# **Iowa Seed Certification Requirements**



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# **GENERAL SEED CERTIFICATION REQUIREMENTS**

The general requirements apply to all crops eligible for certification unless otherwise stated. For specific requirements, see standards for the crop being certified. Specific certification requirements for crops not listed in this document will be those published by the Association of Official Seed Certifying Agencies (AOSCA). In any case, requirements will not be less than standards and procedures specified in §201.68 through §201.78 of the Federal Seed Act.

## I. The Certifying Organization

- A. Iowa Crop Improvement Association (ICIA) is designated in Chapter 177 of the Iowa Code as the official seed certifying agency in Iowa. In compliance with the Federal Seed Act (FSA) §201.67, ICIA administers standards that meet or exceed the FSA standards and procedures specified in §201.68—201.78.
- B. Membership in ICIA is open to those individuals or entities who:
  - 1. Participate in certification, field inspection or other services of ICIA; or
  - 2. Participate in the Iowa Crop Performance Tests; or
  - 3. Are engaged in agricultural work in Iowa; or
  - 4. Are actively interested in crop improvement;

Customers—participants described in items 1 and 2 above—are considered members of ICIA. Noncustomers who wish to become members, those described in items 3 and 4 above, shall submit a membership application and fee.

### II. Purposes of Certification

The purposes of certification are to encourage the production of ample supplies of high quality seed of superior varieties grown and distributed under careful conditions to:

- A. Assure genetic identity and purity are maintained during all stages of certification, including planting, harvesting, processing, and labeling of seed;
- B. Make known to the public the sources of certified seed supplies;
- C. Promote the use of quality seed.

## III. Eligibility Requirements for Certification of Crop Varieties

A. Only those varieties that are accepted by the certifying agency as meriting certification, in accordance with the criteria listed below, shall be eligible for certification. Varieties will normally be considered eligible for certification if the variety has received favorable action by one or more of the following:

AOSCA National Variety Review Board Plant Variety Protection Office or Breeder Rights statement Official Seed Certifying Agency OECD Seed Schemes

- 1. When eligibility approval is sought through any method other than a Variety Review Board, the information indicated below in § III D must be made available to ICIA.
- 2. Should questions arise concerning the eligibility of a variety for certification, or if a variety does not fit in one of the four categories listed above, final determination of merit for certification will be made by Iowa Crop Improvement Association.
  - a. Varieties in foundation seed production that have not been accepted as eligible for certification may be accepted for inspection with final certification subject to later eligibility approval as outlined above.
    - 1) Acceptance for inspection will be with the understanding that the variety will be approved as eligible prior to final certification.
    - 2) At the time of the first application for certification of a variety, the certifying agency shall be furnished a detailed morphological description of the plant and the seed including the incidence of variations expected (if any), and any other distinguishing characteristics.
  - b. Varieties in breeder seed production may be accepted for inspection on a service basis only, provided an adequate description of the variety is received with the application. No certification tags will be issued.
- B. A field planted with an eligible class of certified seed identified by a certification tag is eligible for certification if the crop, variety and class are accepted for certification in lowa.
- C. When a seed lot is downgraded to a lower class of certified seed for reasons other than genetic factors, the seed may retain the original classification when used as planting stock by the original applicant. The seed must be finally certified in order to be eligible. A tag taken from the seed planted will be required to establish the identity and eligibility of the source of seed planted.
- D. The originator, developer, or owner of a variety, or agent thereof, shall make the following items available when eligibility for certification is requested:
  - 1. The name of the variety. This name must be the established name if the variety has been previously marketed.
  - 2. A statement concerning the variety's origin and the breeding procedure used in its development.
  - 3. A detailed description of the morphological, physiological, and other characteristics of the plants and seed that distinguish it from other varieties.
  - 4. Evidence of the identity of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety.
  - 5. A statement delineating the geographic area or areas of adaptation of the variety.
  - 6. A statement on the plans and procedures for the maintenance of stock seed classes, including the number of generations through which the variety may be multiplied.

- 7. A description of the manner in which the variety is constituted when a particular cycle of reproduction or multiplication is specified.
- 8. Any additional restrictions on the variety, specified by the breeder, with respect to geographic area of seed production, age of stand or other factors affecting genetic purity.
- 9. A sample of seed representative of the variety as marked. The minimum sample size shall be that required for a submitted sample in the current issue of the Rules of Testing Seeds for the Association of Official Seed Analysts.

#### IV. Definitions [Derived from FSA Regulations.]

#### A. Variety [§ 101. (A), (12)]

The term variety means a subdivision of a kind which is distinct, uniform, and stable; distinct in the sense that the variety can be differentiated by one or more identifiable morphological, physiological, or other characteristics from all other varieties of public knowledge, uniform in the sense that variations in essential and distinctive characteristics are describable; and stable in the sense that the variety will remain unchanged to a reasonable degree of reliability in its essential and distinctive characteristics and its uniformity when reproduced or reconstituted as required by the different categories of varieties.

### B. Off-Type [§ 201.2, (ff)]

Off-type means a seed or plant which deviates in one or more characteristics from that which has been described as being usual for the strain or variety. Off-types may include seeds or plants of other varieties; seeds or plants not necessarily any variety; seeds or plants resulting from cross pollination by other kinds or varieties; seeds or plants resulting from uncontrolled self-pollination during production of hybrid seed; or segregates from any of the above plants.

#### C. Variants [AOSCA handbook definitions]

- 1. Variants are seeds or plants which are:
  - a. Distinct within the variety but occur naturally in the variety;
  - Stable and predictable with a degree of reliability comparable to other varieties of the same kind, within recognized tolerances, when the variety is reproduced or reconstituted; or
  - c. Originally a part of the variety as released.
- 2. Variants are not to be considered off-types.
- D. Inbred line [§ 201.2, (gg)]: A relatively true-breeding strain resulting from controlled self-fertilization, backcrossing to a recurrent parent with selection, or its equivalent.
- E. Single cross [§ 201.2, (hh)]: The first generation hybrid of a cross between two inbred lines, an inbred line and a foundation back cross or of two foundation back crosses.

