.50%
Inert matter (maximum)	3.00%	3.00%	3.00%
Weed seed (maximum)	0.15%	0.50%	0.50%
Weed seed, restricted, singly or combined	None	15/lb.	45/lb.
Weed seed, prohibited	None	None	None
Germination (minimum)	85.00%	85.00%	80.00%

Two Tag Certification System Mechanical Quality Tolerances: None

PERENNIAL RYEGRASS - Continued

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include:

Canada thistle
dodder
field bindweed
horsenettle
leafy spurge
johnson grass
knapweed
quackgrass
sheep sorrel
bedstraw
dogbane
pennycress
perennial sowthistle
Russian knapweed
white top
wild garlic

Restricted Weed Seeds include:

buckhorn
downy brome
giant foxtail
hoary alyssum
Indian mustard
oxeye daisy
white cockle
wild mustard
wild oats
wild radish
yellow rocket
bracted plantain
docks (bitter, green & smooth, curly)
wild carrot

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no “thistle tops.”

RED CLOVER

GENERAL FIELD STANDARDS

Previous Crops. A Certified seed production field must not have grown red clover of a different variety during either of the three years immediately preceding the seeding year and must have been clean-cultivated during one of the three years. Manure must not have been applied since clean-cultivation.

Length of Stand. A stand of red clover will not be eligible to produce Certified seed after two seed crops.

Field Inspection. Each production field, for which certification is requested, must be inspected during the growing season at blossom time.

SPECIFIC FIELD STANDARDS

Factor	Standards for Certified
Other varieties	5 plants/acre
Sweet clover plants	None
Inseparable other crops	5 plants/acre
Isolation:	
From other varieties or noncertified seed of the same variety	165 feet
From same variety planted with certified seed	42 feet
From other inseparable crops	6 feet

SEED QUALITY STANDARDS

Factor	Standards For Each Class	
	First Quality	Second Quality
Purity (minimum)	99.00%	99.00%
Inert matter (maximum)	1.00%	1.00%
Prohibited weed seeds	None	None
Restricted weed seeds (maximum)	9*	45*
Other weed seeds (maximum)	0.25%	0.25%
Total other crop seeds (maximum) (including sweet clover)	0.75%	1.00%
Other kinds (maximum)	0.50%	0.50%
Other varieties (maximum)	0.25%	1.00%
Sweet clover seeds (maximum)	5*	90*
Germination and hard seeds (minimum)	85.00%	85.00%

*Seeds per pound

Two Tag Certification System Mechanical Quality Tolerances: None

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include Canada thistle, dodder, field bindweed, horse nettle, leafy spurge, perennial sowthistle, quackgrass, Russian knapweed and white top.

Restricted Weed Seeds include buckhorn, downy brome, giant foxtail, hoary alyssum, Indian mustard, oxeye daisy, white cockle, wild mustard, wild oats, wild radish, and yellow rocket.

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

SMALL GRAINS (Barley, Oats, Rye, Triticale and Wheat)

GENERAL FIELD STANDARDS

Seed Treatment. All seed planted in foundation seed increase fields must be treated with a fungicide which will control smut infection.

Field History. A seed production field must not have grown the same kind of crop the previous year unless planted with certified seed of the same variety.

Wheat and triticale cannot follow each other in a field rotation.

Manure or other contaminating materials must not have been applied the year previous to seeding or during the crop production cycle.

Field Inspection. Each production field must be inspected after heading but previous to any harvest operation.

Seed from a field harvested before inspection will not be eligible for certification.

Field Isolation. Fields shall be separated from any other variety, uncertified seed of the same variety, and from other inseparable crops by a distance adequate to prevent mechanical mixture.

See Specific Field Standards for additional requirements.

Field Contamination with Weeds. Any production field that is so severely infested with weeds of any kind as to make it obviously not usable for seed production shall be rejected. Portions of severely infested fields may be accepted if they are isolated by a distance of at least 6 feet from the rejected portions.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	2 plants/acre	5 plants/acre
Inseparable other kinds	2 plants/acre	5 plants/acre
Isolation		
Rye from rye	660 feet	660 feet
Red and white wheat from each other	660 feet	100 feet
Smut*	0.5%	1%
Weeds		
Wild Radish**	None	None
Wild Oats** (only for oat and barley fields)	None	None

*Seed of fields exceeding smut infection standards must be treated with an acceptable fungicide before certification can be completed.

**Roguing of these weeds will not correct the contamination.

SMALL GRAINS - Continued

SEED QUALITY STANDARDS

Factor	Standards For Each Class		
	Foundation	First Quality	Second Quality
Moisture (maximum)	14.00%	14.00%	14.00%
Winter wheat, rye and winter triticale (maximum)	15.00%	15.00%	15.00%
Purity (minimum)	99.44%	99.36%	98.71%
Inert matter (maximum)	0.50%	0.50%	1.00%
Prohibited weed seeds	None	None	None
Restricted weed seeds (maximum)	1*	1*	1*
Other weed seeds (maximum)	0.02% (10)*	0.02% (10)*	0.04% (20)*
Total other crop seeds (maximum)	0.04%	0.12%	0.25%
Other kinds (maximum)	0.01% (1)*	0.02% (2)*	0.05% (5)*
Other varieties (maximum)	0.03% (3)*	0.10% (10)*	0.20% (20)*
Germination (minimum)		90.00%	80.00%
Rye, triticale and wheat (minimum)		85.00%	80.00%

*Seeds per pound (in the case of small seeded legumes, the number allowable for other kinds is increased by the factor of 4)

Recertification of Carryover Seed. Winter small grain seed is to be sampled after June 15 of the year in which it is to be planted.

