

GENERAL STANDARDS

These general standards are applicable to all field crops eligible for certification and, with the standard for the individual crops, shall constitute the standard for field crop certification in Colorado.

I. Purpose of Certification

The purpose of seed certification shall be to make available to the public high quality seed of superior crop varieties so grown and distributed as to insure genetic identity and purity.

II. Eligibility Requirements for Certified Crop Varieties

- A. The Release Committee, appointed by the Head of the Department of Soil and Crop Sciences of Colorado State University, makes recommendations for release of varieties that are eligible for certification.
- B. A variety shall be eligible for certification in Colorado if it has been approved as meriting certification by at least one member of the Association of Official Seed Certifying Agencies or by appropriate national variety review board.
- C. If a variety is currently not eligible for certification in Colorado, the originator, developer, owner, or agent may request certification by submitting the following information to the Colorado Seed Certification Service:
 1. The name of the variety. This name must be the established name if the variety has previously been 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 performance of the variety, such as comparative yield data, insect and disease resistance and other factors supporting the identity of the variety.
 5. A statement delineating the geographic area or areas of adaption 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 marketed. The sample size shall be that required for a submitted sample in the current issue of the Rules for Testing Seeds of the Association of Official Seed Analysts.
- D. If the originator of a potentially promising variety contemplates naming and release, Breeder and/or Foundation seed may be increased prior to release. The originator shall submit applications for field inspection and sufficient descriptive information for proper field inspections to be performed. Official tags or labels will not be issued until the variety is accepted for certification.

III. Classes and Generations of Certified Seed

A. Classes

Seven classes of seeds or propagating materials are recognized in seed certification. These are: Breeder, Foundation, Registered, Certified, Tested, Selected and Source-Identified. The Colorado Seed Growers Association requirements for these classes must meet or exceed the minimum standards of the Association of Official Seed Certifying Agencies. The seven classes of seed are defined as follows:

1. *Breeder Seed*

Breeder seed shall be that seed or vegetative propagating material directly controlled by the originating or, in certain cases, the sponsoring plant breeder, institution, or firm, and which provides the source for the initial and recurring increase of Foundation seed.

2. *Foundation Seed*

Foundation seed (white tag) shall be seed stocks that are so handled as to most nearly maintain specific genetic identity and purity, and which may be designated or produced by an Agricultural

Experiment Station, or originator. Foundation seed shall be the source of Registered and/or Certified seed.

3. *Registered Seed*

Registered seed (purple tag) shall be the progeny of Foundation seed. Registered seed is the parent stock for the production of Certified seed.

4. *Certified Seed*

Certified seed (blue tag) shall be the progeny of Foundation or Registered seed that is so handled as to maintain satisfactory genetic identity and purity and that has been approved and certified by the Colorado Seed Growers Association.

5. *Tested Seed*

Tested seed (blue tag) requires progeny testing to prove that traits of interest are heritable in succeeding generations. Testing procedures (number of sites, generations required, etc.) are outlined for each species by the Colorado Seed Growers Association.

6. *Selected Seed*

Selected seed (green tag) or plant material shall be from rigidly selected woody species or stands that have promise of genetic superiority, but that may or may not have been progeny tested. Shows promise of superior and/or identifiable traits as contrasted with other germplasm accessions, ecotypes or variety/cultivars of the species. Selection criteria and supporting comparative data is required.

7. *Source-Identified Seed*

Source-Identified seed (yellow tag) or plant material may be seed from: a) natural stands with geographic source and elevation known, or b) from plantations or shelter-belts of known geographic location.

Comparisons with other germplasm collections, accessions or ecotypes of the same species are not known.