- F. Foundation single cross [§ 201.2, (ii)]: A single cross used in the production of a double cross, a three-way cross, or a top cross.
- G. Double cross [§ 201.2, (jj)]: The first generation hybrid between two foundation single crosses.
- H. Top cross [§ 201.2, (kk)]: the first generation hybrid of a cross between an open-pollinated variety and an inbred line, a foundation back cross, or a foundation single cross.
- I. Three-way cross [§ 201.2, (II)]: The first generation hybrid between a foundation single cross and an inbred line.
- J. Open-pollination [§ 201.2, (mm)]: Pollination that occurs naturally, as opposed to pollination controlled by detasselling, cytoplasmic male sterility, self-incompatibility, or similar processes.
- K. Foundation back cross [AOSCA handbook definitions]
  - 1. A first generation foundation back cross shall be the first generation cross between a foundation single cross of related inbred lines and an inbred line which shall be the same as one of the inbreds in the foundation single cross.
  - 2. A second generation foundation back cross shall be made by using a first generation backcross as the seed parent and the pollinating parent shall be an inbred line. The inbred line shall be the same as the inbred parent used in making the first generation backcross seed parent.
- L. Seed lot [§ 201.2, (v)]: A definite quantity of seed identified by a lot number, every portion or bag of which is uniform, within permitted tolerances, for the factors which appear in the labeling.
- M. Conditioning [§ 201.2, (z)]
  - Conditioning seed is defined as separating the seed from impurities such as weed seed, other crop seed and inert matter. Also, conditioning refers to polishing, scarifying, grading, and other operations which would change the purity or germination of the seed and therefore require retesting to determine the quality of the seed.
  - Conditioning is intended to make the seed more suitable for planting, more
    favorable for germinating after planting, and more likely to produce a superior crop
    compared to using the same seed before the conditioning was done. The terms
    cleaning and conditioning are often used synonymously.

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

[Derived from FSA Regulations, § 201.2, (bb)—(ee).]

A. Breeder seed is a class of certified seed directly controlled by the originating or sponsoring plant breeding institution, or person, or designee thereof, and is the source for the production of seed of the other classes of certified seed.

- B. Foundation seed is a class of certified seed which is the progeny of Breeder or Foundation seed and is produced and handled under procedures designed to maintain genetic purity and identity.
- C. Registered seed is a class of certified seed which is the progeny of Breeder or Foundation seed and is produced and handled using procedures designed to maintain genetic purity and identity.
- D. Certified seed is a class of certified seed which is the progeny of Breeder, Foundation, or Registered seed and is produced and handled using procedures designed to maintain genetic purity and identity.

#### VI. Limitation of Generations

[Derived from FSA Regulations, § 201.70.]

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

- A. Recertification of the Certified class may be permitted when no Foundation seed is being maintained.
- B. The production of an additional generation of the Certified class may be permitted on a one-year basis only, when an emergency is declared by any official seed certifying agency stating that the Foundation and Registered seed supplies are not adequate to plant the needed Certified class acreage of the variety. The additional generation of Certified class seed to meet the emergency need is ineligible for recertification.
- C. The production of an additional generation of the Certified class may be permitted for one harvest only, when an emergency is declared by any official seed certifying agency stating that an unanticipated event occurred post-planting and expected production will be insufficient to meet the expected demand. The additional generation of Certified seed to meet the emergency need is ineligible for recertification.

## VII. Application for Certification

#### A. Applications

Application for certification must be made on current application forms supplied by ICIA. These are available upon request. Please specify the crop when requesting forms.

- 1. The application form records the name and address of the applicant, crop, variety, field number, acres in each field and verifies eligibility of seed planted.
- 2. Separate applications are required for each crop of forage, small grain and soybeans and each variety of commercial corn.
- 3. The application form includes the location of the farm and field and gives the field history, where needed, for the previous year.

### B. Application Deadlines and Fees

All application deadlines and fees can be found on the ICIA website at <a href="https://www.iowacrop.org">www.iowacrop.org</a>. If the application date falls on a weekend or legal holiday, the date of acceptance shall be the next regular business day.

- 1. ICIA reserves the right to reject any or all applications postmarked or emailed after the application date.
- 2. Applications that are not acceptable because of errors or omissions (including tags to establish the source of seed) will be given up to 7 days as a grace period for correction and return. Applications not received and still unacceptable after 7 days may be refused or charged an additional fee.

## C. Certification Charges

- 1. Fees will be calculated by rounding up the acres for each field to the next whole number. For example, a field of 1.64 acres will be considered a 2-acre field when calculating fees.
- 2. Certification fees apply to the total acreage of all varieties of one crop grown by one applicant. The crops oat, rye, and wheat are all considered small grains and are considered as one crop. Foundation corn is considered to be a separate crop from hybrid corn.
- 3. Return inspection
  - Additional trips for inspections or sampling outside of the normal inspection to determine if the field or seed meets certification requirements shall be made at the expense of the applicant.
- 4. Refunds—applicable to all crops certified
  - A portion of the certification fee may be refunded for applications declared ineligible before field inspection or for abandonment of certification before field inspections start.
  - b. No refund will be made because of abandonment of certification after field inspections have started or when either the field or seed is rejected for certification.

## VIII. Eligibility of Seedstock

A. A certification tag or invoice showing class, variety, lot number, and grower number that represents the seed planted in each field must be submitted with the application for certification to verify the eligibility of the source of seed planted. If seed from more than one lot was planted, a tag from each lot or invoice identifying each lot must be submitted with the application. Each tag or invoice submitted may also show the field number where planted and the total amount of seed (in pounds or bushels) represented by that tag or invoice. Certification tags submitted must be from the containers of seed planted.

#### B. Unit of Certification

The unit of certification shall be a clearly defined area which may be divided subject to special regulations for specific crops. Each field bounded by a fence or a road or separated from another field by 33 feet or more will be considered a separate field for purposes of identification.

## IX. Field Inspection

- A. One or more inspections shall be made of each field. Refer to specific requirements for each crop type.
- B. ICIA reserves the right to reject a field when the condition of the field does not permit inspection adequate to determine genetic identity and purity.

## X. Seed Inspection

#### A. Seed Lots

A supply of cleaned seed of a given variety and class that has passed field inspection may be kept as a single lot, or an applicant may elect to divide it into two or more lots. It is recommended that large quantities of seed be divided into smaller lots convenient for sampling and, if sampled as bulk cleaned seed in more than one bin, each bin should be considered a separate lot. Regarding seed lots, the following provisions must be observed:

- 1. A lot number should be assigned to each lot. The first digit of the lot number indicates the year the seed was grown. For example, lot 71001 describes a lot grown in 2017. The lot number shall be two to five digits in length. Each lot of a given variety and class of seed shall have a unique lot number.
- 2. Applicants must declare their intention to divide the supply of seed of a given variety into lots by sending a completed Lot Conditioning Record which will state their intentions to ICIA either before or at the time a sample is drawn. The form will also declare total bushels grown and the number of bushels in each lot.
- After a supply of cleaned seed is divided into lots, each lot must be maintained separately and cannot be blended with other lots of seed until all requirements for certification have been met.