Two Tag Certification System Mechanical Quality Tolerances:

Germination.....2.00%
 Inert0.02%
 Noxious weed seeds 1 seed per pound
 Other weed seeds 1 seed per pound
 Other crop seeds..... 1 seed per pound
 No tolerances for other factors

EXPLANATION OF STANDARDS

Moisture Testing is required for “new crop” seed samples submitted to the lab prior to November 1.

Prohibited Noxious Weed Seeds include Canada thistle, field bindweed, Indian mustard, leafy spurge, quackgrass, wild mustard, wild oats, wild proso millet, wild radish, woolly cupgrass and yellow rocket.

Restricted Noxious Weed Seeds include buckhorn, dodder, downy brome, giant foxtail, hoary alyssum, oxeye daisy, perennial sowthistle and white cockle.

Velvet Leaf is a restricted noxious weed seed in the Certified class and a prohibited noxious weed seed in the Foundation class.

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from sticks, stems, chaff, dead insects and similar matter as to be satisfactory in appearance.

Seed shall contain no “thistle tops” or have a distinctly moldy odor.

Seed containing more than five pieces of stem or straw per pound larger than the seed itself will be rejected for certification.

SOYBEANS

GENERAL FIELD STANDARDS

Previous Crops. A seed production field must not have grown soybeans during the previous year, unless planted with Certified seed of the same variety.

Field Isolation. Fields shall be separated from any other variety, uncertified seed of the same variety, and from other inseparable crops by a distance adequate to prevent mechanical mixture.

Field Inspection:

Certified Class. Fields are inspected at maturity after leaf drop and color change.

Foundation Class. Fields are inspected twice during the production season:

1. During flowering
2. At maturity after leaf drop and color change.

SPECIFIC FIELD STANDARDS

Factor	Standards for Each Class	
	Foundation	Certified
Other varieties	0.1% (1 per 1000 plants)	0.50% (1 per 200 plants)
Corn and sunflower plants bearing seed	None	None

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Moisture (maximum)	15.00%	15.00%	15.00%
Purity (minimum)	98.38%	98.00%	98.00%
Inert matter (maximum)	1.50%	2.00%	2.00%
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	0.01%	0.03% (1)*	0.06% (2)*
Total other crop seeds (maximum)	0.11%	0.54%	0.58%
Other kinds (maximum)	0.01%	0.04% (1)**	0.08% (2)*
Other varieties (maximum)	0.10% (2)*	0.50% (10)*	0.50% (10)*
Germination (minimum)		85.00%	80.00%

*Seeds per pound

**Seeds per two pounds

Recertification of Carryover Seed. The seed is to be sampled after January 1 of the year in which it is to be planted.

Recleaning. When the Association laboratory requires that a lot be recleaned, a germination test is required on the seed sample submitted from the recleaned lot.

Two Tag Certification System Mechanical Quality Tolerances: Germination 2.00%; No tolerances for other factors.

EXPLANATION OF STANDARDS

Moisture Tests are made on "new crop" seed through June 1st after the year in which it was grown.

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed law. (See definitions page 12.)

SOYBEANS - Continued

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance, and shall contain no “thistle tops.”

SOYBEAN BLENDS

Different varieties of soybeans can be blended if the following criteria are met:

- All lots of each variety have met field and seed certification standards and are approved for blending by the Association prior to blending.
- No more than four varieties can be blended under each blend designation. No blend component shall be less than 15% of the total on a weight basis. Blending tolerance limits for each component shall be plus or

minus 10% of each component on a weight basis. Weight records must be kept and be available for inspection by the Association.

- When protected varieties are blend components, written permission must be received from the owner and a copy must be filed with the Association.
- The blend components and their percentages on a weight basis must be filed with the Association. The formula for each specific blend must remain the same for the duration of that blend designation.

Blend components and their percentages on a weight basis do not need to be listed on the certification tag unless required for protected variety components by the owners.

HYBRID SUNFLOWERS

GENERAL FIELD STANDARDS

Previous Crops. A seed production field must not have grown the same kind of crop during the previous year.

Field Inspection. Each crossing field will be inspected before, during and at completion of bloom. Inspections will be made without previous notification to the grower.

A field producing hybrid sunflower seed must have:

1. The male parent in bloom and producing pollen at

the time the female parent is in bloom.

2. The male parent plants in bloom prior to any female parent plants blooming. All female sunflower heads blooming before the male parent heads are in bloom must be removed.
3. At least 50% of the male parent plants flowering and producing pollen when the female parent is in full bloom.

SPECIFIC FIELD STANDARDS

Isolation For:	Minimum Isolation Distance From		
	Oil Type	Non-Oil Type	Wild Type
Oil Type	2,640 ft.	1 mile	1 mile
Non-Oil Type	1 mile	2,640 ft.	1 mile

Factor	Maximum Tolerance	
	Foundation	Certified
Pollen producing plants in male sterile rows	.80% (8 per 1000 plants)*	.80% (8 per 1000 plants)*
Off-type plants (wild type, branching purple plants and white seeded plants)	.02% (1per 5000 plants)	.05% (1 per 2000 plants)
Corn plants bearing seed	None	None

*Maximum tolerance applies to any one inspection.

