



Seed Certification Handbook

Agronomic Seed Certification Standards Supplement

This handbook describes procedures required for participation in the seed certification program. It was developed to supplement the requirements in the *MCIA Agronomic Seed Certification Standards*. Certified seed producers and conditioners are responsible for compliance with all federal and state seed laws and certification requirements. We hope you will find this handbook to be a useful aid in consistently producing a high-quality seed product.

All MCIA standards, handbooks, forms and other program documents are updated and revised as needed. The current versions of seed certification documents are available on the MCIA website at www.mncia.org.

CONFIDENTIALITY OF INFORMATION

All information regarding seed lots for which certification has been requested is considered confidential by MCIA. Unless approved by the applicant, information will be provided only to the applicant and the seed conditioner they have designated.

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Basic Steps for Producing Certified Seed

Seed Certification is an internationally recognized system to preserve the genetic identity and purity of crop varieties. A brief overview of the basic steps to produce certified seed is listed below. The sections that follow provide additional details to complete the certification process.

The basic steps for producing certified seed include:

1. Submit an application for membership to MCIA (if not already a member).
2. Plant eligible seed stock in fields meeting the certification land requirements for the crop type being grown.
3. Apply for field inspection supplying proof of seed planted and location of the field.
4. MCIA shall inspect the field to determine the field's conformance to standards for varietal identity, purity, isolation, and freedom from weeds and other crop species.
5. Condition seed at an MCIA approved facility.
6. An MCIA authorized sampler shall submit a representative sample from the conditioned seed lot to an authorized seed testing laboratory.
7. Seed is tested for germination, purity and other specified tests to determine conformance to seed standards. Specific seed standards are established for each crop kind and seed class.
8. Certification labels or bulk sales certificates are issued by MCIA for eligible seed lots.
9. To complete certification, attach a certification label to each seed container or issue a bulk sales certificate to each buyer of bulk certified seed.

Certification is complete when the seed has met the specific standards established for the crop kind and seed class produced and a certification label has been attached to each seed container or a bulk sales certificate has been issued.

Determining Variety Eligibility for Certification

In the U.S., crop varieties must comply with Federal Seed Act requirements to be eligible to be sold as certified seed. MCIA and other seed certifying agencies are required to enforce Federal Seed Act requirements when determining whether varieties are eligible to be entered into the seed certification program.

Varieties normally enter certification programs after favorable review by:

- AOSCA Crop Variety Review Board.
- Plant Variety Protection Office (with additional information).
- Organization for Economic Cooperation and Development (OECD).
- An official seed certifying agency.

Federal Seed Act §201.68: Eligibility requirements for certification of varieties.

The certifying agency shall require the originator, developer, or owner of the variety, or agent thereof, to make the following available when eligibility for certification is requested:

- a) The name of the variety.*
- b) A statement concerning the variety's origin and the breeding procedure used in its development.*
- c) A detailed description of the morphological, physiological, and other characteristics of the plants and seed that distinguish it from other varieties.*
- d) Evidence supporting the identity of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety.*
- e) A statement delineating the geographic area or areas of adaptation of the variety.*
- f) A statement on the plans and procedures for the maintenance of seed classes, including the number of generations through which the variety may be multiplied.*
- g) A description of the manner in which the variety is constituted when a particular cycle of reproduction or multiplication is specified.*
- h) 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.*
- i) A sample of seed representative of the variety as marketed.*

APPLICATION FOR VARIETY ELIGIBILITY

Eligibility of varieties entering certification programs is focused on genetic purity, novelty, and sufficient data to support claims by plants breeders for these new varieties. There are several ways to apply.

- 1. AOSCA National Variety Review Board (NVRB) Application** – The aim of review boards is to provide uniformity among certifying agencies as new varieties are developed and grown for certified seed. The process is updated annually to provide an efficient system for gathering information for review by the NVRB members. The applications and supporting information are submitted to the AOSCA office for electronic distribution to each review board member. The boards meet annually to consider the applications that have been submitted for review. The application forms are available at the AOSCA website during the time when applications are being accepted. Current review boards include:

- Alfalfa
- Small grains
- Sunflowers
- Grasses
- Soybeans

Upon receiving a positive review, new plant varieties are recommended for inclusion into seed certification programs administered by AOSCA Agencies. The plant breeders or owners of these varieties receive a certificate from AOSCA and a final NVRB report is published and made available online.

2. **Plant Variety Protection (PVP) Application** – The application forms are available on the PVP website for applicants interested in PVP. MCIA may ask for additional information to meet the requirements of the FSA. Applications are available year round and the status of the application is posted on the PVP office website. A *Certificate of Protection* is issued once the application has been approved, which is effective for 20 years.
3. **Organization for Economic Co-operation and Development (OECD)** – Foreign varieties are approved through the OECD. U.S. approved varieties and synonyms can be added to the “OECD List of Varieties Eligible for Certification” by submitting a request, which is reviewed by MCIA and forwarded to the USDA-Agricultural Marketing Service (AMS). The form is available on the AMS website.
4. **MCIA policy for accepting varieties into certification** - Applicants are first requested to use either PVP application or submission to an AOSCA Variety Review Board as the preferred vehicle to enter the MCIA seed certification program. When a PVP application is used, additional information must be supplied to meet requirements e – i of the FSA.

In those instances when it is clear that neither PVP nor a Variety Review Board is an effective method to enter the material into a certification program, including species with no review board, application will be accepted by the AOSCA Director in Minnesota. The following information must accompany each application:

- a. A completed application form that provides the same information required by a specific crop AOSCA Variety Review Board. Contact MCIA for this application form.
- b. All information specifically required by the Federal Seed Act must be included in the application information.

All submitted data will be evaluated by the Minnesota AOSCA Director in consultation with the appropriate staff of the association. Upon review, the variety will be accepted into certification if, in the judgment of the AOSCA Director, all criteria of the Federal Seed Act are met.

Guidelines for Handling Experimental Line

The Experimental Line Program provides guidelines for seed increase using published AOSCA or member agency field and seed standards during the final stages of testing an experimental line so that classes of certified seed may be available in the event of the line being released as a variety. The program is to be used for seed production of an experimental line that has not been reviewed or accepted into certification. Seed produced using this program cannot be sold or represented as a class of certified seed, nor should it be included in a certified seed mix or blend until such time as the experimental line has been accepted as a variety for certification.

1. Definitions:

- a. **Experimental Line:** A germplasm that has not been released and/or recognized as eligible for certification and is being tested with the possibility of release as a variety at some point in the future.
- b. **Classes of Experimental Lines:**
 - i. Exp-F: Eligible for Foundation seed upon variety acceptance.
 - ii. Exp-R: Eligible for Registered seed upon variety acceptance.
 - iii. Exp-C: Eligible for Certified seed upon variety acceptance.

2. The Experimental Line applicant should provide documentation that includes the following information prior to field inspection:*

- a. The experimental line owner.
- b. The experimental line identification or the proposed name of the experimental line.
- c. A brief description with sufficient morphological, physiological, and/or other characteristics of the plants and seed to identify the experimental line during field and/or seed inspection.
- d. A statement of the generations through which the experimental line may be multiplied.
- e. The generation of the stock seed used to plant the field must be documented. Acceptable generations are Breeder Seed, Experimental Line-F, or Experimental Line-R.

3. Standards:

- a. The requirements of sections 2a through 2e should be met.
- b. All land requirements, isolation standards, field standards, and seed standards for the crop and corresponding class of certified seed should be met.
- c. All inspections required for that crop should be performed.
- d. The limited generation system should be maintained, with a maximum of three generations, those being the equivalent of Foundation (Experimental Line-F), Registered (Experimental Line-R), and Certified (Experimental Line-C) classes.
- e. Seed meeting documentation, field and seed standards is eligible for seed stock tags or documents that identify it as eligible under the Experimental Line Program. These tags are printed by MCIA.

4. Labels:

- a. Tags, labels, or official documents such as Transfer Certificates provided by an AOSCA member agency for seed produced using the Experimental Line Program will be clearly marked with the words "Experimental" and will note that certification is pending.
- b. "Foundation", "Registered", or "Certified" will not appear on tags, labels, or official documents for seed produced using the Experimental Line program with the exception of wording required in section 4a.
- c. MCIA shall use a gold-colored tag for seed produced under this program.

d. Below is an example of an experimental tag for soybeans.

| | |
|---|--|
| <p style="text-align: center;">EXPERIMENTAL SEED (EXP-F)</p> <p>XYZ Soybeans Lot 55-111-1234EF 12-10001</p> <p>Eligibility of variety for seed certification has not been approved.</p> | <p>VERIFICATION: Minnesota Crop Improvement Association verifies that the product contained in this lot has been produced under specified conditions and has met specific standards. NOTICE TO BUYER: EXCLUSION OF WARRANTIES AND LIMITATION OF DAMAGES: THE FOREGOING VERIFICATION IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. In no case shall MCIA or the seller be liable for any actual, special, incidental or consequential damages for any cause, including breach of contract, breach of warranty, negligence, or any other legal theory, with respect to the sale of this product which has been provided by applicant/member and/or vendors; buyer's remedy is limited solely to a refund of the purchase price.</p> <p style="text-align: center;">Minnesota Crop Improvement Association 1900 Hendon Ave., St. Paul, MN 55108</p> <p style="text-align: right;"></p> <p>123321 Minnesota Crop Improvement Association</p> |
|---|--|

5. **Completing Certification of seed produced using the Experimental Line Program:** In the event that the experimental line meets AOSCA variety eligibility requirements and is accepted for certification, Experimental Line seed stock tags or documents may be replaced by AOSCA tags or documents for the appropriate class of certified seed. Submit a *Sampling Report* to MCIA requesting the appropriate tags, or a tagging report indicating the serial numbers of the tags printed and attached to the bags. Retain the Experimental Seed tags and return to your field supervisor.

