



# SOIL

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## Producing Certified and Registered Seed no. 0.302

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### Quick Facts...

Seed certification maintains a pedigree on seed of a specific variety.

Once a superior variety of seed is developed, painstaking effort must be taken to keep it pure and produce it in large quantities for use.

Most growers can produce certified seed if they are willing to make the extra effort.

The certification program recognizes four basic classes of seed: breeder, foundation, registered and certified, representing advancing generations of seed production.

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The production of certified and registered seed ensures that commercial grain and forage crop producers have an adequate supply of high quality, clean seed stocks. It does require extra time, labor and management effort. However, it usually does not require additional equipment. Most growers can produce certified seed if they are willing to make the extra effort.

### Certification Program

The certification program recognizes four basic classes of seed: breeder, foundation, registered and certified. Each class represents advancing generations of seed production. Production of breeder and foundation classes are limited to the plant breeder and Foundation Seed Projects, respectively.

Three additional classes are recognized: select, tested and source identified. These classes are used for collection of native species and improved strains that have not been formally released. Refer to the *Colorado Seed Certification Standards Handbook* for a more detailed description of seed classes.

To produce certified seed, follow precisely these nine steps:

#### 1. Obtain foundation or registered seed.

Foundation seed of public varieties may be obtained from the Foundation Seed Project at Colorado State University. Registered seed produced in Colorado can be obtained directly from growers listed in the *Colorado Certified Seed Directory*.

Retain the proof of planting eligible seed stock, because it must be supplied to the certification service to verify the seed source. The proof of eligible seed is the certification label or tag attached to the bag, or a bulk sales certificate issued by the seller at the time of purchase. This proof must accompany the application for field inspection.

#### 2. Clean all equipment before planting, harvesting, transporting or storing the seed.

Use special care to prevent contamination from other crops, other varieties and weed seeds. The most efficient methods to clean equipment include sweeping, vacuuming and using compressed air or water. A small amount of contamination may cause for rejection of a seed field.

#### 3. Plant the seed on clean ground that meets all certification land requirements.

The field should **not** have a history of containing noxious weeds and must not have been planted to the same crop the previous year, unless it was planted to the same variety and class of certified seed. If the field is intended for production of registered seed of any small grains, use a field where no other

variety of small grains have been grown during the past two cropping seasons. Some other crops, such as alfalfa and grasses, also may require more than one year between seed crops.

Isolation requirements also must be met. Self-pollinated crops usually require only mechanical isolation (10 feet or 3 meters from other crops of the same kind). Isolation requirements for cross-pollinated crops vary with crop and class of seed produced. Refer to the *Colorado Seed Certification Standards Handbook* for specific isolation requirements.

#### 4. Applications are available from and should be submitted directly to the Colorado Seed Growers Association.

Return the completely filled out Application for Field Inspection form to the Colorado Seed Growers Association office, along with proof of source material and full payment. Deadlines are as follows:

May 1:	fall-sown small grains
June 1:	spring-sown small grains
May 1:	alfalfa, clover and grasses
July 10:	beans
August 1:	millet

Late application will be accepted only if adequate time permits for field inspection. A late fee will be required on all late applications.

#### 5. Prepare your seed fields for inspection by roguing off-type plants and controlling weeds.

If noxious weeds are present in a small portion of the field, destroy the weeds. Clearly mark off that area so it can be eliminated from harvesting for certified seed. Careful roguing and weed control ensure varietal purity and absence of weed seed.

#### 6. Arrange for field inspection.

Contact the certification office to make inspection arrangements. The grower is responsible for contacting the certification office for field inspection prior to harvest. Fields cannot be inspected once the crop is cut. Fields are inspected for varietal purity, isolation, freedom from noxious weeds and seed-borne disease, and any other factor that can adversely affect seed quality. Upon completion of the inspection, the inspector will either approve or reject the field. Approved fields are eligible to continue in the certification process and need no further field inspection.

Rejected fields are not eligible for certification unless the cause for rejection is remedied and they pass a second inspection. Fields are not inspected more than twice. Fields can be certified when a clean seed sample is submitted that conforms to the minimum standard for certification.

#### 7. Harvest, transport and store the seed with clean equipment.

Make sure that harvesting equipment, trucks and storage facilities are clean prior to harvest. Clean equipment will help to maintain genetic and mechanical purity.

Store seed from each certified field in a separate bin identified by kind, variety, year produced and field location. Check the seed often after harvest to make sure the seed is not overheating. Take a representative bin run sample immediately after harvest and send it to the Colorado Seed Growers Association for germination and purity analysis. This helps you to detect potential problems with the seed.