If the count exceeds .4% (4/1000) on any one inspection, the field must be rogued within 24 hours.

If the field is not below .4% shadders within 24 hours, it must be rejected.

If the total percentage of all inspections exceeds 2%, the field must be rejected.

SEED QUALITY STANDARDS

Factor	Foundation	Standards For Each Class	
		First Quality	Second Quality
Purity (minimum)	99.00%	99.00%	98.00%
Inert matter (maximum)	1.00%	1.00%	2.00%
Noxious weed seeds	None	None	None
Other weed seeds (maximum)	None	0.02% (1)*	0.04% (2)*
Total other crop seeds (maximum)	0.02%	0.09%	0.20%
Other kinds (maximum)	None	0.05% (1)**	0.10% (1)*
Other varieties (maximum)***	0.02% (1)*	0.04% (2)*	0.10% (5)*
Germination (minimum)		85.00%	85.00%
Sclerotinia (Sclerotinia Sclerotiorum)	None	None	1 sclerotium/lb.
Hybridization (minimum)		95.00%****	85.00%****

*Seeds per pound

**Seeds per two pounds

***Shall not include more than .04% purple or white seeds

****To be determined by winter growouts (one growout/field)

HYBRID SUNFLOWERS - Continued

Two Tag Certification System Mechanical Quality
Tolerances: None

EXPLANATION OF STANDARDS

Noxious Weed Seeds include all weed seeds declared to be noxious in the Wisconsin Seed Law. (See definitions page 12.)

Insects and Trash in Seed. Seed shall contain no living “stored grain” insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no “thistle tops.”

PRE-CONTROL STANDARDS

If field inspection shows one or more of the following, the applicant may request that seed certification be based on the results of a pre-certification growout test approved by the certification agency:

1. Inadequate isolation.
2. Too few male parent plants shedding pollen when female parent plants are receptive.
3. Excess off-types not to include wild-types.

In such cases, at least 2,000 plants must be observed and they must meet the following standards before seed can be certified from fields with problems listed above.

POST-CONTROL STANDARDS

Factor	Hybrid	Inbred
Sterile plants	5.0%	—
Sterile or fertile plants	—	5.0%
Morphological off types	0.5%	0.5%
Wild-types	0.2%	0.2%
Total, including above types	5.0%	5.0%

TIMOTHY

GENERAL FIELD STANDARDS

Previous Crops. A Certified production field must not have grown or been seeded to the same species during the previous three calendar years unless the crop was of the same variety, the same or a higher seed certification class and passed field inspection for certification. The field must be clean cultivated one season prior to seeding. Fall seeding is permitted in the second year.

Manure must not have been applied the year previous to seeding or during the crop production cycle.

Length of Stand. A stand of timothy will not be eligible to produce certified seed after 3 seed crops.

Field Inspection. Each production field must be inspected after heading.

SPECIFIC FIELD STANDARDS

Factor	Standards for Certified
Other crops	5 plants per acre
Other varieties	5 plants per acre
Isolation	
Other varieties or uncertified fields of the same variety ¹	165 feet
Inseparable other crops	6 feet

¹ When different classes of seed of the same variety are being grown on the same or adjacent farms, the isolation requirements may be reduced to 25% of this distance.

SEED QUALITY STANDARDS

Factor	Standards For Each Class	
	First Quality	Second Quality
Purity (minimum)	99.00%	97.00%
Inert matter (maximum)	1.00%	3.00%
Prohibited weed seeds	None	None
Restricted weed seeds (maximum)	13*	45*
Other weed seeds (maximum)	0.25%	0.50%
Total other crop seeds (maximum)	0.60%	1.50%
Other kinds (maximum)	0.10%	0.50%
Other varieties (maximum)	0.50%	1.00%
Other grasses (maximum)	0.10%	0.25%
Germination (minimum)	80.00%	80.00%

*Seeds per pound

Two Tag Certification System Mechanical Quality Tolerances: None

EXPLANATION OF STANDARDS

Prohibited Weed Seeds include Canada thistle, field bindweed, leafy spurge and quackgrass.

Restricted Weed Seeds include buckhorn, dodder, downy brome, giant foxtail, hoary alyssum, Indian mustard, oxeye daisy, perennial sowthistle, white cockle, wild mustard, wild oats, wild radish and yellow rocket.

Insects and Trash in Seed. Seed shall contain no living "stored grain" insects and shall be sufficiently free from sticks, stems, dead insects and similar matter as to be satisfactory in appearance and shall contain no "thistle tops."

SOURCE-IDENTIFIED CERTIFICATION STANDARDS FOR NATIVE SPECIES PRODUCED IN WISCONSIN

INTRODUCTION

Seed certification of native species will be done by the Wisconsin Crop Improvement Association (WCIA). Wisconsin Native Species seed certification standards are reviewed by the WCIA Certification Committee which makes recommendations for any changes to the WCIA Board of Directors for their approval. The committee will include at least five persons knowledgeable about native seeds appointed by the President of the WCIA Board of Directors. The five persons will include three producers, one Department of Natural Resources representative and one member of a conservation organization.