Many crop varieties are subject to restrictions pertaining to the production and sale of seed of those varieties. It is the responsibility of the seed producer to determine and abide by all intellectual property and seed production requirements including the payment of fees to variety owners.

PUBLIC VARIETY ASSESSMENTS

Publicly developed varieties often require seed producers to pay fees to the variety owner that are assessed based on the amount of seed sold. States vary in how they handle variety assessments and fee collection, but often, MCIA will collect the fees from seed producers for public varieties certified in Minnesota on behalf of the variety owner. Certified seed producers of public varieties may be required to sign a grower agreement or license and, at the end of each production season, submit a report of seed sold along with fees owed to MCIA. A current list of assessment fees for commonly grown public varieties is available on the MCIA website Seed Certification client resources page.

PRIVATE VARIETIES

The production of most privately developed varieties and some public varieties require that the seed producer obtain a license to produce seed from the owner of the variety. Royalties on the sale of seed are usually paid directly to the variety owner as defined in the license agreement. Contact the variety owner to determine seed production requirements before attempting to produce seed of any privately developed variety or public variety subject to licensing.

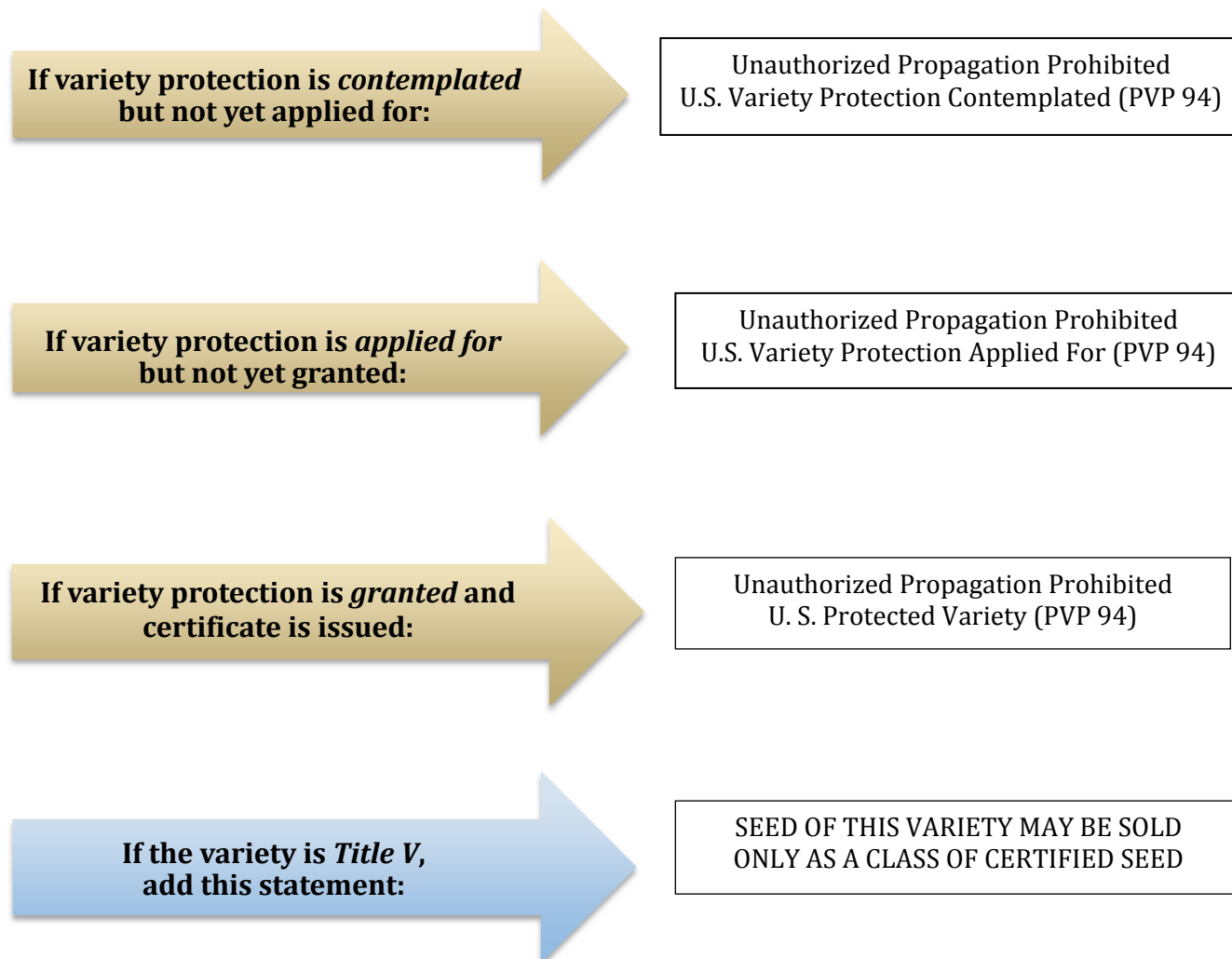
PLANT VARIETY PROTECTION (PVP)

The Plant Variety Protection Act provides legal intellectual property rights protection to breeders of new varieties of plants which are sexually reproduced (by seed) or tuber-propagated. The USDA Plant Variety Protection Office (PVPO) administers the Plant Variety Protection Act (PVPA) by issuing *Certificates of Protection*.

Seed of protected varieties must be grown according to requirements established by the owner of the variety. Variety owners may elect to require all seed to be sold as a class of certified seed (Title V). Sellers are required to inform buyers of PVPA requirements including Title V if applicable. Sales of uncertified seed of Title V protected varieties are prohibited.

The USDA maintains a database of protected varieties online (for link see Resources section, last page of handbook.) MCIA also publishes a list of protected varieties on the MCIA website, and informs members of status changes in the *Samplings* newsletter.

Plant Variety Protection (PVP) statements: PVP statements are required on labels of protected varieties. Listed below are types of protection and their applicable PVP statements.



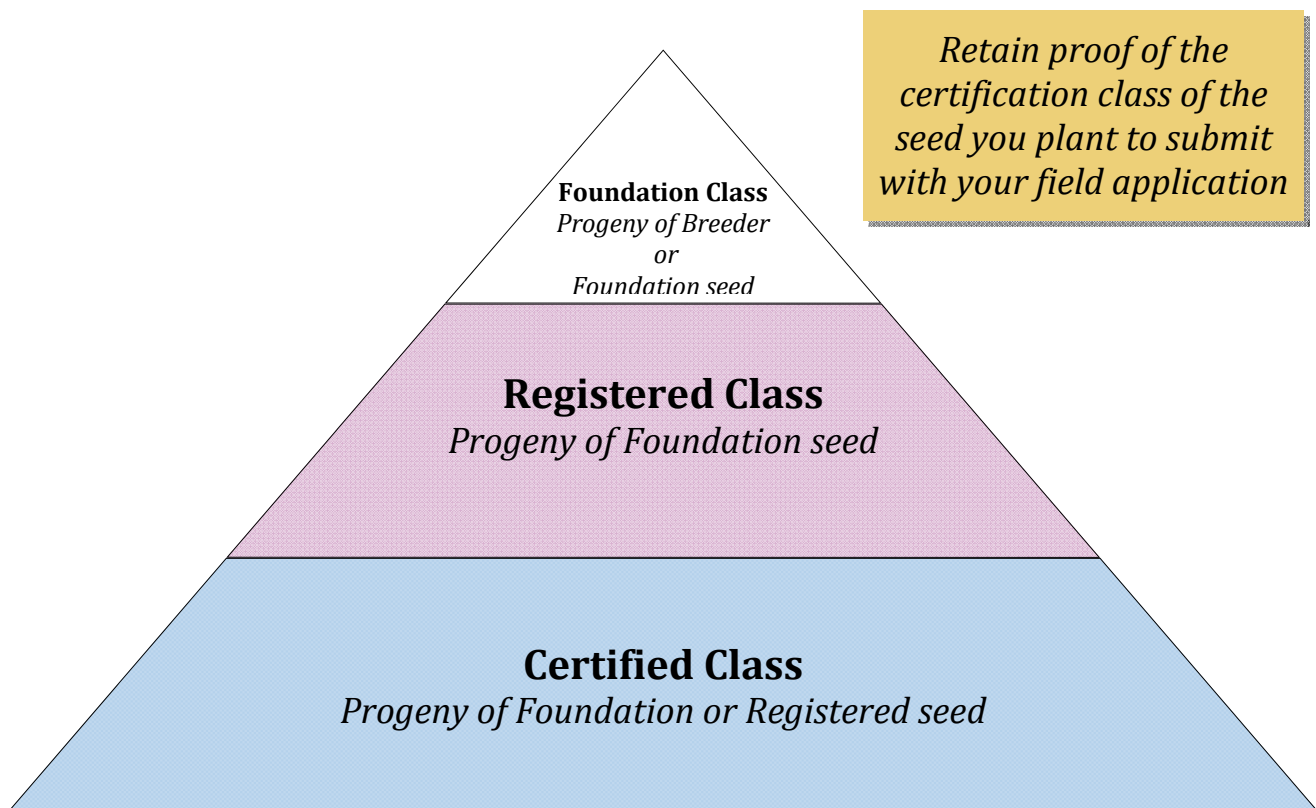
Establishing Seed Production Fields

Review the *MCIA Agronomic Seed Certification Standards* to determine the seed requirements and applicable field standards for the crop type you wish to produce. To avoid delays, provide complete and accurate applications for field inspection—they contain key points regarding the eligibility of your field.