B. Limited Generations

1. The number of generations through which a variety may be multiplied, shall be limited to that specific 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 originator or sponsoring Plant Breeder, institution or his/her designee:
 - a. For older varieties where foundation seed is not maintained.
 - b. When an emergency is declared stating that foundation and registered seed supplies are not adequate to plant the needed certified acreage of the variety. This additional generation of Certified seed is ineligible for re-certification.
 - c. At the discretion of the certifying agency, a producer may continue production of Foundation, Registered or Certified seed from lots of seed which were inspected but rejected because of factors not involving varietal identity and genetic purity.
2. Source-Identified, Selected and Tested Classes should use Generation 0 (G0) as equivalent to originally collected seed or plant material; Generation 1 (G1) as equivalent to Foundation Seed; Generation 2 (G2) as equivalent to Registered Seed; and Generation 3 (G3) as equivalent to Certified Seed.
 - a. Number of generations allowed for seed production and length of stand for perennial plants varies by species.
 - b. When germplasm at any stage can be shown to have been significantly altered from the original collection or accessing, it loses its non-manipulated (Natural) status and is routed to the bulk population (manipulated germplasm) track.

IV. Establishing the Source of Seed

- A. A crop, to be eligible for certification, shall be grown from seed inspected and certified by the Colorado Seed Growers Association or an official certification agency of another state or country. The source of seed claimed by each application must be supported by documentary evidence, such as a bulk sales certificate or an official seed certification tag from the seed which was planted. The documentary evidence must accompany the application for field inspection when it is submitted to the Colorado Seed Growers office. An applicant claiming a seed source of his/her own production need only identify the field or lot from which his seed source came.

- B. The Tested, Selected and Source-Identified classes must have a Certified Site Identification Log submitted to the Colorado Seed Growers Association. CSGA will send an inspector to visit at least 5% of all sites applied for. It is the responsibility of the collector to positively identify the species being collected. Proof of identification must accompany the Certified Site Identification Log (a list of pertinent plant characteristics, literature sources of plant characteristics, and/or a document from a recognized authority that positively identifies the plant).

V. Application for Certification

A. Forms

Field Application forms may be secured by

1. Writing to:
Colorado Seed Growers Association
CSU - Dept. of Soil and Crop Sciences
Fort Collins, CO 80523 - 1170
2. Calling CSGA at 970-491-6202
3. E-mailing to csga@lamar.colostate.edu

B. Date for Filing Field Applications

Field application forms are due at the office of the Colorado Seed Growers Association as follows:

- May 1 — Alfalfa, clover and grasses
- May 1 — Fall-sown small grains
- June 1 — Spring-sown small grains
- June 10 — Hybrid corn and sorghum
- June 15 — Canola
- July 10 — Beans
- July 20 — Non-hybrid corn and sorghum
- Aug 1 — Millet

C. Application Information

1. All crops are to be applied for on the Application for Field Inspection form. The form will be processed by the Colorado Seed Growers Association office, and a verification report itemizing all applied for fields and acreages will be returned to the grower for approval and/or corrections.
2. Growers with a Farm Service Agency-established yield of less than 35 bushels per acre on small grains who wish to apply for a low yield adjustment must include the **FSA Form 574** with the Application for Field Inspection by May 1.
3. One Certified tag, bulk sales certificate, or source field number establishing source of seed planted in the field, must accompany the application. Applications which lack necessary information, adequate fees, or documentary evidence of the source of seed planted will be returned to the applicant, whose responsibility it is to see that the application is returned within the specified time. Manner of completion, payment of fees, verification of seed source and date of filing shall be governed by the instructions appearing on or with the application. Fee payment must accompany application. Checks should be made payable to: **Colorado Seed Growers Association.**

D. Application for Alfalfa, Clover and Grasses

Application for certification of alfalfa, clover and grasses must be made the year these crops are seeded and each year a Certified seed crop is to be produced.

E. Late Application

Late applications, if accepted, are subject to a late fee of \$50 per field, in addition to the membership fee and field inspection fees. The Colorado Seed Growers Association reserves the right to refuse any application received after the closing date.

VI. Fees

A. Membership

The membership fee is \$80 per year. For regularly enrolled 4-H and FFA members, the membership fee is \$2.50 per year. Only one membership fee is required per partnership or farm.

B. Inspection Fees

The following fee schedule is subject to periodic revision.