If you plan to market your seed to an approved conditioner, a bin run analysis will be an important marketing tool. Field-approved seed cannot be sold as certified. It can be sold as certified seed only when a representative sample of

the cleaned seed meets the minimum standards for that crop and certification has been issued to the owner.

#### 8. Have the seed conditioned (cleaned) by an approved certified seed conditioner.

The primary purpose of seed conditioning is to remove unwanted inert material, weed seed, other crop seed, and small, less vigorous crop seed. Seed that is eligible for certification may be cleaned only by an approved certified seed conditioner. All hard red winter wheat seed must also be conditioned through an approved length grader or gravity table before certification can continue. A list of approved conditioners is published in the back of every certified seed directory. Growers may condition their own seed provided that their cleaning facilities have been inspected and approved by the certification service.

#### 9. Submit a representative sample of the conditioned seed to the certification agency for purity and germination analysis.

Be sure to include a Seed Sample Identification form with each sample. Fill the form out completely and sign it. Make sure the sample is representative of the entire lot of seed offered for sale. Take several samples during the conditioning process, then take a subsample from the bulk of all samples. The sample must meet the minimum standards for purity and germination for the specific crop and seed class. If the seed meets these standards, a certificate will be issued by the seed certification service. Seed can be sold as certified only after a Certification Certificate is issued.

If the entire lot of seed is not conditioned in a continuous operation, each run or separate conditioning produces separate lots of seed. Submit separate samples for each conditioning process.

## Options for Sale of Seed After Harvest

### Sale as Unconditioned Seed to a Conditioner

A grower may sell field approved uncleaned seed that is eligible for certification to an approved conditioner. The conditioner can complete the certification process and offer the seed for sale in bags or in bulk as certified.

### Bagged Sales

The grower may condition and bag the certified seed for sale if all certification requirements are met. Certified seed must be bagged in new containers and have a certified tag or label attached prior to shipment. Any seed sold without the tag or label attached to the container is not considered certified.

All wheat varieties owned by the Colorado Wheat Research Foundation must also have a Red Tag attached to the bag. Red Tags can be obtained at no charge from the Colorado Seed Growers Association office.

Once certified seed is bagged and labeled with a certification tag, it can be resold any number of times. Carryover seed that has not been tested for 13 months must be retested and labeled with the updated germination before it can be sold within Colorado. Seed transported out of Colorado must be tested and labeled for germination within five months.

Keep accurate records concerning the conditioning, storage and sale of all certified seed. Refer to the Colorado Approved Conditioner Standards for more detailed information. A copy of these standards is available upon request from the certification service.

### Bulk Sales

Certified seed may be sold in bulk by the original grower or by an approved Class I conditioner. A "Bulk Sales Certificate" must be issued at the

time of sale. The bulk sales certificate must be completely filled out, including kind, variety, lot number, grower, germination and purity analysis, and signed by the seller. All certified seed sold in bulk must have been issued a Certification Certificate prior to delivery. All wheat varieties owned by the Colorado Wheat Research Foundation sold in bulk must be sold with a Bulk Sales Certificate that has a Red Tag imprinted on it.

Bulk sales certificates can be sent either as preprinted with analysis information or blank for the retailer to fill in. Bulk sales certificates cost \$7.50 each and are available from the seed certification office.

## Marketing of Certified Seed

Certified seed growers are responsible for marketing their own seed. The Colorado Seed Growers Association has several programs that can aid growers in selling certified seed, including promotional items, sales brochures, advertising refunds and certified seed directories.

Potential growers should consider that a successful certified seed sales program must also include a plan to identify, notify and successfully sell to likely customers. Certified seed sales are made during busy planting times and thus may compete with manpower and facility needs.

One way for new growers to start producing certified seed is to contract seed production with an existing grower who has an established customer network. This allows a grower to learn how to produce quality certified seed without having to spend much time or extra money developing new markets and sales facilities.

## Plant Variety Protection

Varieties for which plant variety protection certificates have been issued or applied for with the Title V option of the Federal Plant Variety Protection Act (PVPA) can be sold or advertised for seeding purposes only as a class of certified seed. The crop harvested from a field of a protected variety under Title V must be marketed for grain if it is not certified.

The owner of the certificate can bring civil action against those violating the PVPA. Sale of uncertified seed of a Title V protected variety can constitute a violation of the Colorado Seed Law and/or Federal Seed Act.

For further information about the PVPA, see fact sheet 0.301, *Protected Varieties and the Plant Variety Protection Act*.

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