SEED REQUIREMENTS

To produce seed of a certified seed class, you must purchase eligible parent seed as described below. **Retain proof of the certification class of the seed you plant** as you will be required to furnish a seed certification label or *Bulk Seed Sale Certificate* with your application for field inspection.

Seed certification is a limited generation system based on three seed classes:



Variety owners determine the certification classes allowed for their varieties. Some variety owners do not allow the Registered class of seed. For those varieties all Certified class seed is produced from Foundation class.

Breeder Seed: *When Breeder Seed is used to establish a field, a letter from the breeder must be provided as proof of seed source. The letter should declare that the seed lot used was breeder seed and should indicate the class of seed to be produced.*

RECERTIFICATION OF CERTIFIED CLASS SEED

The production of an additional generation of certified seed may be allowed when requirements defined in the Federal Seed Act are met:

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

- a) *Recertification of the Certified class may be permitted when no Foundation seed is being maintained.*
- b) *The production of an additional generation of the Certified class may be permitted on a 1-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 acreage of the variety. The additional generation of Certified seed to meet the emergency need is ineligible for recertification.*

MCIA will evaluate requests to produce an additional generation of certified seed on a case by case basis. Requests must be submitted in writing to MCIA prior to undertaking certified seed production. Requests must include written permission for an additional generation from the owner of the variety and must state the reason for the request. Restrictions regarding which seed lots may be used as seed source or the identity of growers authorized to undertake the production should be clearly described.

CHOOSING THE FIELD

The seed certification standards for most crops include **land requirements**. Certified seed cannot be produced on fields that do not meet the land requirements. Seed production of annual crops on land where the same crop was grown the previous year is usually prohibited unless the crop the previous year was planted with a class of certified seed of the same variety. Land requirements for perennial crops often prohibit seed production on land where the same crop was grown in the previous three years. Consult the seed certification standards for the specific land requirements for the crop type that you wish to grow.

Consider crop **isolation requirements** when choosing the field location. Seed fields of cross pollinated crop types such as corn, sunflowers, perennial ryegrass and others must meet isolation distance requirements from other varieties of the same crop type as defined in the seed certification standards. The standards for some crops allow isolation distances to be modified by utilizing border rows or buffer strips - consult the specific crop standards for details. Self-pollinated crops must be separated from neighboring fields of the same crop type or from crops that are potential seed contaminants. The isolation distance must be sufficient to prevent commingling at harvest.

PLANTING THE FIELD

1. Clean all planting equipment thoroughly prior to filling the planter. Bulk seed handling equipment should also be cleaned thoroughly to prevent contamination and commingling issues. Cleaning activities should be performed outside of the field to be planted.
2. Check the label on each bag of seed planted to confirm the seed identity and avoid inadvertent varietal mixtures.
3. Plant the field to meet isolation requirements (as discussed above). Place flags to clearly mark field boundaries when planting varieties that are difficult to visually distinguish or when two classes of the same variety are planted adjacent to one another.

PLANTING RECORDS

Maintain complete and accurate planting records including:

- Field number
- Field location (map, GPS coordinates, etc.)
- Variety planted
- Identity of seed used (seed invoice, certification tags, *Bulk Seed Sale Certificates*)
- Amount of seed planted
- Planting date
- Previous crop

Seed production fields must be inspected by MCIA prior to harvest to be eligible for seed certification. Seed producers are responsible for submitting applications along with required documentation to MCIA. Seed producers are also responsible for verifying that necessary field inspections have been completed prior to harvesting a seed production field.

APPLYING FOR FIELD INSPECTION

MCIA will mail a field inspection application packet that includes forms and instructions to previous participants in the field inspection program in late spring of each year. Forms and instructions are also available on the MCIA website on the Seed Certification Client Resources page.

Make application for field inspection by the following dates:

- Soybeans - July 15
- Small seeded grasses and legumes - Year of seeding
- All other crops - June 7

Applications for field inspection must include the following:

- Signature of applicant – indicating intention to comply with all seed certification requirements
- Proof of seed source – a certification label or *Bulk Seed Sale Certificate* from the seed planted
- Maps showing field locations
- Field inspection fees

Retain a copy of your field inspection application and other required application documentation for your records.

Incomplete applications may result in field disqualification or delay field inspection until required information has been submitted.

Late applications may be accepted if it is possible for MCIA to complete the required inspection. A late fee will be assessed.

PREPARING FOR FIELD INSPECTION

Prepare seed fields for inspection before the field inspector arrives. Review the field standards for the crop being grown to determine problems that could lead to potential rejection for certification. Rogue out weeds and other crop plants that can be detrimental to seed quality focusing on contaminants that are difficult to remove in conditioning. Other varieties or offtype plants should be removed prior to pollination (for cross-pollinated crops) or prior to seed formation (self-pollinated crops).

FIELD INSPECTION REPORTS

MCIA will inspect each field at the appropriate time to confirm varietal identity and purity and determine conformance to other field standards. Inspection times vary according to crop type (e.g. small grains are inspected after they have fully headed, corn during pollination and soybeans after the leaves have dropped). Some crop types are inspected more than once (corn, sunflowers, field beans). A field inspection report will be provided to the applicant upon completion of the field inspection.

Instruct your contract growers to notify you prior to harvesting so that you may contact your MCIA field supervisor to schedule an inspection if necessary. Assume that your field has not been inspected until you have received a field inspection report from your inspector.

The field inspection report will indicate the field status (whether the field has met seed certification requirements). Review the inspection report carefully including the inspector's comments to identify corrective actions required before or during harvest. Fields not meeting certification standards will not

be certified until corrective actions have been completed. Corrective actions may include the requirement for a re-inspection to confirm that field standards have been met. Retain the copy of the field inspection report as part of your certification records.

A crop that has been harvested prior to inspection is not eligible for seed certification. Contact MCI 48 hours prior to harvesting if you have not received a field inspection report.

Harvesting, Transporting and Storing Seed

Proper harvesting, transporting and storing of seed are critical to maintaining seed quality. It is the responsibility of the seed producer to utilize sound production practices that preserve the varietal identity, purity and overall quality of the seed.

HARVESTING THE SEED

Clean all harvest equipment thoroughly prior to beginning harvest. This should include combines, wagons, trucks, conveyors and other harvesting equipment. Harvest the crop at the proper moisture. Acceptable moisture levels vary by crop type. Harvesting when moistures are too high can result in storage problems such as heating and mold which will result in loss of germination. Harvesting when too dry can result in mechanical damage to fragile seeds such as soybeans or field beans. Also monitor combine settings to avoid seed damage - especially critical for fragile crop seeds.

TRANSPORTING SEED

Thoroughly clean all conveyors: augers, legs and belt conveyors and trucks used to move seed. Avoid using conveyors that cannot be thoroughly cleaned prior to use. Watch for seed hanging up inside augers, in truck boxes, in the boots and behind the cups of legs. When handling fragile crop seeds, use conveyors that will not damage the seed. Augers and legs should be run fully and slowly to avoid seed damage. Avoid long drops or impacts against bin walls that will damage seed.

Monitor seed movement carefully to ensure that seed damage is not occurring. Observing and testing samples drawn at critical points in the seed handling process can help identify problems and avoid seed damage.

SEED STORAGE

All bins and other seed storage containers must be cleaned thoroughly prior to use. Bins should be swept, washed or cleaned with compressed air to remove all grain and residue from the previous crop stored. If insect infestations are evident, proper actions must be taken to remove insects and larvae to prevent infestation of the seed crop to be stored. Stored grain insects can have severe negative impacts on seed quality.

All bins and other seed storage containers **must be labeled** during use to prevent loss of seed identity and to prevent inadvertent varietal contamination. Assign numbers to all storage bins and maintain detailed storage records. Delivering the wrong variety to the seed conditioning plant is one of the most damaging seed production errors that can result in mislabeled seed when not caught in subsequent testing.

| |
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| <p>Bin Number _____</p> <p>Variety/Kind _____</p> <p>Crop Year _____</p> <p>Class _____</p> <p>Field Number(s) _____</p> <p>_____</p> |
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Bin label example (after harvest and prior to conditioning)

Certified seed must be conditioned at an MCIA Approved Seed Conditioning Facility or by the applicant producer of the seed.