INSPECTION FEE FOR EACH CROP IN ADDITION TO MEMBERSHIP FEE***

	<u>Irrigated fee/acre</u>	<u>Dryland fee/acre</u>
Small grains and millet	\$6.50	\$4.00
Canola	7.50	—
Alfalfa and other small-seeded legumes	2.60	1.75
Beans (2 inspections on irrigated beans)	5.50	2.50
Grasses	4.50	1.75
Hybrids, incl. corn, sorghum, small grains and sunflowers	6.00	6.00
Other crops not listed	Ask	Ask
Per collection site (Source Identified)	—	25.00*
Bin inspection (for goatgrass removal)	50.00**	50.00**
Seedling inspection (perennial crops when no seed crop is produced the year of establishment)	8.50/field	8.50/field

* Collection site fee is \$25.00/site applied for, plus 39¢ per mile and \$20.00/hour fee where applicable. All wild-collected seed will be assessed an additional 2¢ per pound when tags are ordered.

** Bin inspections to determine goatgrass removal from lots found to have goatgrass in the field is minimum - \$50.00 per visit (more than one bin acceptable on one visit). Up to \$250 can be charged to cover actual costs per CSGA Office discretion.

*** All fees are subject to change.

MINIMUM inspection fee PER FIELD is \$10 except for seedling inspection. Late fees are \$50 per field.

C. Variable Low Yield Adjustment

If small grains yield according to the Farm Service Agency is lower than 35 bushels per acre, then an adjustment of 10¢ per bushel can be deducted from the acreage fee to a minimum of \$3.00/acre. FSA 574 form must accompany the Field Application to CSGA.

D. Tag and Label Fees

Pressure-sensitive labels \$0.08/each Sew-on tags \$0.08/each

Additional tag/ label fees may be added on specific commodities as a checkoff to fund promotion, research, etc.

E. Colorado Seed Growers Association has been designated to collect licensing and royalty fees for certain crop varieties which have been released under a licensing program. Producers of such seed will be notified of the licensing agreement when they purchase foundation or registered seed. Certification will not be completed on licensed varieties without a current signed agreement on file in the Colorado Seed Growers Office. Licensing agreements and licensing fees are due on or before the due date for the crop field inspection.

F. Red tags

Red tags will be attached to all bags of Foundation, Registered and Certified seed for varieties owned by the Colorado Wheat Research Foundation.

G. Bulk Sales Certificates

Bulk sales certificates are required on ALL PRODUCTION SOLD AS PLANTING SEED unless the seed is sold in bags with tag or label attached. Bulk Sales Certificates are available from the Colorado Seed Growers Association office at a cost of \$7.50 each.

1. The bulk sales certificate for all non-CWRF wheat varieties is a **two-colored** certificate.
 2. The bulk sales certificate for Colorado Wheat Research Foundation varieties of wheat is a **three-colored** certificate imprinted with the Red Tag.
 3. The bulk sales certificate for Colorado Wheat Research Foundation varieties of *Clearfield* wheat is a **four-colored** certificate with an imprinted Red Tag and a Yellow *Clearfield* statement.
- H. Seed Testing Fee
Seed samples sent to Colorado Seed Growers Association for analysis will be tested by the Colorado Seed Testing Laboratory. Growers will be billed by Colorado State University for Lab fees.
- I. Tests performed by any other AOSA (Association of Official Seed Analysts) approved lab will also be considered official for certification. These tests are to be billed directly to the grower. The grower is responsible for the delivery of the test results to the Colorado Seed Growers office.
- J. Credit Policy
Fees shall be collected in a timely manner according to a credit policy established by the Board of Directors. (see Appendix I)
- K. All fees shall be payable to: **Colorado Seed Growers Association.**

VII. Refund of Fees

- A. Field Inspection Fee
1. The field inspection fee will be refunded if a grower finds that his crop will not meet certification requirements and withdraws his field by notifying the Colorado Seed Growers office or the field inspector prior to the time the inspector inspects the field.
 2. 75% of the inspection fees will be refunded after inspection only if the field is destroyed by a disaster such as hail or fire.
 3. Late applications may not be canceled for refund except under disaster conditions listed above.
 4. All production from the canceled part of the field is ineligible for certification.
 5. A rebate of up to two-thirds (2/3) of field inspection fees may be refunded if the seed field is heavily damaged after inspection, and the grower would still like to use the seed. This request must be supported by documentation and is subject to Board approval.
- B. Membership Fee
After the application for certification has been accepted by the certifying agency, the membership fee will not be refunded under any circumstances.
- C. Tag Fees
Tag fees are nonrefundable except under special circumstances as dictated by the CSGA management. Refunds will only be made for any amount above normal costs of material and printing.