PURPOSE

The purpose of this seed certification program is to maintain and make available to the public, quality seed of source-identified species of native plants so produced, handled and distributed as to insure proper labeling and identity.

GENERAL STANDARDS

CLASSES OF SOURCE-IDENTIFIED SEED

Classes of seed recognized in the certification of source-identified seed.

- | | |
|--|-----------|
| A. Source-identified Generation zero
Seed collected from native stands. | (G_0) |
| B. Source-identified Generation one
Seed harvested from a G_0 planting. | (G_1) |
| C. Source-identified Generation two
Seed harvested from a G_1 planting. | (G_2) |
| D. Source-identified Generation three
Seed harvested from a G_2 planting. | (G_3) |
| E. Unlimited generations beyond G_3 are recognized for certification. | |

SOURCE GEOGRAPHIC IDENTIFICATION

The geographic location of all classes of source-identified

seed shall be described as one of the following:

- A. One or more of the Native Plant Seed Genotype Regions of Wisconsin (see pages 43 and 44)
- B. One or more counties
- C. Wisconsin

ELIGIBILITY

The eligibility criteria for source-identified certification are as follows:

- A. The species being considered for certification must be native to Wisconsin and shall not be a noxious weed under Wisconsin or federal law or regulation.
- B. Approved seedstocks are:
 - (1) Certified source-identified seedstocks. Applicant using certified seedstocks acquired from or multiplied from seedstocks acquired from another collector or producer must have a signed "Authorization to Produce Source-Identified Certified Seed" form for each seed lot.
 - (2) Seedstocks produced by the producer requesting field inspection which passed field inspection, but failed certified mechanical seed quality standards.
 - (3) G_0 seedstocks collected by the applicant from native stand sites which are documented either by WCIA field inspection or as Wisconsin Department of Natural Resources approved collections.
- C. The producer must properly submit an application for source-identified certification.
- D. Seed must be harvested from:
 - a. an approved native stand.
 - b. an approved production field.

- E. Production for certification on producer established fields may continue indefinitely providing certification standards are met.

APPLICATION

- A. Application forms will be supplied by the certification agency. Completed applications for certification shall be submitted to the certification agency annually.
- B. Maps shall be provided, along with completed applications, to the certification agency showing the location of native stand collection sites and established production fields.
- C. Specific native stand collection site information is confidential between the grower and WCIA except through court order or during a Department of Agriculture, Trade and Consumer Protection (DATCP) inspection.
- D. One Source-identified certification tag, for each seed stock lot planted, must be submitted with the application for field inspection of producer established fields with the following exceptions:
 - 1. Producer collected/WCIA documented G₀ seedstocks were planted.
 - 2. A WCIA laboratory report is submitted for seedstocks which passed field inspection but failed seed mechanical quality standards.
 - 3. For acquired seedstock lots, in addition, a signed "Authorization to Produce Source-Identified Certified Seed" form must also be submitted.
- E. Producers must furnish, in writing, collection authorization from the owner for native stands located on private property.

FIELD INSPECTION PROCEDURES

- A. Field inspection of the source-identified seed shall be performed by certification agency inspectors for both production field plantings and native stands. Inspections will occur after heading out, preferably at flowering but before harvest, and will include verification of location, elevation (if applicable) and field size. Roguing of objectionable plants is required prior to field inspection and is the responsibility of the grower.
- B. State Natural area and State Wildlife area native stand

sites do not require on site inspections. Producers must furnish annually to WCIA copies of:

- 1. DNR document authorizing collections.
 - 2. Producer report of seed collections to the DNR.
- C. Native stand sites may be inspected the year after seed collection provided the producer furnished collection site, identification number, location and seed quantity collected to WCIA during the year of collection.

ISOLATION DISTANCES

- A. Existing native stands must be isolated from planted stands of the same species by:
 - 880 yards (0.5 miles) for grasses and sedges
 - 440 yards (0.25 miles) for forbs.
- B. For field or nursery grown material, plantings must be isolated from stands of the same species of different or unknown genotypes and for which higher generation planting stocks were used to maintain source purity by:
 - 880 yards (0.5 miles) for grasses and sedges
 - 440 yards (0.25 miles) for forbs.

SEED INSPECTION PROCEDURES

See *General Seed Certification Standards* pages 7 and 8.

SEED SAMPLE

- A. When requesting certification, an official seed sample must be submitted for each native species seed lot harvested from each collection site or production field.
- B. Sampling procedures and testing methods recognized by the Association of Official Seed Analysts (AOSA) shall be used where applicable.
- C. Seed samples will be retained by WCIA after seed analysis testing is completed.

TESTING SEED LOTS

- A. Seed analysis tests for labeling must be performed by the WCIA Seed Testing Lab. AOSA methods will be used where applicable.

- B. All seed must meet Wisconsin certification standards for source-identity, species purity, mechanical purity and germination before certification tags will be issued.

See Table 1 on page 40.

There are no minimum germination standards for G₀ class source-identified seed.

- C. All forb seed shall be free of dispersal apparatus not required for germination.
- D. The seed shall contain no prohibited and limited restricted noxious weed seeds as defined in the State Seed Laws of Wisconsin.