APPROVED SEED CONDITIONING FACILITIES

MCIA has established requirements as a basis for approving conditioning facilities to condition seed eligible for seed certification. Approval is granted on an annual basis and may be granted for conditioning all crops, for conditioning specific crops, or for specified conditioning activities. Approved seed conditioning facilities designate personnel to perform official sampling and certification labeling activities required in the seed certification process. MCIA inspects approved facilities on a regular basis to verify on-going conformance to requirements.

To be approved, facilities must meet facility requirements appropriate for the product type to be processed and the type of processing to be performed. Facilities must:

- Possess and demonstrate the ability to operate the equipment necessary for the product being processed.
- Meet structural requirements necessary to preserve the product identity and quality.
- Utilize record keeping systems that meet certification and regulatory requirements.

A list of Approved Seed Conditioning Facilities, approval requirements and other program information is available on the MCIA website and is published annually in the *MCIA Directory*.

WHEN DELIVERING SEED FOR CONDITIONING

Contact an approved seed conditioner to make arrangements for conditioning your seed. When delivering seed take along a copy of your field inspection report to provide the seed conditioner with the information needed to complete the *Sampling Report*.

Bagging and Bulk Seed Requirements

Certified seed may be sold in bags, as bulk or in portable bulk containers. Specific requirements must be followed in order to maintain the certification status of the seed lot.

SALE OF CERTIFIED SEED IN BAGS

Bagging: The following rules apply when bagging Foundation, Registered, or Certified class seed:

1. New jute, cotton, plastic or paper bags must be used.
2. All bags in a given seed lot must be of the same kind, size and net weight.
3. Lot size limits in bags:

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| Grasses and small-seeded legumes | 55,000 lbs |
| Sunflower | 44,000 lbs |
| Corn | 88,000 lbs |
| Other crops including small grains and soybeans | 2,500 bushels |

4. State seed law prohibits any labeling or other representation conveying the seed to be certified unless it has been determined by a seed certifying agency that the seed conforms to certification standards. **The seed must have a certified seed label attached.**

Rebagging: The following rules apply when rebagging Foundation, Registered, or Certified class seed:

1. Rebagging may be desired for transfer to brand bags, recleaning or other reasons. When rebagging is performed by someone other than the original seed producer, it must be done under supervision of a MCIA representative.
2. Rebagged lots must be assigned a new lot number.
3. Draw a representative sample as required for bagged seed lots.
4. Complete a *Sampling Report* for the new lot. Indicate that the lot was certified previously by writing the following in the "Remarks" section:
 - a. "Rebagged".
 - b. The MCIA *Seed Certification Report* number of the previously bagged lot.
5. Requirements for retesting vary based on the design of the facility, the types of seed handled and methods used.
 - a. Retesting requirements are determined based on an inspection of the facility.
 - b. An approved seed conditioning facility may be approved to rebag seed without retesting.
 - c. Consult the *Inspection Report - Seed Conditioning Facility* to determine retesting requirements for the facility where the rebagging will take place.
6. The following apply when retesting is not required:
 - a. Submit the completed *Sampling Report* to MCIA reflecting the new bag lot information and retain the sample for your files.
 - b. MCIA will apply the test results from the original certified lot and issue the final *Seed Certification Report*.
7. The following apply when retesting is required
 - a. For fragile seed types (such as soybeans) submit the completed *Sampling Report* and sample to a MCIA authorized laboratory for germination and purity testing.
 - b. For non-fragile seed types, submit the completed *Sampling Report* and sample to a MCIA authorized laboratory for purity testing.

8. When all requirements have been met, MCIA will issue a final *Seed Certification Report*.
9. Bags must be labeled with certification tags containing the new lot number.

Bagging Seed from Certified Bulk Lots: The following rules apply when bagging seed from certified bulk lots:

1. When bagging seed previously certified as part of a certified bulk lot, follow all rules for bagging seed, including assigning a new lot number.
2. Draw a representative sample as required for bagged seed lots.
3. Complete a *Sampling Report* indicating that the seed was certified previously as a bulk lot by writing the following in the "Remarks" section:
 - a. "Bagged from Bulk".
 - b. The MCIA *Seed Certification Report* number of the bulk lot.
4. Requirements for retesting vary based on the design of the facility, the types of seed handled and methods used.
 - a. Retesting requirements are determined based on an inspection of the facility.
 - b. An approved seed conditioning facility may be approved to bag seed from certified bulk lots without retesting.
 - c. Consult the *Inspection Report - Seed Conditioning Facility* to determine retesting requirements for the facility where the bagging will take place.
5. The following apply when retesting is not required:
 - a. Submit the completed *Sampling Report* to MCIA reflecting the new bag lot information and retain the sample for your files.
 - b. MCIA will apply the test results from the original certified lot and issue the final *Seed Certification Report*.
6. The following apply when retesting is is required
 - a. For fragile seed types (such as soybeans) submit the completed *Sampling Report* and sample to a MCIA authorized laboratory for germination and purity testing.
 - a. For non-fragile seed types, submit the completed *Sampling Report* and sample to a MCIA authorized laboratory for purity testing.
7. When all requirements have been met, MCIA will issue a final *Seed Certification Report* with a new certification number.
8. Bags must be labeled with certification tags containing the new lot number.

SALE OF CERTIFIED SEED IN BULK

Certified, Registered and Foundation Class seed of wheat, oats, barley, rye, and soybeans may be sold in bulk, subject to the following regulations:

1. All field and seed standards applying to bagged seed shall also apply to classes of bulk certified seed.
2. All classes of certified seed may be sold in bulk.
 - a. Bulk **Certified class** seed may be sold by an approved bulk seed handling facility, approved seed conditioning facility or by the applicant producer. A maximum of two physical seed transfers are permitted after the lot has been certified.
 - i. From applicant producer or approved seed conditioning facility completing final certification of the seed lot to an approved bulk seed handling facility or consumer.
 - ii. From approved bulk seed handling facility to consumer.

- b. To be eligible for certification, bulk **Registered class** seed must be sold by the applicant producer or from an approved seed conditioning facility. A maximum of two physical transfers of seed are permitted after the lot has been certified:
 - i. From the applicant producer completing final certification of the seed lot to an approved seed conditioning facility or consumer.
 - ii. From approved seed conditioning facility to consumer (certified seed producer).
 - c. To be eligible for certification, bulk **Foundation class** seed must be transferred by the applicant producer or from an approved seed conditioning facility directly to the consumer (certified seed producer). A maximum of one sale is permitted. The maximum lot size for the bulk Foundation class shall be 10,000 bushels.
3. It is the seller's responsibility to:
 - a. Handle seed in a manner to prevent mixtures and contamination.
 - b. Supply seed that is representative of the seed tested and approved for certification.
 - c. Clean all bins, augers, conveyors, and other equipment before handling classes of certified seed.
 - d. Determine that the vehicle receiving bulk classes of certified seed is clean. If it is not clean, this condition is to be noted on the bill of sale or *Bulk Seed Sale Certificate*.
 - e. Keep a sample of each lot of bulk certified seed sold.
 - f. Furnish a completed *Bulk Seed Sale Certificate* to buyer.
 4. It is the buyer's responsibility to maintain purity of the seed after it has been loaded into the buyer's vehicle.
 5. Each load of bulk certified seed shall be accompanied by a *Bulk Seed Sale Certificate*.
 6. Bulk seed handling facilities must be approved before classes of certified seed can be handled in bulk, and must be inspected annually. Bulk seed handling facilities may be part of a seed conditioning facility or may be approved only for handling bulk Certified class seed (approved bulk seed handling facility). Before approval, all procedures for receiving, storing, dispensing and record keeping must be inspected. The operator of the facility must demonstrate acceptable procedures for maintaining purity and identity of bulk lots.
 7. For all bulk certified seed:
 - a. Storage bins must be cleaned between each variety that will be sold in bulk.
 - b. All bins, augers, conveyors and other equipment must be cleaned before storing or handling of classes of certified seed.
 - c. All bins must be clearly and prominently marked to maintain identity. Seed offered for sale must be marked with a complete label including kind, variety, lot number, origin, percentage of: weed seeds, other crop, inert, germination, hard and dormant seeds, name and rate of occurrence per pound of noxious weeds, name and address of labeler and seed treatment information as required by the Minnesota Seed Rules.