- 4. The entire quantity of seed of any one lot must be conditioned before a sample is drawn. If automatic samplers are used, they shall be in use throughout conditioning the entire lot.
- 5. All extra costs, such as sampling, testing, tags and other items accruing because of the decision to divide the supply of seed into lots shall be paid by the applicant.
- B. Sampling—with Approved Conditioner status
  Conditioners approved by ICIA may take their own samples according to the following specifications:
  - When a bin or unconditioned sample was not taken, an Approved Conditioner must take a conditioned seed sample with an approved automatic sampler. The automatic sampler should be in use throughout the conditioning of the entire quantity of seed of a given lot.
  - 2. If a bin sample was taken and met genetic standards, the Approved Conditioner has the option of taking the conditioned seed sample with an automatic sampler, probe, or open bags as conditioned.
  - 3. Refer to the Iowa Approved Conditioners Handbook for additional specifications.
- C. Sampling—without Approved Conditioner status
  - 1. A representative of the certifying agency will obtain a sample of the seed for laboratory analysis.
    - a. A lot of seed will be sampled after the applicant indicates it has been conditioned for sale and is ready for sampling.
    - b. A representative sample of each lot of cleaned seed shall be taken during or after conditioning and previous to sale for the purpose of determining whether or not the seed meets the seed standards. All samples shall be taken with a probe or trier in accordance with the procedures for sampling prescribed in the current issue of the Rules for Testing Seeds of the Association of Official Seed Analysts.
  - The entire amount of a given lot of seed of each variety produced by one applicant
    must be available for sampling as a separate lot and cannot be blended with other
    lots of seed. This applies both to the original sampling and to any resampling for
    which the applicant may apply.
  - 3. If the seed is hybrid corn, it must be shelled and should be cleaned before sampling.
  - 4. Bulk, uncleaned, field inspected, eligible seed may be sampled at the request of an Approved Conditioner.

#### D. Carry-over Seed

Certified carry-over seed from a previous season must be documented for traceability purposes. Access to records must be available upon request.

E. Blending Seed Lots [Derived from FSA Regulations, § 201.73.]

Seed lots of the same variety and class may be blended and the class retained. If lots of different classes are blended, the lowest class shall be applied to the resultant blend.

## XI. Germination Tests and Seed Analyses

When a sample fails required genetic standards for certification additional samples can be taken and the results will be averaged to determine if certification requirements are met.

## XII. Sampling after Certification

The certifying agency reserves the right to resample any lot of seed after certification has been granted.

## XIII. Certification Tags

### A. Tags

All seed sold as certified must be bagged except when moved in bulk for further conditioning, or when sold directly by the applicant to the grower who will plant the seed. Each bag must be labeled with a certification tag which must be sewn, stapled or otherwise affixed to the bag in such a manner that it cannot be removed without damage to the tag.

- 1. The certification tag will identify the seed by crop, variety, class, lot number, applicant (either by name or number as desired) and the statement that certification requirements have been met.
  - a. An analysis statement bearing the seed analysis, germination percentage, name of seller and other information necessary to meet the labeling clause of the Iowa Agricultural Seed Law, will need to be affixed to each container.
  - b. The labeling of the analysis data will be the responsibility of the seller of the seed.
  - c. The color of this label shall be other than blue. Analysis labels may be purchased from Iowa Crop Improvement Association (either blank or printed).
- One certification tag will be supplied for each container of certified seed to be sold.
   In no case shall any certification tags be given or mailed by the applicant or
   Approved Conditioner to the buyer or any other person or entity.

#### B. Identification of Bags

Each bag of certified seed that is not pretagged shall be stenciled with the following information:

Variety

Lot Number

**Grower Number** 

If cleaned by an Approved Conditioner, the conditioner's number shall also be stenciled on each bag.

#### C. Responsibility

Responsibility for the compliance with certification requirements of the seed in the bag to which the certification tag is attached and the proper use of the tag, lies in all cases with the individual or business (grower or approved conditioner) whose name or number is printed on the certification tag.

#### D. Cleaning Seed

All classes of certified seed must be cleaned by an Approved Conditioner or by equipment owned and supervised by the applicant.

- 1. The registered and foundation classes must be bagged at the time of sampling and tagged when offered for sale.
- 2. The certified class must be bagged at the time of sampling, then tagged when offered for sale except when the seed is sold under the bulk retail sales certificate.

#### XIV. Bulk Seed Movement and Sale

### A. Moving Bulk Seed for Further Conditioning

Seed which has passed field inspection for certification, or is completely certified, may be sold and moved in bulk for further conditioning. If the seed is to be moved to another state, a Transfer of Seed Pending Certification form must be submitted to ICIA before it is moved.

#### B. Bulk Retail Sales of Certified Seed

- 1. Bulk sales of certified seed shall be limited as follows:
  - a. Only small grain and soybeans may be sold in bulk.
  - b. Bulk sales shall be limited to the Certified class.
  - c. Bulk sales may be made only by applicants and/or Approved Conditioners who sell directly to the grower who will be planting the seed.
  - d. Bulk retail sales of Iowa certified seed may be made only in Iowa.

#### 2. Facilities for bulk certified seed

- a. A separate storage bin must be available for each variety that will be sold in bulk.
- b. All bins, augers, conveyors and other equipment must be cleaned before storage or handling certified seed.
- c. All bins must be clearly and prominently marked to show crop and variety.
- d. All bin openings must be closed to prevent contamination, except when seed is being put in or removed from the bin.