LABELING

- A. The certified source-identified seed label shall contain the following information:
1. Class of certified source-identified seed
 2. Species common and scientific name
 3. Purity information including: the percentage by weight of pure seed, inert matter, weed seeds and seed of other species
 4. Lot number
 5. Percentage of germination exclusive of dormant or hard seed and the percentage of dormant or hard seed
 6. Total of the germination and dormant or hard seed percentages
 7. Original geographic location of G₀ (native stand) collection site for all seed regardless of generation
 8. Production field county location
- B. Small packet labels must meet AOSCA standards (AOSCA certification handbook, section 1, page 4)
- C. G₀ seed will be labeled with a white Source-Identified tag. G₁ and higher generation seed will be labeled with a yellow Source-Identified tag.

- D. The producer, collector or vendor, whose name appears on the seed container guarantees to the buyer that the tag attached to the seed is an accurate representation of the entire lot of the seed and that the lot has been inspected by the official seed certification agency and conforms to the published standards of that agency.

SEED CONDITIONING AND PRODUCTION RECORDS

All grower records and facilities involved in receiving, cleaning, storing, labeling, shipping or other functions in the certification process shall be available for inspection by the WCIA during normal business hours.

It is the responsibility of each producer to maintain an accurate record of all sales of certified source-identified seed, including the name and address of the purchaser, amount and species/genotype of seed sold and the date.

REJECTION OF SEED LOTS

The seed certifying agency will reject for certification, any lot of source-identified seed which is questionable as to source-identity, and any lot which does not meet the certification standards of WCIA.

VIOLATIONS

The penalty for providing false information or collecting seed and/or digging plants on state or private land without permission is the loss of certification privileges now and in the future.

TABLE 1
SEED QUALITY STANDARDS

SPECIES	% Inert Matter	% Weed Seed	% Other Species	*** % Purity	**** % Viable Seed	** Sample Size/gm AOSA Equiv.	** Sample Size/GM AOSA Std.
SEDGES	15	1	.50	90	70		
GRASSES							
Andropogon gerardii (Big bluestem)	15	1	.50	85	70	--	70
Bouteloua curtipendula (Side-oats grama)	10	1	.50	90	70	--	20 *60
Bromus ciliatus (Fringed brome)	20	1	.50	80	70	100	--
Bromus kalmii (Prairie brome)	20	1	.50	80	70	110	--
Bromus purgans (Hairy wood chess)	20	1	.50	80	70	110	--
Cinna arundinacea (Wood reed)	25	1	.50	75	70	10	--
Elymus canadensis (Canada wild rye)	10	1	.50	90	80	--	110
Elymus hirsuta (Bottlebrush grass)	10	1	.50	90	80	110	--
Elymus villosus (Silky wild rye)	10	1	.50	90	70	110	--
Elymus virginicus (Virginia wild rye)	10	1	.50	90	70	150	--
Glyceria canadensis (Rattlesnake grass)	5	1	.50	95	70	20	--
Glyceria grandis (American mannagrass)	5	1	.50	95	70	10	--
Glyceria striata (Fowl mannagrass)	5	1	.50	95	70	5	--
Koeleria macrantha (June grass)	25	1	.50	75	70	5	--
Panicum virgatum (Switch grass)	5	1	.50	95	70	--	40
Schizachyrium scoparium (Little bluestem)	25	1	.50	75	60	--	50
Scirpus atrovirens (Dark-green bulrush)	5	1	.50	95	70	2.5	--
Sorghastrum nutans (Indian grass)	10	1	.50	90	70	--	70
Spartina pectinata (Prairie cordgrass)	25	1	.50	75	40	110	--
Sporobolus cryptandrus (Sand dropseed)	5	1	.50	95	70	--	2.5
Sporobolus heterolepis (Prairie dropseed)	5	1	.50	95	40	50	--
Stipa spartea (Needlegrass)	5	1	.50	95	50	500	--
FORBS							
Agastache foeniculum (Anise hyssop)	5	1	.50	95	70	10	--
Agastache nepetoides (Yellow Giant hyssop)	5	1	.50	95	70	10	--
Agastache scrophulariae (Purple giant hyssop)	5	1	.50	95	70	10	--
Alisma plantago (Water plantain)	5	1	.50	95	70	10	--
Allium cernuum (Nodding wild onion)	5	1	.50	95	70	110	--
Amorpha canescens (Leadplant)	5	1	.50	95	70	40	--
Anemone canadensis (Meadow anemone)	15	1	.50	85	70	75	--
Anemone cylindrica (Thimbleweed)	15	1	.50	85	70	30	--
Anemone virginiana (Tall thimbleweed)	15	1	.50	85	70	30	--
Artemisia campestris (Beach wormwood)	5	1	.50	95	70	5	--
Artemisia ludoviciana (White sage)	5	1	.50	95	70	--	5
Asclepias incarnata (Swamp milkweed)	5	1	.50	95	70	140	--
Asclepias syriaca (Common milkweed)	5	1	.50	95	70	120	--
Asclepias tuberosa (Butterfly milkweed)	5	1	.50	95	70	120	--
Asclepias verticillata (Whorled milkweed)	5	1	.50	95	70	120	--

(continued)