Bin label example for seed offered for sale:

| | | |
|---|--------------------------------------|---------------------|
| Certified Lacey Barley | | Lot 123456 |
| Pure Seed: 99.50% | Germination: 92% | Germ Date: 12/01/12 |
| Inert Matter: 0.48% | Other Crop: 0.01% | |
| Weed Seed: 0.01% | Noxious Weed Seeds: Wild Oats – 1/lb | |
| Smith Farm Seeds | Origin: Minnesota | |
| 123 Lake Road | Loose smut: 0.2% | |
| Anytown, MN 55555 | | |
| Unauthorized Propagation Prohibited | | |
| U.S. Protected Variety (PVP 94) | | |
| Seed of this variety may be sold only as a class of certified seed. | | |

- d. All bin openings must be closed except when seed is being put in or removed from the bin, or have sufficient separation from other bins to prevent cross contamination.
8. The following records must be maintained:
 - a. Amount of seed grown and conditioned or purchased for bulk sale.
 - b. Amount of bulk certified seed sold by variety and lot number.
 - c. A current inventory of seed available for sale of each variety.
9. One lot number will be assigned to each bin per filling. The maximum lot size is the bin capacity. All bins must be prominently identified to assure maintaining identity of the seed therein.
10. Bulk certified seed shall not move through any commercial grain-handling facilities.

SALE OF CERTIFIED SEED IN PORTABLE BULK CONTAINERS

Certified, Registered and Foundation class seed of wheat, oats, barley, rye, soybeans, small-seeded grasses and legumes may be sold in portable bulk containers using a *Bulk Seed Sale Certificate* or certification tag as proof of certification. When certification tags are used and the portable bulk container is unloaded into the buyer's vehicle, the tag must be given to the buyer.

Procedures:

1. Portable bulk containers must be cleaned thoroughly before they are filled.
2. The approved seed conditioner must indicate on the *Sampling Report* whether *Bulk Seed Sale Certificates* or certification tags are to be used for proof of certification.
3. If certification tags are used, a tag must be securely attached to each container.
4. When Registered or Certified class seed is sold to a non-approved seed retailer in portable bulk containers, certification tags must be attached to the containers.
5. It is the seller's responsibility to:
 - a. Adequately clean all augers, conveyors, and other equipment prior to handling certified seed.
 - b. Determine that the vehicle receiving certified seed is clean. If it is not clean this condition is to be noted on the bill of sale or *Bulk Seed Sale Certificate*.
 - c. Furnish a completed *Bulk Seed Sale Certificate* or the certification tag(s) from the container(s) to the buyer.
6. It is the buyer's responsibility to maintain purity of the seed after loading into the buyer's vehicle.
7. Portable bulk containers must be clearly and prominently marked to maintain identity. Seed offered for sale must be marked with a complete label including kind, variety, lot number, origin, percentage of: weed seeds, other crops, inert, germination, hard and dormant seeds, name and rate of occurrence per pound of noxious weeds, name and address of labeler and seed treatment information as required by the Minnesota State Seed Law.
8. The maximum size of certified seed lots in portable bulk containers is 2,500 bushels for small grains and soybeans. For small-seeded grasses and legumes, the maximum size is 55,000 pounds.

Seed Sampling Requirements

A seed sample submitted for testing must be an accurate representation of the entire lot from which it was drawn. Each sample must be drawn carefully and conscientiously in order to yield reliable information. Samples submitted for seed certification inspection must be drawn in accordance with procedures derived from the Association of American Seed Control Officials (AASCO) Handbook on Seed Sampling as described below.

AUTHORIZED SAMPLERS

1. Samples of seed lots conditioned at an Approved Seed Conditioning Facility may be drawn by the designated sampler at that facility.
2. Samples of seed conditioned by a non-approved applicant-producer must be drawn by MCIA. Contact your field supervisor, who will sample your seed lot and submit the official sample to the authorized laboratory of your choice for seed testing.

GENERAL REQUIREMENTS

1. Approved seed conditioning facilities shall designate a person (or persons) responsible for submitting representative samples.
2. MCIA shall determine eligibility of samplers for submitting official samples for seed certification.
3. To secure a representative sample, equal portions shall be drawn from evenly distributed parts of the quantity of seed to be sampled. Access shall be had to all parts of that quantity.
4. As the seed is sampled, each portion shall be examined. 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. Thoroughly mix the composite sample.
5. Composite samples shall be obtained to determine the quality of a lot of seed, such as the percentages of pure seed, other crop seed, weed seed, inert matter, germination, and varietal purity.
6. Samples must be labeled at all times and should be stored in sealed containers in a cool, dry location to prevent contamination and loss of germination.
7. Seed samples are to be submitted for testing as soon after conditioning as possible.

A sample of each lot of conditioned seed must be kept on file for at least one year after the lot has been completely sold as required by the Minnesota Seed Law.

SAMPLING EQUIPMENT

Probes (triers):

1. For sampling free-flowing seed in bags:
 - a. The trier shall be designed so that it will remove an equal volume of seed from each part of the bag through which the trier travels.
 - b. A trier long enough to reach all areas in the bag shall be used.
 - c. Unless the trier has partitions in the seed chamber it must be inserted into the bags horizontally.
 - d. When more than one trierful of seed is drawn from a bag, different paths shall be followed.
2. For sampling free-flowing seed in bins or portable bulk containers - a trier long enough to reach all areas in the bin shall be used.

Stream sampling:

1. The containers used must be of sufficient size to prevent seed from escaping during the sampling process.
2. The device must be capable of passing through the entire stream of seed.
3. The speed and timing of each cut must be uniform to produce uniform sized samples at regular intervals.
4. Ten percent of the seed must pass before and after the first and last samples respectively, as sampling must only take place when a uniform volume of seed is present.
 - a. Automatic mechanical sampling devices may be used to continually or intermittently draw representative samples as a seed lot is conditioned.
 - b. Hand-held sampling container – Any container or other device hand-held by the seed sampler that can be passed through the entire stream of seed to capture all of the seed in a cross-section cut may be used.

Hand sampling:

Non-free-flowing seeds that are difficult to sample with a trier shall be sampled by thrusting the hand into the seed and removing representative portions.

1. Insert the hand flat with the fingers together. Keep the fingers together as the hand is closed and withdrawn.
2. When more than one handful is drawn from a bag, the handfuls shall be taken from well separated points.

SAMPLING INSTRUCTIONS

When sampling seed, draw a representative sample from conditioned seed in the following manner:

Bagged lots and seed in portable bulk containers:

1. Draw the sample from the last piece of conditioning equipment or as bags are filled.
- OR** If sampling after closing the containers, use a probe (see seed sampling equipment) to draw the sample from the bags.
2. For lots of six bags or less, each bag shall be sampled or for lots of more than six bags, a minimum of 5 bags plus 10% of the total number of bags in the lot must be sampled. No more than 30 bags need to be sampled, regardless of the size of the lot.

NUMBER OF BAGS WHICH MUST BE SAMPLED

| No. of Bags/Lot | Minimum No. Sampled |
|-----------------|-------------------------------|
| 1 - 6 | each bag (minimum 5) |
| 7 to 14 | 6 |
| 15 to 24 | 7 |
| 25 to 34 | 8 |
| 35 to 44 | 9 |
| 45 to 54 | 10 |
| 55 to 64 | 11 |
| 65 to 74 | 12 |
| 75 to 84 | 13 |
| 85 to 94 | 14 |
| 95 to 104 | 15 |
| 105 to 114 | 16 |
| 115 to 124 | 17 |
| 125 to 134 | 18 |

| No. of Bags/Lot | Minimum No. Sampled |
|--------------------|---------------------|
| 135 to 144 | 19 |
| 145 to 154 | 20 |
| 155 to 164 | 21 |
| 165 to 174 | 22 |
| 175 to 184 | 23 |
| 185 to 194 | 24 |
| 195 to 204 | 25 |
| 205 to 214 | 26 |
| 215 to 224 | 27 |
| 225 to 234 | 28 |
| 235 to 244 | 29 |
| 245 to 254 | 30 |
| 254 or more | 30 |

Bulk lots:

1. Bulk lot samples may be drawn from the last piece of conditioning equipment if the seed is going directly to the final storage bin.
2. If seed is to be transferred to a bin outside the seed plant, draw the sample from the stream of seed as it enters the final bin.
3. If sampling after filling the bin, use a probe (see sampling equipment) to draw cores from well-distributed points throughout the bin.
4. To obtain a composite sample, take as many cores or handfuls as if the same quantity of seed were in bags of ordinary size. At least seven probes either by hand or trier shall be made from uniformly distributed parts of the quantity being sampled.

SAMPLE SIZE REQUIREMENTS

1. Submit samples in the sample bags available from MCIA. Use a ball point pen to label each sample bag with the required information.
2. Fill the bags to the level indicated for that crop on the sample bag.
3. MCIA has standards for seed lot purity that go beyond the testing requirements of the Federal Seed Act (FSA) and Minnesota Seed Law. Larger samples than what is defined in the FSA may be required. Please refer to chart for amount to submit for testing.
4. Keep in mind that there can be some dry down and seed loss at the testing labs; enclose enough extra seed to account for small weight losses.
5. For **treated lots** of all crops, **one sample bag (at least 500gm) of untreated seed** from each lot to be certified must be submitted in addition to a representative sample of the treated seed. The untreated sample will be examined for varietal purity. The treated sample will be tested for germination and purity.

| AMOUNT TO SUBMIT | | |
|--|--|-----------------------|
| Crop | All Classes | Minimum weight |
| Small grains, Soybeans, Corn, and Field beans | One sample bag filled to upper fill line | 1000 gm (2¼ lb) |
| Sunflower | Two filled sample bags or enough to meet minimum weight requirements | 1000 gm (2¼ lb) |
| Alfalfa, Birdsfoot trefoil, Kentucky bluegrass, Ryegrass, Timothy, Reed canarygrass and seed of similar size | One bag filled to lower fill line | 142 gm (5 oz) |

Submitting Samples for Testing

A representative sample of each lot must be submitted for testing to verify the seed meets certification standards.