#### 3. Seller's responsibility

- a. To handle seed in a manner to prevent mixtures and contamination equivalent to bagged seed requirements.
- b. Determine that the vehicle receiving bulk certified seed is clean. If it is not clean, this is to be noted on the Bulk Retail Sale Certificate for Certified Seed.
- c. Keep a sample of each load of bulk certified seed sold. ICIA will have the option of testing any or all of the samples.
- d. To comply with section 199.4 "Sales from Bulk" of the Iowa Law Relating to Agricultural Seeds.
- 4. It is the buyer's responsibility to maintain purity of the seed after it is loaded into the buyer's vehicle.
- 5. Identification of seed sold in bulk
  - a. No certification tags will be issued for seed to be sold in bulk nor may tags for bagged seed be given to a purchaser of bulk seed.
  - b. Bulk retail certificates, available from ICIA, must be used for each sale of bulk certified seed. The certificate identifies the certification agency, crop, variety, class, and lot number.
- 6. Storage and handling facilities plus sales and inventory records shall be available for inspection at the request of ICIA.

## XV. Interagency Certification

- A. Upon request of an officially recognized certification agency of another state, ICIA will act as agent in making inspections, drawing samples, bagging, tagging and/or sealing of seed to be certified.
- B. For completely certified seed carrying the certification tag or label of an official certifying agency, application for interagency certification shall be made directly to ICIA and the following documentary evidence shall be supplied.
  - 1. Variety and Kind
  - 2. Class of certified seed
  - 3. Number of bags
  - 4. Weight of each bag
  - 5. Name and address of grower or the inspection or lot number traceable to the records of the agency making the field inspections.
- C. A seed lot which has passed field inspection by another official certification agency may be sold and/or moved into Iowa in bulk for further conditioning and/or completion of certification, provided:
  - 1. Prior arrangements for moving the seed is made with and approved by the cooperating certification agency, or
  - A copy of a transfer record is filed by the original applicant for certification of such seed with ICIA, on forms furnished by one of the cooperating agencies. A bulk transfer fee will be assessed for each transfer certificate on seed coming into lowa.
- D. All expenses incurred for interagency certification shall be paid by the approved conditioner.

#### XVI. OECD Certification

- A. The Organization for Economic Cooperation and Development (OECD), in its scheme for the production and certification of seed, has established minimum requirements and procedures to protect genetic purity and to maintain varietal identity during seed multiplication in its member countries. OECD certification provides for official recognition of "quality guaranteed" seed, thus facilitating international trade. In the US, certification in the OECD Seed Schemes is carried out by state seed certifying agencies under a cooperative agreement with the USDA Agriculture Marketing Service.
- B. The funding necessary to support the OECD seed certification program administration is provided by user fees. As the certifying agency for lowa, ICIA has the responsibility of collecting this user fee. An assessment per hundred pounds of a crop is collected for seed certified under OECD seed schemes.
- C. Shipping certificates are prepared by ICIA upon request. A fee will be assessed for each OECD shipping certificate prepared.
- D. An assessment on each lot of not finally certified seed (OECD gray labeled) being imported into Iowa is collected.

## XVII. Complying with Federal and State Seed Laws [lowa Code Chapter 199, Section 7]

Responsibility for compliance with the seed law labeling requirements of the country, state or province into which seed is shipped or sold rests with the seller.

- A. The classes of certified seed shall be foundation, registered, and certified and shall be recognized by the certifying agency.
- B. It shall be unlawful for any person to sell, offer for sale, or expose for sale in the state:
  - 1. Any agricultural seed, including seed potatoes, as a recognized class of certified seed unless:
    - a. Such seed has been certified by a duly constituted state authority or state association recognized by the lowa secretary of agriculture.
    - b. Each container bears an official label approved by the certifying agency stating that the seed has met the certification requirements established by the certifying agency.
    - c. Each container of the certified class of Certified seed bears a label blue in color with the word "Certified" thereon.
    - d. Each container of the foundation and registered class of certified seed bears a label with a color or colors approved by the certifying agency.
  - 2. Any agricultural seed, including seed potatoes, with a blue label unless such seed is a class of certified seed.

### **HYBRID CORN**

## I. Eligibility of Seedstock

- A. Foundation single cross seed and foundation back cross seed planted for the production of double cross, single cross or three-way cross hybrid corn seed must have been completely certified by a recognized seed certifying agency.
- B. Inbred seed planted for the production of single cross or three-way cross hybrid corn seed to be used for grain or forage production must meet the requirements for the definition of an inbred and be certified. Evidence of eligibility shall be a certification tag taken from the seed planted.
- C. Certified class is the only recognized class of hybrid corn seed.

### II. Field Inspection

At least three field inspections shall be made by a representative of the certifying agency during the pollinating period. Seed fields shall not be planted on land that has grown corn of another color or endosperm type the preceding crop. Field inspection may be made without giving prior notice to the applicant or grower.

#### III. Field Standards

#### A. Isolations

- 1. A specific hybrid must be located so that the seed parent is not less than 660 feet from other corn except hybrid seed production fields of dent sterile popcorn need not be isolated from yellow dent field corn.
- 2. In the case of same color and endosperm type corn this distance may be modified by the planting of pollen parent border rows according to table HC1.
  - a. The border rows and pollen parent rows must be planted with certified first generation seedstock, must be shedding pollen effectively and simultaneously with silk emergence of the seed parent, and must not be separated from the seed parent by more than 33 feet.
  - b. A field planted with the same eligible pollen parent may be used as an isolation buffer, provided it is enrolled for certification, inspected, and meets field requirements for certification.
  - c. Full credit will not be given where poor stands of border corn exist, where the border rows have been detasseled, or where, for any reason, the border rows are not shedding pollen as abundantly as the pollen parent rows. Planting more than the minimum number of border rows is recommended.

# **Hybrid Corn**

**Table HC1:** Minimum isolation distances for various border row numbers.

Minimum distance from other	Field size	Field size
corn to first seed parent plant	to 20 acres	20 acres or more
-Feet-	Minimum b	order rows
660	0	0
570	4	2
490	6	2
410	8	4
330	10	6
270	12	8
210	14	10
150	16	12
90	18	14
<90	24	16

- 3. When contaminating sweet corn acreage combined is less than ¼ acre on one exposure the isolation distance may be modified according to Table HC1.
- 4. Corrections for improper isolation must be made by one of the following methods:
  - a. By detasseling or completely destroying the necessary contaminating corn before silks appear in the seed parent in the field to be certified.
  - b. By completely destroying, before the final field inspections, the seed producing plants which are improperly isolated from contaminating corn.

#### B. Detasseling or pollen control

Five percent or more of the seed parent plants must have receptive silks for the following provisions to apply. Receptive silks are emerged silks which are not wilted or brown.