* with appendages

** Noxious weed seed exam sample size

*** Purity Exam sample size is 1/10 of the noxious exam sample

**** Viable seed% = germinable seed % plus the hard/dormant seed %

TABLE 1 (CONTINUED)
SEED QUALITY STANDARDS

SPECIES	%	%	%	***	****	**	**
				%	%	Sample	Sample
	Inert	Weed	Other	Purity	Viable	Size/gm	Size/GM
	Matter	Seed	Species		Seed	AOSA Equiv.	AOSA Std.
FORBS							
Astragalus canadensis (Canada milkvetch)	5	1	.50	95	70	40	--
Baptisia lactea (White false indigo)	5	1	.50	95	70	500	--
Clematis virginiana (Virgin's bower)	5	1	.50	95	70	20	--
Coreopsis lanceolata (Lance-leaved coreopsis)	5	1	.50	95	70	--	50
Coreopsis palmata (Stiff coreopsis)	50	1	.50	50	70	70	--
Coreopsis tripteris (Tall coreopsis)*	50	1	.50	50	70	50	--
Dalea candida (White prairie clover)	5	1	.50	95	70	40	--
Dalea purpurea (Purple prairie clover)	5	1	.50	95	70	40	--
Desmodium canadense (Showy tick-trefoil)	5	1	.50	95	70	110	--
Desmodium illinoense (Illinois tick-trefoil)	5	1	.50	95	70	150	--
Dodecatheon meadia (Shooting star)	5	1	.50	95	70	10	--
Echinacea pallida (Pale purple coneflower)	5	1	.50	95	70	110	--
Erechtites hieracifolia (Burnweed)	5	1	.50	95	70	10	--
Eryngium yuccifolium (Rattlesnake master)	15	1	.50	85	70	110	--
Eupatorium maculatum (Joe pye-weed)	5	1	.50	95	70	10	--
Eupatorium perfoliatum (Boneset)	5	1	.50	95	70	10	--
Eupatorium purpureum (Woodland Joe-pye weed)	5	1	.50	95	70	20	--
Euphorbia corollata (Flowering spurge)	5	1	.50	95	70	70	--
Euthamia graminifolia (Grass-leaved goldenrod)	15	1	.50	85	70	2.5	--
Glycyrrhiza lepidota (Wild licorice)	5	1	.50	95	70	110	--
Helenium autumnale (Sneezeweed)	15	1	.50	85	70	--	5
Helianthus grosseserratus (Sawtooth sunflower)	5	1	.50	95	60	50	--
Helianthus pauciflorus (Showy sunflower)	5	1	.50	95	60	110	--
Helianthus occidentalis (Western sunflower)	5	1	.50	95	60	50	--
Heliopsis helianthoides (Ox-eye sunflower)	5	1	.50	95	70	--	100
Hypericum sphaerocarpaceum (Round-fruited St. John's wort)	5	1	.50	95	70	5	--
Ionactis linariifolius (Stiff aster)	5	1	.50	95	60	10	--
Kuhnia eupatorioides (False boneset)	5	1	.50	95	70	30	--
Lespedeza capitata (Round-headed bushclover)	5	1	.50	95	70	70	--
Liatris aspera (Rough blazing star)	20	1	.50	80	60	50	--
Liatris cylindracea (Dwarf blazing star)	20	1	.50	80	60	50	--
Liatris pycnostachya (Prairie blazing star)	20	1	.50	80	60	70	--
Liatris spicata (Marsh blazing star)	20	1	.50	80	60	70	--
Lobelia siphilitica (Great blue lobelia)	5	1	.50	95	70	2.5	--
Lupinus perennis (Perennial lupine)	5	1	.50	95	70	--	500
Lycopus americanus (Bugleweed)	5	1	.50	95	70	5	--

(continued)