MCIA has authorized the following laboratories to conduct testing for the Seed Certification programs. Applicants must select a laboratory authorized to perform testing for the crop species to be tested (see table below). Contact MCIA for details.

| | |
|---|--|
| <p>BioDiagnostics, Inc. 507 Highland Drive River Falls, WI 54022 Phone: (715) 426-0246 Fax: (715) 426-0251</p> | <p>Contact: Diandra Viner or DaNell Jamieson Email: diandra.viner@biodiagnostics.net danell.jamieson@biodiagnostics.net Website: http://www.biodiagnostics.net</p> |
| <p>North Dakota State Seed Dept. 1313 18th Street North Fargo ND 58105 Phone: (701) 231-5400 Fax: (701) 231-5401</p> | <p>Contact: Jeanna Mueller Email: jmueller@ndseed.ndsu.edu Website: http://www.nd.gov/seed/lab</p> |
| <p>SDSU Seed Testing Laboratory US Postal Mailing address: Agricultural Hall 242 Box 2207-A Brookings, SD 57007-1096 Shipping (UPS, FedEx, Speedy) address: 2380 Research Parkway Brookings, SD 57006-1785 Phone: (605) 688-4589 Fax: (605) 688-4013</p> | <p>Contact: Brent Turnipseed, Sharon Clasen, or Ronny Parmely Email: brent.turnipseed@sdstate.edu Ronny.Parmely@sdstate.edu Sharon.Clasen@sdstate.edu Website: http://www.sdstate.edu/ps/seed-lab/index.cfm</p> |

| Crop/Species | Authorized Laboratory | | |
|---------------------|-----------------------|------------------------------|------------------------------------|
| | BioDiagnostics, Inc. | SDSU Seed Testing Laboratory | North Dakota State Seed Department |
| Barley | X | X | X |
| Corn | X | X | |
| Field Beans | | | X |
| Flax | X | X | X |
| Grasses – Group I | X | | |
| Grasses – Group II | X | X | |
| Legumes – Group III | X | X | |
| Oats | X | X | X |
| Rye | X | X | X |
| Soybeans | X | X | X |
| Sunflowers | X | | X |
| Triticale | X | X | X |
| Wheat | X | X | X |

Grasses – Group I: Bluegrass, Canarygrasses, and Timothy

Grasses – Group II: Bentgrass, Bromegrass, Fescues, Orchardgrass, Redtop, Ryegrass, and Wheatgrass

Legumes – Group III: Alfalfa, Clovers, Crownvetch, and Trefoils

TO SUBMIT SEED FOR TESTING FOLLOW THESE STEPS:

1. Draw an official representative sample of each conditioned lot according to MCIA sampling procedures and place in a sample bag provided by MCIA. Use a ball point pen to label each sample bag with the required information.
2. Fill out the *MCIA Sampling Report* correctly and completely. Laboratories will bill you directly for testing so address information is required. If using North Dakota State Seed Department seed laboratory for testing, be sure to complete the *NDSSD Seed Test Request Form* also. **Please note steps 8 through 10 regarding submission of documents to the NDSSD laboratory and MCIA.**
3. The chart below describes the tests required for seed certification of the most common crops produced in Minnesota (you may request additional tests if desired).

| Crop | Seed Quality Tests required | Seed Health Tests required | Varietal Purity Test required |
|-----------------------|-----------------------------|--|---|
| Barley | Germination; Purity | Loose smut (per field or seed lot) | Barley rachilla hair check |
| Corn | Germination; Purity | n/a | Visual exam for off-types on untreated seed |
| Field beans | Germination; Purity | Bacterial blight and Anthracnose (per field or seed lot) | n/a |
| Flax | Germination; Purity | n/a | n/a |
| Grasses I | Germination; Purity | n/a | n/a |
| Grasses II | Germination; Purity | n/a | n/a |
| Legumes III | Germination; Purity | n/a | n/a |
| Oats | Germination; Purity | n/a | Oat fluorescence check |
| Rye | Germination; Purity | n/a | n/a |
| Soybeans | Germination; Purity | n/a | Soybean hilum color check |
| Sunflowers | Germination; Purity | n/a | Visual exam for off-types on untreated seed |
| Triticale | Germination; Purity | n/a | n/a |
| Wheat (Spring) | Germination; Purity | n/a | Variety identification (electrophoresis) beginning with 2013 crop |
| Wheat (Winter) | Germination; Purity | n/a | n/a |

Grasses – Group I: Bluegrass, Canarygrasses, and Timothy

Grasses – Group II: Bentgrass, Bromegrass, Fescues, Orchardgrass, Redtop, Ryegrass, and Wheatgrass

Legumes – Group III: Alfalfa, Clovers, Crownvetch, and Trefoils

4. Once MCIA has received a completed *Sampling Report* and analysis report, a certification status of the lot can be determined. A *Seed Certification Report* will be sent to the owner and conditioner.
5. The sample tag should be submitted directly to MCIA accompanied by a copy of the *Sampling Report* via email, fax or regular mail. Any additional information, such as transfers of seed coming in from other states, OECD tagging reports, incoming *Bulk Seed Sale Certificates*, and certification tags or other supporting documentation should also be sent directly to MCIA.

Submitting samples to BioDiagnostics or SDSU Seed Testing Lab:

1. Send the sample and *Sampling Report* to either laboratory authorized for the crop type to be tested. The laboratory will send a copy of the *Sampling Report* to MCIA. The sample information will be entered into the MCIA database and will be used to facilitate any required follow-up on the lot.
2. Test results will be sent by the laboratory directly to the owner of the lot and to MCIA. Questions regarding testing should be made directly to the laboratory conducting the tests.

Submitting samples to North Dakota State Seed Department:

1. Fill out the *NDSSD Seed Test Request Form* in addition to the *MCIA Sampling Report*. **All** tests necessary for certification must be indicated on the form, including a varietal (genetic) purity test if applicable, to avoid delays in completing final certification.
2. In the section labeled “Results” please check the box “Email to MCIA” so that MCIA receives a copy of the results.
3. Send **only** the sample bag and completed *NDSSD Seed Test Request Form* to the laboratory. Send the *MCIA Sampling Report* directly to MCIA.

It is the responsibility of the applicant to request all necessary tests and to send all necessary documents to MCIA. Final certification cannot be completed until this information is received.

Certification Labels and Bulk Seed Sale Certificates

In order for certification to be completed, all seed must have a certification tag attached to each container or be delivered with a *Bulk Seed Sale Certificate*.

SEED CERTIFICATION LABELS

State and Federal Seed Laws require that certification labels be securely fastened to each bag before seed leaves the original owner's possession. Seed in containers with no certification labels attached is not certified seed. These labels, supplied by MCIA, identify the certification agency and seed class. Variety name, seed kind, lot number and identifying number are imprinted before attaching to bags. Certification labels shall contain only information approved by MCIA. There are several options for obtaining certification labels.

Requesting pre-printed certification tags: Applicant producers and approved seed conditioning facilities may request pre-printed tags to sew into bags as they are filled. When this system is used, the applicant must agree to keep seed under their control until certification is granted.

1. Submit a *Sampling Report* with all information except amount of seed and request the number of tags you need. Request "Pre-print tags" in the "Remarks" section of the report.
2. You will receive serially numbered tags registered in your name for which you are accountable. You must report lost, damaged or unused tags to MCIA. Return damaged or unused tags to your field supervisor.
3. After seed is bagged and sampled, complete a *Sampling Report*. Note in the report "remarks" section that you have received pre-printed tags and indicate the actual amount of seed and final number of bags in the lot.

MCIA may print tags once the seed lot meets certification standards: Applicant producers and approved seed conditioning facilities may request tags on the *Sampling Report*, to be received once the seed lot has met certification standards.

1. Submit a *Sampling Report* with the number of tags needed.
2. Once the seed lot meets certification standards, the tags you requested will be printed and shipped by MCIA.
3. Attach the tags to the bags.

Printing tags: Approved seed conditioning facilities that have tag-printing privileges authorized by MCIA can print certification tags.

1. Approved seed conditioning facilities with tag-printing privileges shall print tags only for seed conditioned in that facility unless special authorization is given by MCIA.
2. Each facility must designate an individual in charge of certification tags and provide his/her name to MCIA. This person will be accountable for printing, attaching tags to bags, and record keeping.
3. Blank certification tags will be issued upon request to seed conditioning facilities approved for tag printing. Plants are accountable for all tags issued to them and must maintain an accurate account. An inventory of tags will be taken by the MCIA field supervisor at least annually.
4. Tags are serially numbered and consecutive numbers must be assigned to each seed lot.
5. Tag printing must be clear, uniform and legible.
6. Approved seed conditioning facilities that print tags are accountable for all seed tagged prior to testing. Shipping seed prior to receiving test results could bring revocation of tag-printing privileges.
7. If a seed lot is rejected, certification tags must be removed and returned to the MCIA field supervisor. Damaged tags must also be returned to the field supervisor.