- 1. A field (individual female by male combination) will not be accepted for certification if at one inspection more than 1 percent of the stalks of the seed parent have shed pollen, or if the total number having shed pollen on any three inspections exceeds 2 percent.
- 2. When more than one seed parent is being grown with a common pollinator and 1 or more seed parents is shedding pollen in excess of 1 percent, all other seed parents having 5 percent or more apparently receptive silks at the time will be disqualified unless adequately isolated from the shedding seed parent.
- 3. Tassels, sucker tassels, and portions of tassels 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 the anthers extended from the glumes and are shedding pollen.

# **Hybrid Corn**

#### C. Male Sterile Seed Parent

A male sterile seed parent can be used to produce certified hybrid corn seed if either of the following two criteria are met:

- 1. Seed of the normal fertile seed parent must be mixed with the seed of the male sterile seed parent of the same pedigree. This can be done by blending in the field at harvest or by blending same-size lots at conditioning. The ratio of male sterile seed parent seed to normal seed parent seed should not exceed 2:1.
- 2. The male parent must involve a certified pollen restoring line so that not less than one-third of the plants grown from the hybrid corn seed will produce viable pollen.

#### D. Roguing

- Definitely off-type plants in a parent line planted for the production of single cross or three-way cross hybrid corn seed must be completely destroyed so that suckers will not develop. Plants showing a definitely different type from the parent being inspected shall be classified as definitely off-type.
- 2. A field in which more than 0.1% (1 in 1000) of definitely off-type plants in the parent or parents have shed pollen, at a time when more than 5 percent of the seed parent plants have apparently receptive silks, shall be disqualified for certification.
- 3. A field in which more than 0.1% (1 in 1000) of definitely off-type plants are present in the seed parent at the final inspection shall be disqualified for certification.
- E. In addition to field inspection, molecular marker assays may be used at the direction of the certifying agency to determine if standards have been met. The molecular marker tests must be conducted by a laboratory approved by the certifying agency. An assay of two replications of each grade size will be conducted. A purity standard of 95% must be met. Selfs are considered an off-type in a hybrid.

# **Hybrid Corn**

## IV. Seed Inspection

- A. See general requirements.
- B. A molecular marker assay may be used to determine genetic purity by each grade size.

## V. Seed Standards

## A. **Table HC2:** Genetic seed standards for hybrid corn.

Factor	Standard for Certified Class
Other varieties and off-types (maximum)	0.5%
Kernels of different endosperm type in opaque 2,	0.5%
flowery 2 and waxy (maximum)	

## B. **Table HC3:** Recommended quality guidelines for hybrid corn.

Factor	<b>Recommended Standard</b>
Pure Seed (minimum)	98.0%
Total other crops	N.S.
Total other varieties	0.5%
Total weed seed (maximum)	0.0%
Total inert matter (maximum)	2.0%
Germination (minimum)	90.0%
Moisture (maximum)	14.0%

N.S. = No standards

### FOUNDATION CORN SINGLE CROSSES

## I. Eligibility of Seedstock

- A. The seed of each parent must meet one of the following requirements:
  - 1. Be in the hands of the originator;
  - 2. Be a line obtained directly from the originator; or
  - 3. Be certified (evidence of eligibility shall be a certification tag taken from the seed planted).
- B. Additional requirements for male sterile lines:
  - 1. A male sterile line may be substituted for its fertile counterpart as one parent of a foundation single cross provided the male sterile line is the same in other characteristics as its fertile counterpart.
  - 2. Male sterile lines propagated by hand pollination will be eligible for certification.
- C. Additional requirements for pollen restoring lines: A pollen restoring line may be substituted for its non-restoring counterpart in a foundation single cross provided the pollen restoring line is the same in other characteristics as its non-restoring counterpart.

## II. Field Inspection

At least three field inspections shall be made by a representative of the certifying agency during the pollinating period. Seed fields shall not be planted on land that has grown corn of another color or endosperm type the preceding crop. Field inspection may be made without prior notice to the applicant or grower.

#### III. Field Standards

#### A. Isolation

- 1. A foundation single cross must be located so the seed parent is at least 660 feet from other corn except for pollinator rows and other seed parents in the same isolated field. In this case, all seed parent(s) in the same isolated field must be applied for certification, inspected and meet all field requirements for certification.
  - a. Differential maturity dates are permitted for modifying isolation distances for male sterile inbred line increases provided there are no receptive silks in the seed parent at the same time pollen is being shed in the contaminating field.
  - b. Foundation single cross production fields of dent sterile popcorn need not be isolated from yellow dent field corn.

# **Foundation Corn Single Crosses**

- 2. Corrections for improper isolation must be made by one of the following methods:
  - a. By completely destroying or by detasseling the necessary contaminating corn before silks appear in the seed parent in the field to be certified, or
  - b. By completely destroying, before the final field inspection, the seed producing plants which are improperly isolated from the contaminating corn.
- B. The maximum distance a seed parent row may be from a pollen parent row shall be 9 feet. A third-party molecular marker assay may be used to verify seed purity if the 9 foot standard is not met.
- C. The minimum population of pollen shedding plants per acre should be 2000. Ineffective pollen parent plants will not be counted.
- D. Fields being inspected for certification should contain not less than 400 pollen plants per acre that are actively shedding pollen when more than 25 percent of the seed parent silks are apparently receptive.
- E. Detasseling or pollen control
  Five percent or more of the seed parent plants must have apparently receptive silks for
  the following provisions to apply. Receptive silks are emerged silks which are not wilted
  or brown.
  - 1. An isolation of a specific foundation single cross will not be accepted for certification if at one inspection more than 0.5% (1 in 20) of the stalks of the seed parent have shed pollen, or if the total number having shed pollen on any three inspections exceeds 1 percent.
  - 2. When more than one combination is being grown in the same isolation and the seed parent of one or more of them is shedding pollen in excess of 0.1% (1 in 1000), all other seed parents having 5 percent or more apparently receptive silks at the time will be disqualified unless adequately isolated from the shedding seed parent.
  - 3. Detasseling to control pollen-shedding plants is permitted for cytoplasmic male sterile seed parent plants, but cytoplasmic male sterility will not be certified by ICIA.
  - 4. Tassels, sucker tassels and portions of tassels 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 the anthers extended from the glumes and are shedding pollen.