* with appendages

** Noxious weed seed exam sample size

*** Purity Exam sample size is 1/10 of the noxious exam sample

**** Viable seed% = germinable seed % plus the hard/dormant seed %

TABLE 1 (CONTINUED)
SEED QUALITY STANDARDS

SPECIES	%	%	%	***	****	**	**
				%	%	%	Sample
	Inert	Weed	Other	Purity	Viable	Size/gm	Size/GM
	Matter	Seed	Species		Seed	AOSA Equiv.	AOSA Std.
FORBS							
Monarda fistulosa (Wild bergamot)	5	1	.50	95	70	10	--
Monarda punctata (Horsemint)	5	1	.50	95	70	10	--
Napaea dioica (Glade mallow)	5	1	.50	95	70	150	--
Oenothera biennis (Common evening primrose)	5	1	.50	95	70	20	--
Parthenium integrifolium (Wild quinine)	10	1	.50	90	70	110	--
Penstemon digitalis (Smooth penstemon)	5	1	.50	95	70	5	--
Physostegia virginiana (Obedient plant)	5	1	.50	95	70	40	--
Potentilla arguta (Tall cinquefoil)	5	1	.50	95	70	5	--
Pycnanthemum virginianum (Mountain mint)	5	1	.50	95	70	5	--
Ratibida pinnata (Yellow coneflower)	5	1	.50	95	70	30	--
Rudbeckia hirta (Black-eyed Susan)	5	1	.50	95	70	--	10
Rudbeckia laciniata (Wild golden glow)	5	1	.50	95	70	40	--
Rudbeckia subtomentosa (Sweet black-eyed Susan)	5	1	.50	95	70	20	--
Rudbeckia triloba (Branched coneflower)	5	1	.50	95	70	20	--
Sagittaria latifolia (Arrowhead)	5	1	.50	95	70	10	--
Senna hebecarpa (Wild senna)	5	1	.50	95	70	500	--
Silphium integrifolium (Rosinweed)	15	1	.50	85	70	200	--
Silphium laciniatum (Compass plant)	15	1	.50	85	70	500	--
Silphium perfoliatum (Cup plant)	15	1	.50	85	70	500	--
Silphium terebinthinaceum (Prairie dock)	15	1	.50	85	70	500	--
Solidago nemoralis (Grey goldenrod)	5	1	.50	95	70	5	--
Solidago ohioensis (Ohio goldenrod)	5	1	.50	95	70	10	--
Solidago ptarmicoides (Upland white aster)	5	1	.50	95	70	10	--
Solidago riddellii (Riddells goldenrod)	5	1	.50	95	70	10	--
Solidago rigida (Stiff goldenrod)	5	1	.50	95	70	20	--
Solidago speciosa (Showy goldenrod)	5	1	.50	95	70	10	--
Symphotrichum dumosus (Long-stalked aster)	5	1	.50	95	60	10	--
Symphotrichum laevis (Smooth aster)	5	1	.50	95	60	20	--
Symphotrichum novae-angliae (New England aster)	10	1	.50	90	60	--	10
Symphotrichum oolentangiensis (Sky-blue aster)	5	1	.50	95	60	10	--
Symphotrichum urophyllum (Arrow aster)	5	1	.50	95	60	10	--
Thalictrum dasycarpum (Meadow rue)	5	1	.50	95	70	50	--
Tradescantia ohioensis (Spiderwort)	5	1	.50	95	70	110	--
Verbena hastata (Blue vervain)	5	1	.50	95	70	10	--
Verbena stricta (Hoary vervain)	5	1	.50	95	70	20	--
Veronicastrum virginicum (Culver's root)	5	1	.50	95	70	2.5	--
Vernonia fasciculata (Ironweed)	5	1	.50	95	70	30	--
Ziza aurea (Golden alexanders)	5	1	.50	95	70	100	--

* with appendages

** Noxious weed seed exam sample size

*** Purity Exam sample size is 1/10 of the noxious exam sample

**** Viable seed% = germinable seed % plus the hard/dormant seed %

GENOTYPE. The entire genetic constitution, expressed or latent, of an organism.

INERT MATTER. Broken or damaged seeds one-half or less their original size, undeveloped weed seeds without embryo or endosperm and any matter other than seeds, i.e. sand, stones, dirt, sticks, pods, chaff.

NATIVE STANDS. Production sites which have never been tilled. Sites which are no longer tilled and have repopulated naturally with native species without the introduction of seeds by man.

NOXIOUS WEEDS. Weeds which are listed as prohibited and restricted by Wisconsin State seed law.

NURSERY PLANTING. Monoculture of native plant species grown for the specific purpose of seed or plant multiplication.

OTHER CROP. Other native species or domesticated crops.

PERCENT GERMINATION. Percentage of pure seed that will produce normal seedlings in seed laboratory tests.

PURITY. Percent by weight of pure seed (100% minus the percentages of inert matter, weed seed and other crop).

ROGUE. Systematic removal of individuals or families of undesirable genotype or other species.

SOURCE-IDENTIFIED. Plants or seeds that are not genetically improved but are guaranteed as to source of geographic origin.

UNCONDITIONED SEED. Seed in its harvested state prior to being put through the cleaning process.

WEED SEED. Includes seeds of any plant commonly known as a weed but not designated as prohibited or restricted noxious.

Native Plant Seed Genotype Regions

Southcentral Genotype Region

Adams	Monroe
Columbia	Portage
Green Lake	Sauk
Jackson	Waupaca
Juneau	Waushara
Marquette	Wood

Southwest Genotype Region

Buffalo	Juneau
Chippewa	LaCrosse
Clark	Lafayette
Crawford	Monroe
Dane	Pepin
Dunn	Pierce
Eau Claire	Richland
Grant	Sauk
Green	St. Croix
Iowa	Trempealeau
Jackson	Vernon

Southeast Genotype Region

Brown	Milwaukee
Calumet	Outagamie
Columbia	Ozaukee
Dane	Racine
Dodge	Rock
Fond du Lac	Sauk
Green	Sheboygan
Green Lake	Walworth
Jefferson	Washington
Kenosha	Waukesha
Manitowoc	Waushara
Marquette	Winnebago

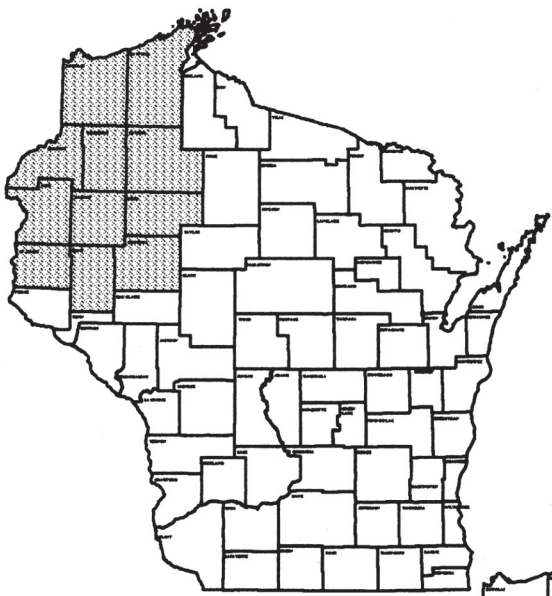
Northeast Genotype Region

Ashland	Marathon
Clark	Marinette
Door	Menominee
Florence	Oconto
Forest	Oneida
Iron	Price
Kewaunee	Shawano
Langlade	Taylor
Lincoln	Vilas