8. These requirements must be followed to maintain accurate certification records. MCIA reserves the right to revoke tag printing privileges in case of violation.
9. The prefix to the AP (Approved Plant) number changes to that of the current calendar year each July 1.



Front of tag



Back of tag

BULK SEED SALE CERTIFICATES

Bulk Seed Sale Certificates supplied by MCIA shall be issued for each sale of certified seed sold in bulk. There are several options for obtaining *Bulk Seed Sale Certificates*.

Blank *Bulk Seed Sale Certificates*: Applicant producers, approved seed conditioning facilities and approved bulk seed handlers may request blank *Bulk Seed Sale Certificates* to be filled out by the seed seller prior to seed delivery. When this system is used, the facility must issue a certificate for each sale.

1. Request blank certificates from the MCIA office.
2. You will receive serially numbered certificates in your name for which you are accountable.
3. At time of sale complete the certificate accurately and completely. Sign the certificate.
4. Return the yellow copy of all certificates issued and all voided and unused certificates to your field supervisor.

***Bulk Seed Sale Certificates* printed by MCIA:** Applicant producers, approved seed conditioning facilities and approved bulk seed handlers may request MCIA to print required information on the *Bulk Seed Sale Certificates*.

1. Indicate “printed” next to the number of certificates requested on the *Sampling Report*.
2. At time of sale complete the certificate by writing in the buyer’s name, address, amount of seed sold, whether for resale/not for resale. Sign the certificate.
3. Return the yellow copy of all certificates issued and all voided and unused certificates to your field supervisor.

Issuing *Bulk Seed Sales Certificates* Online: Applicant producers, approved seed conditioning facilities and approved bulk seed handlers may generate *Bulk Seed Sale Certificates* through an online system.

1. Contact the MCIA office to set up a user name and password, including your email address. It is best to set this up a couple of days prior to wanting to use the electronic system.
2. Once the initial set up of your data has been made, you will be able to issue serially numbered certificates in your name.
3. You are responsible for:
 - a. Generating a certificate for each sale of seed.
 - b. Accurately entering into the system information needed to complete the certificate.
4. MCIA will utilize the system to monitor certificate use.

Rejected Seed Lots and Substandard Seed

If a seed lot has been rejected, there are options/conditions under which the seed lot may still be certified.

SEED LOTS REJECTED FOR PROHIBITED WEED SEEDS

1. Seed lots rejected for prohibited weed seeds can neither be offered for sale in Minnesota nor blended with other lots of seed.
2. Samples of seed lots rejected for prohibited weed seeds cannot be resubmitted for certification.
3. Seed lots rejected for prohibited weeds can be reconditioned. Issue a new lot number for reconditioned seed lots and submit a sample for purity and germination testing.
4. Certification labels from rejected lots must be returned to the MCIA field supervisor.

SEED LOTS REJECTED FOR OTHER REASONS

Use either option below for seed lots rejected for reasons other than prohibited weeds:

1. Resample the seed lot using the required sampling procedures - see the section of the handbook on Seed Sampling Requirements. The designated sampler of the approved seed conditioning facility that conditioned the seed may draw one resample per lot.
2. A rejected lot can be reconditioned. Issue a new lot number for the reconditioned seed lot. The designated sampler of the approved seed conditioning facility may draw and submit a sample of the reconditioned lot for purity and germination testing.
3. Certification labels from rejected lots must be returned to the MCIA field supervisor.

SUBSTANDARD SEED

Certain qualities of seed may be affected by environmental conditions, such as unfavorable weather. Seed that fails to meet the certification standards for inert matter and/or germination may be certified as "Substandard Seed". Also, barley containing more than 4% loose smut may be certified as substandard seed. The percentage of loose smut found in the test shall be included on the label.

The following requirements must be met:

1. All possible means of upgrading the quality of the seed lot must be used before substandard classification is given.
2. The labeler is responsible for ensuring that seed analysis information printed on labels is accurate and in compliance with seed law labeling requirements.
3. Certification labels or *Bulk Seed Sales Certificates* must indicate that the seed is substandard and the reason for the substandard status (see following labeling examples).

Procedure for Substandard Lots:

1. The form *Substandard Seed* is sent to all seed certification applicants whose seed lots do not meet germination, inert matter and/or loose smut standards.
2. The form must be completed and returned to MCIA to receive "Passed - Substandard" status on a failed lot. When completing this form, indicate which of the following options is being used to label the seed as substandard.
 - a. Tags stamped by the owner to show the substandard status.
 - b. Request tags or adhesive labels from MCIA.
 - c. The approved seed conditioning facility printed new certification tags showing substandard status. The serial numbers of the tags used must be indicated and a sample tag attached to the form.

The following are two examples of certification labels for substandard seed lots:

| CERTIFIED SEED | CERTIFIED SEED |
|---|---|
| <p>MN0209SP Soybeans Lot 123456 Grown in 2012 Substandard Inert Matter</p> | <p>Lacey Barley Lot 123456 Pure Seed: 99.50% Germination: 92% Germ Date: 12/01/12 Inert Matter: 0.48% Other Crop: 0.01% Weed Seed: 0.01% Noxious Weed Seeds: Wild Oats – 1/lb</p> <p>Substandard – Loose smut Loose smut: 5.2% Smith Farm Seeds Origin: Minnesota 123 Lake Road 12-AP-9000 Anytown, MN 55555 Net weight 48 lbs</p> <p style="text-align: center;">Unauthorized Propagation Prohibited U.S. Variety Protection (PVP 94) Seed of this variety may be sold only as a class of certified seed.</p> |

Substandard Seed – No Analysis

Substandard Seed – With Analysis

APPROVING LOTS “FOR OWN USE ONLY”

Occasionally, when a Foundation or Registered class seed lot fails to meet certification standards, an applicant may request that the lot be passed for his own use for further seed production. Before MCIA will consider such a request, all reasonable measures must be taken to correct problems with the seed lot. Where seed conditioning may correct the problem(s), it is recommended that the applicant recondition and retest the seed lot prior to requesting "For Own Use Only" status.

To be eligible, seed lots must comply with all requirements of the Minnesota Seed Law. Lots containing prohibited weed seeds, restricted weed seeds in excess of 25 per pound or total weed seed in excess of one percent are not eligible.

Upon receipt of a written request from the applicant, individual lots will be evaluated based on several factors including the experience of the applicant, seed supply, and end use of the seed. If approval is granted certification tags will be issued that include the statement "For Own Use Only." Seed so labeled may not be offered for sale.

Downgrading Seed

Registered seed may be downgraded to the Certified class at the discretion of the owner of the seed. Contact MCIA prior to downgrading Registered class seed of new public variety releases.

PRIOR TO COMPLETING CERTIFICATION

Mark “Certified” seed class on the *Sampling Report* and write “downgrade” in the “Remarks” area.

AFTER COMPLETING CERTIFICATION TO REGISTERED CLASS

Bagged Seed: If downgrading only a portion of a lot, complete the following steps:

1. Assign a new lot number to the Certified class seed lot.
2. Submit a *Sampling Report* for the new Certified class seed lot. Include the following:
 - a. New lot number.
 - b. Previous lot number (from Registered class seed lot).
 - c. Previous MCIA number (from Registered class seed lot).
 - d. If new Certified class seed tags are printed, indicate the serial numbers of the tags used and attach a sample tag.
 - e. Number of bushels/pounds to be downgraded.
 - f. Number of containers.
 - g. Write “downgrade” in the “Remarks” area of the form.
3. Return Registered tags to MCIA or your field supervisor.
4. MCIA will issue *Seed Certification Reports* for the Registered and Certified class seed lots indicating the correct number of bushels for each.

Bagged Seed: If downgrading the entire lot the following steps must be met:

1. Submit a corrected *Sampling Report* with the correct seed class and indicate “downgrade” in the “Remarks” area of the form.
2. Return Registered tags to MCIA or your field supervisor.
3. MCIA will issue a *Seed Certification Report* indicating the correct seed class.

Bulk Seed: If downgrading only a portion or the entire lot, issue a *Bulk Seed Sale Certificate* indicating the seed class as Certified.

It is the seed lot owner's responsibility to uphold seed law requirements when carryover seed is sold. Below are some key points.