# **Foundation Corn Single Crosses**

#### F. Roguing

- Definitely off-type plants in either parent of a foundation single cross must be completely destroyed so that suckers will not develop. Plants showing a definitely different type from the parent being inspected shall be classified as definitely offtype.
- 2. Pollen Parent and Seed Parent
  An isolation in which more than 0.1% (1 in 1000) of definitely off-type plants in
  either parent have shed pollen, at a time when more than 5 percent of the seed
  parent plants have apparently receptive silks, shall not be certified.
- 3. Seed Parent
  An isolation in which more than 0.1% (1 in 1000) of definitely off-type plants are present in the seed parent at the final inspection shall not be certified.
- G. A third-party molecular marker assay may be used to verify seed purity if the field standards are not met.

## IV. Ear Inspection, Winter Growout, and Molecular Marker Assay

- A. Foundation single crosses will be inspected in the ear, included in a winter growout, or tested by a molecular marker assay.
- B. Foundation single crosses to be ear inspected will be inspected after the applicant indicates they are sorted and ready for inspection.
  - 1. A seed lot shall not contain in excess of 0.1% (1 in 1000) of definitely off-type ears.
  - 2. A seed lot shall not contain in excess of 0.5% (5 in 1000) of ears with kernels of different color or endosperm type.
  - 3. A seed lot shall not contain in excess of 25 kernels of different color or endosperm type per 1000 ears.

#### C. Winter Growouts

- 1. When differential maturity dates are permitted for modifying isolation distances for foundation male sterile inbred line increases, winter growouts are required in addition to other standards. Time isolation is allowed in male sterile production.
- 2. The applicant may choose to have a winter growout in lieu of ear inspection.
- 3. Seed shelled before ear inspection must be included in a winter growout.
- 4. Standards for winter growouts are:
  - a. Off-types allowed shall not exceed 1 percent.
  - b. Growouts shall be made on one round and/or flat separation or on individual grade sizes.

#### D. Molecular Marker Assay

- 1. Off-types shall not exceed 2 percent.
- 2. A molecular marker assay shall be made on each grade size.

# **Foundation Corn Single Crosses**

## V. Seed Inspection

When excessive off-type kernels are observed at the time of ear inspection and the off-type kernels are detectable in the shelled seed, the applicant has the option of shelling the ears to attempt to remove the kernels by mechanical or other means. The sampled seed after conditioning shall not contain in excess of 0.3% (3 in 1000) of the off-type kernels.

### FOUNDATION CORN INBRED LINES

## I. Eligibility of Seedstock

- A. Inbred seed must meet one of the following requirements:
  - 1. Be in the hands of the originator;
  - 2. Be a line obtained directly from the originator; or
  - 3. Be certified (evidence of eligibility shall be a certification tag taken from the seed planted).
- B. Inbred lines increased by hand pollination will be eligible for certification.
- C. An inbred used as a pollinator in a foundation single cross production field may be certified provided all the seed parents in the isolated field are inspected for certification and meet all field requirements for certification.
- D. Male Sterility
  - 1. When a specific genetic factor(s) is added to an inbred line, the line must be homozygous for the specific genetic factor(s) except for the pollen restoration factor(s) in the corresponding male sterile maintainer line.
  - 2. For a recovered pollen restorer inbred line, selection must be relative to a specific cytoplasmic male sterile source.
  - 3. A genetic male sterile maintainer line, consisting of duplicate-deficient and malesteriles in an approximate 1:1 ratio, shall be no more than two generations removed from breeder seed. The maintainer shall be designated according to generation as:
    - a. Breeder seed—The hand pollinated selfed seed from a known duplicate-deficient plant heterozygous at a particular male sterile locus.
    - b. Foundation I seed—The product of random-mating among fertile plants arising from Breeder seed.
    - c. Foundation II seed—The product of random-mating among fertile plants arising from Foundation I seed.
  - 4. A genetic male sterile line shall be a strain homozygous for a particular male sterile recessive allele and shall be closely related to its maintainer counterpart.
  - 5. The genetic male sterile lines may be identified as to the recessive genes they carry. The maintainer lines shall be identified not only for the male sterile gene for which it is heterozygous, but for the specific translocation from which it was derived, e.g., B37 Mt-1 ms-1, N28 Mt-1 ms-10.

## **Foundation Corn Inbred Lines**

## II. Field Inspection

At least three field inspections shall be made by a representative of the certifying agency during the pollinating period. Seed fields shall not be planted on land that has grown corn of another color or endosperm type the preceding crop. Field inspections may be made without giving prior notice to the applicant or grower.

#### III. Field Standards

#### A. Isolation

- 1. An inbred must be so located that it is not less than 660 feet from other corn except when the inbred is grown as a pollinator in a single cross production field. In this case any seed parent(s) in the same isolated field must be applied for certification, inspected and meet all field requirements for certification.
  - a. Differential maturity dates are permitted for modifying isolation distances provided there are no receptive skills in the seed parent at the same time pollen is being shed in the contaminating field.
  - b. Foundation inbred production fields of dent sterile popcorn need not be isolated from yellow dent field corn.
- 2. Corrections for improper isolation must be made by one of the following methods:
  - a. By completely destroying or by detasseling, the necessary contaminating corn before silks appear in the seed parent in the field to be certified; or
  - b. By completely destroying, before the final field inspection, the plants which are improperly isolated from the contaminating corn.

#### B. Roguing

- 1. Definitely off-type plants must be destroyed completely so that suckers will not develop. Plants showing definite hybrid vigor or a definitely different type from the inbred being inspected shall be classified as definitely off-type.
- 2. An isolation in which more than 0.1%, (1 in 1000) of definitely off-type plants have shed pollen, when at the same time more than 5 percent of the plants have apparently receptive silks, shall not be certified.
- 3. Tassels, sucker tassels, and portions of tassels 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 the anthers extended from the glumes and are shedding pollen.

## **Foundation Corn Inbred Lines**

## IV. Ear Inspection, Winter Growout, and Molecular Marker Assay

- A. Foundation inbred lines will be inspected in the ear, included in a winter growout, or tested by a molecular marker assay.
- B. Foundation inbred lines to be ear inspected will be inspected after the applicant indicates they are sorted and ready for inspection.
  - 1. A seed lot shall not contain in excess of 0.1% (1 in 1000) of definitely off-type ears.
  - 2. A seed lot shall not contain in excess of 0.5% (5 per 1000) of ears with kernels of different color or endosperm type.
  - 3. A seed lot shall not contain in excess of 25 kernels of different color or endosperm type per 1000 ears.