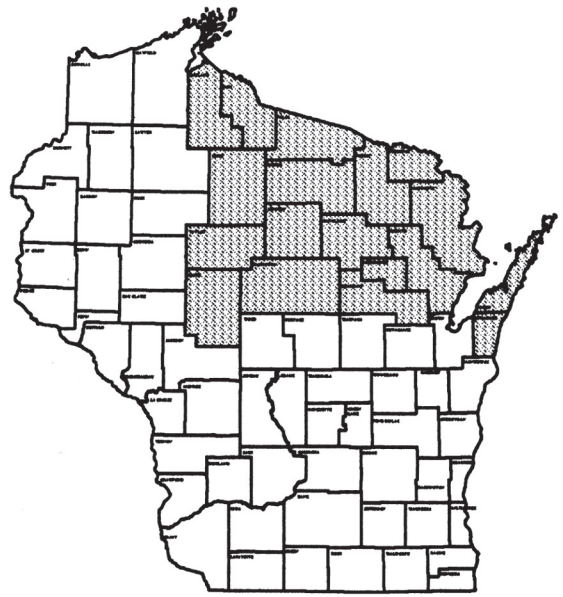
Northwest Genotype Region

Barron	Polk
Bayfield	Rusk
Burnett	Sawyer
Chippewa	St. Croix
Douglas	Washburn
Dunn	

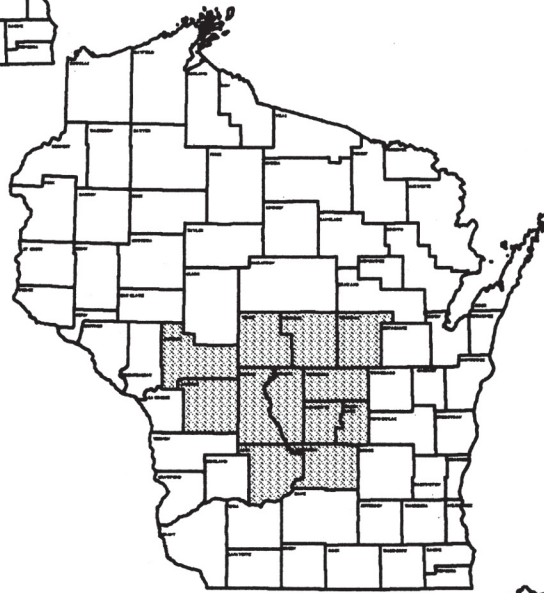
Native Plant Seed Genotype Regions



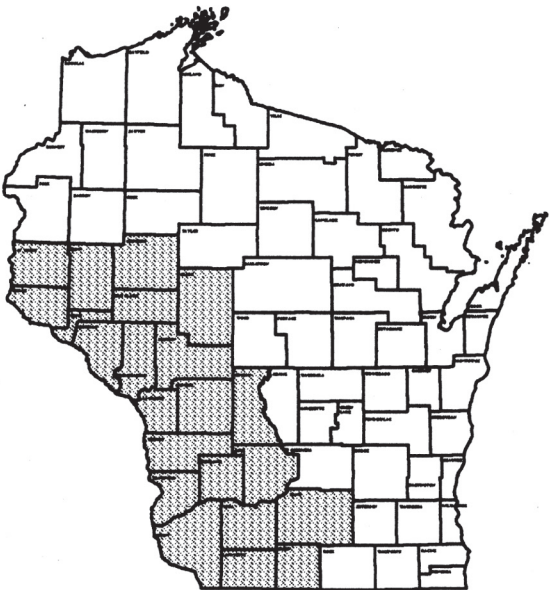
Northwest



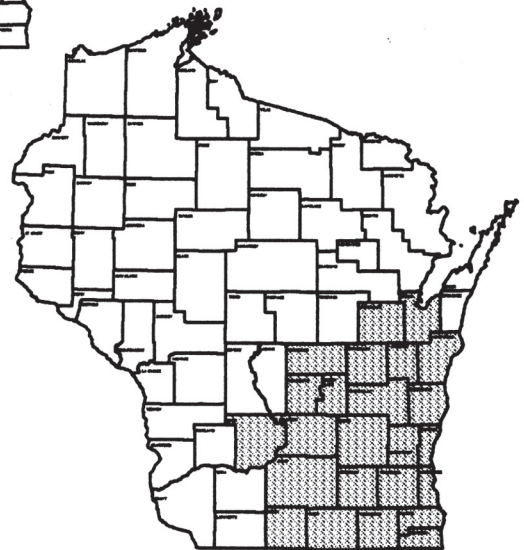
Northeast



Southcentral



Southwest



Southeast