PROCEDURE FOR LABELING CARRYOVER SEED

1. Determine whether the date of the germination test on the label meets applicable seed law requirements:
 - a. Minnesota State Seed Law requires a germination test within 12 months of sale. Grass seed must be germination tested within 15 months of sale. The first full month after the test was done is counted as the first month.
 - b. Seed that moves interstate must comply with the Federal Seed Act, which requires a germination test within 5 months of the date of interstate shipment. The first full month after the test was done is counted as the first month.
2. If the germination test date on the label requires updating, resample the lot and submit the sample for a germination test to the laboratory of your choice. MCI A does not require updated germination results unless the owner of a seed lot requests a revised *Seed Certification Report* or updated analysis tags on certification labels.
3. All containers offered for sale must be labeled with the new germination test date (and germination percentage if changed). Labeling options include:
 - a. Applying stickers with the new germination information to all analysis labels. Stickers must adhere securely and should cover only the analysis information to be updated.
 - b. Attaching a new analysis tag to each container indicating the new germination information. When only the germination test date and germination rate information is being updated, a label including only that information may be attached to the containers in addition to the existing label(s).
 - c. When analysis information was printed on the certification labels and new certification tags are printed to replace the existing labels, use the following procedures:
 - i. Submit a *Sampling Report* to MCI A indicating:
 - The number of tags printed.
 - The serial numbers of the tags used.
 - The lot is "carryover seed" in the "Remarks" area of the report.
 - The original MCI A number of the lot.
 - ii. Attach a sample tag to the *Sampling Report*.
 - iii. Remove the old tags from the bags and return to the MCI A field supervisor.

Variety Blends and Mixtures

To be eligible for certification, variety blends and mixtures must be approved by MCIA.

According to Minnesota State Seed law, blends and mixtures are defined as follows:

Blend - Seed consisting of more than one variety of a kind, each in excess of five percent of the whole.

Mixture - Seed consisting of more than one kind, each in excess of five percent of the whole.

REQUIREMENTS

1. Only MCIA approved seed conditioning facilities that can demonstrate the ability to blend/mix seed within specified tolerances will be approved to do blending and mixing. Approvals are designated on the Seed Conditioner Facility Inspection Report.
2. Only Certified class seed of each of the component varieties shall be used in a certified blend/mixture. Proof of certification of seed used must be submitted to MCIA.
3. If seed of individual components of a certified blend are not visibly distinguishable from one another, MCIA may require that its representative be present during the blending process.
4. Permission to use a protected or private variety in a blend must be obtained from the owner or breeder of the variety. Labeling must be in accordance with the owner's requirements. If the blend contains component varieties for which owners specify that the identity may not be divulged, the components of the blend and proportions of each shall be recorded in confidence at MCIA. If the owner(s) give permission to divulge the variety names, the conditioner has the option of stating the names of the varieties of the components and proportions on the label.
5. A blend may be identified by a brand name. For example: ABC Brand Perennial Ryegrass Blend. With approval of the owners, a blend may also be identified by the names of the components. For example: Evans/Hardin Soybean Blend. The label must specify that the seed lot is a blend or mixture.
6. When a name is assigned to a blend/mixture, the identity and percentage of each component of the blend/mixture shall be recorded with MCIA and shall not vary between lots and between years.

BLEND/MIXTURE CERTIFICATION PROCEDURES

1. Request approval for each blend/mixture to be certified by submitting an *Application for Certification of Variety Blends/Mixtures*.
2. Submit evidence of the owner or breeder's permission to use a protected or private variety in a blend.
3. Draw a representative sample of each component prior to blending, according to MCIA sampling procedures.
4. Submit a sample of each component to an MCIA authorized laboratory for testing, if certification has not yet been completed. For the blend or mixture to be eligible for certification, each component must meet certification requirements. If components have been certified in another state, submit a certification label as proof of certification of the component lot(s) to be used.
5. Submit a *Notification of Blending Certified Seed* to MCIA two days prior to blending or mixing seed.
6. Draw a representative sample of the final blend according to MCIA sampling procedures.
7. Testing requirements for blends/mixtures are determined based on an evaluation of the seed conditioning facility and the crop kind(s) to be blended/mixed.

8. If required, submit a sample of the blended lot for purity and/or germination testing. To be eligible to be labeled with certification tags, the blend/mixture must meet certification requirements for germination and purity.

Examples:

CERTIFIED SEED

BLEND OF CERTIFIED SEED

The components of the blend were inspected and approved as Certified Seed.

ABC Brand Perennial Ryegrass Blend
Lot number 123456
12-AP-9999

CERTIFIED SEED

MIXTURE OF CERTIFIED SEED

The components of the mixture were inspected and approved as Certified Seed.

Play Time Turf Grass Mix
Lot number 123456
12-AP-9999

Interagency Seed Certification

Interagency certification allows certification of seed when moved between states.

Interagency certification is used in three ways:

1. Certification has been completed by another state and a seedsman wishes to blend, condition or rebag in Minnesota.
2. Field inspection was completed in another state and certification is to be completed in Minnesota.
3. Field inspection was completed in Minnesota and certification is to be completed in another state.

CERTIFICATION COMPLETED IN ANOTHER STATE

When certification is completed in another state and a seedsman wishes to recondition or rebag in Minnesota, seed is conditioned and samples are submitted as usual. Include a completed *Bulk Seed Sale Certificate* or certification tag from the state of origin along with a copy of the *Sampling Report* and submit to the MCIA office.

INTERAGENCY SEED BLENDS/MIXTURES

When certification is completed in another state and a seedsman wishes to blend lots in Minnesota, preliminary samples of each must be taken by an official MCIA inspector or by a designated sampler at an approved seed conditioning facility. Each seed lot must be inspected to verify that all bags display certified tags from the originating state. Bags without certified tags cannot be included in the certified blend or mixture. The number of bags must be verified with the conditioners record. Complete the following steps:

1. Sample component lots:
 - a. Samples from each component lot of 20 bags or less shall be one-half pound; samples from more than 20 bags shall be one pound.
 - b. A sample is not necessary for component lots with Minnesota tags. Simply include a certified tag with the other component samples of the blend.
 - c. Remove one certified tag from each component lot and include them along with a copy of the *Sampling Report*. Under "Remarks", identify as a component sample of blended lot number and indicate quantity and identification numbers of bags received.
 - d. Label component sample bag with variety, lot number and class of seed.
 - e. Send component lot seed samples with final sample along with the *Sampling Report* to MCIA.
2. Blend and retag seed.
3. Sample blended lot:
 - a. Sample blended lot. Sample size is the same as for component lots.
 - b. Label sample bag with blend name, lot number and seed class.
 - c. Complete MCIA *Sampling Report*. Under "Remarks," identify as final sample.
 - d. Submit sample and *Sampling Report* to an MCIA authorized laboratory for testing.
4. All original certification tags must be available for inspection by MCIA.

FIELD INSPECTION IN ANOTHER STATE, CERTIFICATION COMPLETED IN MINNESOTA

1. Procedures are the same as for seed grown in Minnesota except that the applicant must furnish a completed *Certificate of Transfer* signed by a representative of the certification agency of the state in which the seed was produced.
2. Seed is conditioned and samples are submitted as usual with the *Sampling Report*. Submit a copy of the *Sampling Report* and the *Certificate of Transfer* to MCIA.
3. Seed must be held until all tests are completed and the lot is passed.
4. Certification tags may be issued by MCIA or printed by approved seed conditioning facilities with tag-printing privileges. Information required on the certification tag and *Bulk Seed Sale Certificate* are shown in the example below.

Certification Tag Example: Use standard US postal service abbreviations for the states in which the seed was produced followed by MN and the words “interagency certified.” If the seed was produced in Canada use CDN for the abbreviation.



FIELD INSPECTION IN MINNESOTA, CERTIFICATION COMPLETED IN ANOTHER STATE

When field inspection was completed in Minnesota and certification is to be completed in another state, the applicant for field inspection shall complete the form *Certificate of Transfer for Seed Pending Certification* and submit to MCIA for completion. MCIA shall send the original to the conditioner/purchaser of the seed. Signed copies shall be sent to the producer/seller and to the certification agency in the state where the seed is to be shipped.

Minnesota Crop Improvement Association (MCIA) Home Page <http://www.mncia.org>

Members are encouraged to use the MCIA website to access information needed for seed certification. The “Client Resources” section of the site provides standards, forms, instructions and fee information needed to participate in the program. The site also provides links to many of the references listed below under “additional resources”.

United States Department of Agriculture (USDA)

Federal Seed Act and other publications

<http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateI&navID=Publications&rightNav1=Publications&topNav=&leftNav=FairTradingRegulations&page=SeedTestingPublications&resultType=&acct=lsgeinfo>

Plant Variety Protection

<http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateC&navID=pvpomainpage&rightNav1=pvpomainpage&topNav=&leftNav=&page=PlantVarietyProtectionOffice&resultType=&acct=plntvarprctn>

Minnesota Department of Agriculture (MDA)

Home page <http://www.mda.state.mn.us/>

Minnesota Seed Regulatory Program, Minnesota Seed Law, and other publications

<http://www.mda.state.mn.us/licensing/licensetypes/fsmsrp.aspx>

Association of Official Seed Certifying Agencies (AOSCA)

Home page National Variety Review Board information <http://www.aosca.org>

Canadian Food Inspection Agency (CFIA)

Information on importing seed into Canada

<http://www.inspection.gc.ca/english/plaveg/seesem/abce.shtml>

Organization for Economic Co-operation and Development (OECD)

USDA site

<http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateG&navID=OECDProgram&rightNav1=OECDProgram&topNav=&leftNav=CommodityAreas&page=SeedTestingOCED&resultType=&acct=lsgeinfo>

International site

http://www.oecd.org/document/0/0,3343,en_2649_33905_1933504_1_1_1_1,00.html