#### C. Winter Growouts

- 1. When either differential dates or detasseling within the required isolation distance are permitted for modifying isolation distances of foundation inbred lines, winter growouts are required in addition to other standards. This applies to the production of male sterile lines, too.
- 2. The applicant may choose to have a winter growout in lieu of ear inspection.
- 3. Seed shelled before ear inspection must be included in a winter growout.
- 4. Standards for winter growouts:
  - a. Off-types allowed shall not exceed 1 percent.
  - b. Growouts shall be made on one round and/or flat separation or on individual grade sizes.

#### D. Molecular Marker Assay

- 1. Off-types shall not exceed 2 percent.
- 2. A molecular marker assay shall be made on each grade size.

## V. Seed Inspection

When excessive off-type kernels are observed at the time of ear inspection and the off-type kernels are detectable in the shelled seed, the applicant has the option of shelling the ears to attempt to remove the kernels by mechanical or other means. The sampled seed after conditioning shall not contain in excess of 0.3% (3 in 1000) of the off-type kernels.

### SMALL GRAIN CROPS

## I. Eligibility of Seedstock

See eligibility requirements in General Requirements.

### II. Land Requirements

The crop shall not be grown on land where the same crop was grown in the previous year unless that crop was an inspected field of the same variety, and the crop was not rejected because of varietal mixture. No manure or other contaminating material should be applied one year preceding or during the establishment and productive period of the stand.

### III. Field Inspection

- A. Small grain will be field inspected by a representative of the certifying agency after the crop is fully headed.
- B. A field harvested before inspection is not eligible for certification.
- C. Field inspection may be made without prior notice to the applicant or grower.

#### IV. Field Standards

#### A. Isolation

- At the time of field inspection and previous to harvest, inspected fields of wheat, oats or barley must be separated from other small grain species or varieties or uninspected fields of the same variety, by a distance of 28 feet when the adjoining crop was broadcast, or by a distance of 5 feet or a permanent fence row when the adjoining crop was drilled.
- 2. Rye fields producing certified seed must be isolated by at least 40 rods (660 feet) from rye fields of other varieties having the same chromosome number or uninspected fields of the same variety. The isolation between diploid and tetraploid rye shall be 15 feet.
- 3. If it is necessary to remove a portion of a field to obtain proper isolation, the part to be removed must be cut from the field that is to be inspected.

#### B. Roguing

- Off-type plants and other varieties in excess of the maximum permitted must be rogued and removed from the field prior to inspection to be acceptable for certification.
- 2. Plants that produce weed seeds and other crop seeds that are difficult to remove with conditioning equipment, and primary noxious weed plants, should be rogued and removed from the field prior to inspection.

# **Small Grain Crops**

## C. Field Inspection

## 1. **Table SG1:** Genetic standards for small grain field inspections.

		Standard	
Factor	Foundation	Registered	Certified
Other varieties and off-types	0.03% or	0.05% or	0.1% or
(maximum)	1:3000	1:2000	1:1000

## 2. **Table SG2:** Recommended quality quidelines for small grain field inspections.

	Recommended Standard
Factor	(all classes)
Inseparable other crops (maximum)	0.01% or 1:10,000
Primary noxious weed seed plants	0.0%
(maximum)	

## V. Seed Inspection

See Seed Inspection in the general requirements.

## VI. Seed Standards

## A. **Table SG3:** Genetic seed standards for small grain crops.

	Standard		
Factor	Foundation	Registered	Certified
Other varieties and off-types (maximum)	0.2%	0.3%	0.5%
oats			
Barley, rye, triticale and wheat	0.05%	0.1%	0.2%

# **Small Grain Crops**

# B. **Table SG4:** Recommended quality guidelines for small grain crops.

	Recommended Standard		
Factor	Foundation	Registered	Certified
Pure seed (minimum)	99.0%	99.0%	99.0%
Other crop seed (maximum per lb)			
Barley in oats	1 per 5 lb	1	1
Oats in barley	1 per 5 lb	1	1
Rye in wheat	1 per 5 lb	1	1
Wheat in rye	1 per 5 lb	1	1
Rye or wheat in triticale	1 per 5 lb	1	1
Additional (excluding forage crops)	2	2	4
Primary noxious weed seed	0	0	0
Secondary noxious weed seed	0	0	1
(maximum per lb)			
Common weed seed (maximum per lb)	5	5	10
Germination (minimum)			
Oats, rye, triticale, and wheat	90%	90%	85%
Barley	90%	90%	90%

### **SOYBEANS**

## I. Eligibility of Seedstock

See eligibility requirements in General Requirements.

### II. Land Requirements

The crop shall not be grown on land where soybeans were grown the previous year unless that crop was an inspected field of the same variety, and the crop was not rejected because of varietal mixture.

## III. Field Inspection

- A. Soybeans will be field inspected by a representative of the certifying agency when genetic purity and identity, or any other factor affecting seed certification, can be determined.
- B. A field harvested before inspection is not eligible for certification.
- C. Field inspection may be made without prior notice to the applicant or grower.

#### IV. Field Standards

#### A. Isolation

- 1. Inspected field must be separated from fields of other varieties of soybeans or uninspected fields of the same variety of soybeans by a distance of 40 feet when the adjoining field was broadcast, or by a distance of 5 feet or a permanent fence row when the adjoining field was drilled or rowed.
- 2. If it is necessary to remove a portion of a field to obtain proper isolation, the part to be removed must be taken from the field that is to be inspected.

#### B. Roguing

- 1. Off-type plants and other varieties bearing seed in excess of the maximum permitted must be rogued and removed from the field prior to inspection to be acceptable for certification.
- 2. Plants that produce weed seeds and other crop seeds that are difficult to remove with conditioning equipment, and primary noxious weed plants, should be rogued and removed from the field prior to inspection.

# **Soybeans**

#### C. Field Standards

1. **Table SB1:** Genetic standards for soybean field inspections.

	Recommended Standards		
Factor	Foundation	Registered	Certified
Other varieties and off-type	0.1% or	0.2% or	0.5% or
plants (maximum)	1:1000	1:500	1:200

### 2. **Table SB2:** Recommended quality guidelines for soybean field inspections.

	Recommended Standards
Factor	(all classes)
Corn plants bearing seed	0
Primary noxious weed seed plants	0

## V. Seed Inspection

See General Requirements.

To certify treated soybean seed the following specifications apply:

- A. A bin sample must be taken and pass a varietal purity exam.
- B. A representative sample of the lot must be taken before the seed is treated. This sample must be submitted and pass a varietal purity exam.
- C. A representative sample of the lot after seed treatment must be taken and submitted. This sample will be tested for noxious weed, purity, and germination. Varietal purity exams will be conducted as deemed necessary by ICIA.
- D. The two lot samples will be submitted together to ICIA with the Lot Conditioning Record for the lot.

## VI. Seed Standards

A. **Table SB3:** Genetic seed standards for soybeans.

	Recommended Standards		
Factor	Foundation	Registered	Certified
Other varieties and off-types (maximum)	0.1%	0.2%	0.5%

# **Soybeans**

# B. **Table SB4:** Recommended quality guidelines for soybeans.

Recommended Standards			ndards
Factor	Foundation	Registered	Certified
Pure seed (minimum)	98.0%	98.0%	98.0%
Total inert matter (maximum)	2.0%	2.0%	2.0%
Total other crop seeds			
Other kinds, excluding corn, sunflower and forage crop (maximum seeds per lb)	3	3	3
Corn or sunflower (maximum)	0	0	1 per 5 lbs
Primary noxious weed seed (maximum)	0	0	0
Secondary noxious weed seed (maximum)	0	0	1 per 5 lbs
Common weed seed (max per lb)	1	1	3
Germination and hard seed (minimum)	80%	80%	80%

#### **SOURCE IDENTIFIED**

#### I. Introduction

The Source Identified program is designed to ensure the geographic origin of native species seed or propagative material is documented through all phases of seed and/or seedling production. There are some certification differences depending on whether the propagating material is collected from a natural stand (i.e., native prairie site) or an established production field. General requirements for both are listed first, followed by specific requirements.

- A. Source Identified is a class of propagating material collected from natural stands or seed production areas where no selection or testing of the parental population has been conducted.
- B. Seed or propagating material certified through this program is identified with a yellow certification label. The geographic origin where the propagating material was originally collected, as well as the location of the production area, is indicated on the certification label.
- C. The geographic origin of a native species collection site must be a definable geographic region from which the propagative material was first collected. The origin site may be relatively broad, resulting from a blend of more than one collection across a region, or it may be narrow, from a single collection location. The precision of the origin claimed is the choice of the producer. However, the source must be accurately described.
- D. It is recommended that sellers notify buyers of restrictions regarding further certification of purchased seed.

## II. Field Inspection

- A. Field inspection is a thorough examination of the production area to confirm species identity, production area, and field standards. A representative of ICIA will conduct all inspections. It is the applicant's responsibility to ensure that appropriate inspections are completed prior to harvest.
- B. Production areas will normally be inspected during the heading/flower stage.
- C. A production area harvested before the field inspection is not eligible for certification.

#### III. Field Standards

Isolation standards exist. However, a contaminating area consisting of less than 10% of the inspected production area will be disregarded.

# **Native Species**

#### IV. Seed Standards

- A. No minimum germination or purity standards are required for certification, but appropriate state and federal seed laws must be followed.
- B. Seed must be conditioned by the applicant or by an ICIA approved conditioning facility.

# **Specific Requirements for Established Production Areas**

## I. Eligible Seedstock

Seedstock must meet one of the following requirements:

- A. Be collected from a natural stand with the following documentation:
  - 1. Location of natural stand
  - 2. Description of natural stand
  - 3. Date of collection from natural stand
  - 4. Name and signature of collector
  - 5. Name and signature of applicant
- B. Be certified seed with the following:
  - 1. Certification label
  - 2. Authorization documentation from the original applicant to produce further generations of seed.
  - This requirement for the certification label may be waived if an applicant is
    producing successive generations. Documentation of the lot and a reference sample
    must still be submitted. The applicant may ask to waive the reference sample due to
    small sample size.

## II. Land Requirements

- A. An established production area is a production area planted with a native plant species.
- B. A production area must not have produced or been seeded to the same species during the previous three years except when using eligible seedstock from an appropriate geographic region when reseeding. Fall seeding is permitted in the third year.
- C. Application for field inspection is required the year the seeding is established and each successive year following. If the field is established after July 15, application must be made the following spring. Inspection fees and field inspection will be required in the year of application and each successive year. Failure to reapply for an established production area, after the original year of application, will result in permanent disqualification of the crop in that production area.
- D. A copy of the collection permit, authorization of the landowner, etc. are recommended when available.

# **Native Species**

#### III. Field Standards

- A. For highly self-pollinated species (greater than 95%), the isolation distance is 15 feet. The applicant must provide unbiased documentation regarding the level of selfing in the species.
- B. For species that are not highly self-pollinated, or that lack supporting documentation, an isolation distance of 165 feet must be maintained from the same species from a different lowa origin. Fields not enrolled in certification will be considered to be of unknown origin.
- C. An isolation distance of 900 feet must be maintained from a cultivar of the same species, or from an out-of-state or unknown source of the same species.

# **Specific Requirements for Natural Production Areas**

## I. Land Requirements

- A. A natural stand is an identified native prairie area of original remnant vegetation, which shall continue to be maintained as such by careful management.
- B. When requesting certification, it is recommended the applicant provide a copy of the collection permit, authorization of the landowner, etc.
- C. ICIA reserves the right to withhold and/or terminate certification of natural stands it deems to be managed in ways inconsistent with accepted prairie management practices aimed at the long-term well-being of remnant plant communities and associated biota. Unacceptable practices include: application of fertilizers or pesticides; cultivation; introduction of new species by seed or plants from known or unknown sources; treating the remnant as an agricultural production field. Such practices are incompatible with the intent of ICIA Source Identified certification of natural areas. Appropriate management techniques aimed at maintaining or improving the remnant as a whole, including the use of limited prescribed fire, brush removal, and targeted use of appropriate herbicides for noxious and/or invasive weed and brush control are acceptable.

#### II. Field Standards

- A. For highly self-pollinated species (greater than 95%), the isolation distance is 15 feet. The applicant must provide unbiased documentation regarding the level of selfing in the species.
- B. An isolation distance of 1,320 feet must be maintained from a cultivar of the same species, or from an out-of-state or unknown source of the same species.