VIII. Unit of Certification

Unit of certification shall be a clearly defined area that may be divided subject to regulations for specific crops.

IX. Field Inspection

- A. Field inspecting requires technical training and shall be performed only by properly qualified personnel.
- B. A field inspection shall be made each year in which a Certified seed crop is produced. If possible, seed growers will be notified of the approximate date of field inspection. Hybrid corn growers shall notify the certifying agency of the approximate date tasseling will begin. Hybrid sorghum and hybrid small grain growers shall notify the certifying agency after the plants have started to head but before any pollen has formed. The growers shall accompany the inspector into the field when possible.
- C. The inspector shall traverse the field sufficiently to evaluate accurately the factors affecting certification. If a field is ready to harvest, but has not been inspected, it is the grower's responsibility to contact CSGA.
- D. The right is reserved to reject a field on general certification principles when weeds, diseases, poor isolation or lack of good management make inspection inaccurate or might bring Certified seed into disfavor. Fields are subject to rejection for certification if the field was harvested before inspection.
- E. Re-inspection of fields not properly identified or ready at inspection time shall be made at the discretion of the certification agency. Extra costs in such cases shall be borne by the grower.

X. Weeds

Every field for which certification is requested shall show that it has been well managed and that reasonable precautions have been taken to control noxious weeds. Prohibited and Restricted noxious weed seeds which are inseparable in available cleaning equipment from seed of the particular crop being inspected will be cause for rejection of the portion of the field in which these weeds are found. If any prohibited or restricted noxious weed seeds are found in the laboratory Noxious Examination, the entire lot of seed will be rejected (see exception for restricted weed seeds in grass species in the Grass Standards). The lot can be reconditioned, and a new sample submitted for reconsideration. Weeds classified as noxious by the Colorado State Law include the following list. Scientific names are given in parentheses.

A. Prohibited (Primary) Noxious Weeds

- Anoda, spurred (*Anoda cristata*)
- Bindweed, field (*Convolvulus arvensis*)
- Bouncingbet (*Saponaria officinalis*)
- Camelthorn (*Alhagi pseudalhagi*)
- Chamomile, scentless (*Anthemis arvensis*)
- Cinquefoil, sulfur (*Potentilla recta*)
- Clematis, Chinese (*Clematis orientalis*)
- Daisy, oxeye (*Chrysanthemum leucanthemum*)
- Goatgrass, jointed (*Aegilops cylindrica*)
- Halogeton (*Halogeton glomeratus*)
- Horsenettle, Carolina (*Solanum carolinense*)
- Horsenettle, white (*Solanum elaeagnifolium*)
- Houndstongue (*Cynoglossum officinale*)
- Johnsongrass (*Sorghum halepense*)
- Knapweed, black (*Centaurea nigra*)
- Knapweed, diffuse (*Centaurea diffusa*)
- Knapweed, Russian (*Acroptilon repens*) (syn. *Centaurea repens*)
- Knapweed, spotted (*Centaurea maculosa*)
- Knapweed, squarrose (*Centaurea virgata*)
- Loosestrife, purple (*Lythrum salicaria*) and (*Lythrum virgatum*)
- Mallow, Venice (*Hibiscus trionum*)
- Medusahead (*Taeniatherum caput-medusae*)
- Millet, wild proso (*Panicum miliceum*, subsp. *runderale*)
- Nutsedge, yellow (*Cyperus esculentus*)
- Povertyweed, silverleaf (*Ambrosia tomentosa*) (syn. *Franseria discolor*)
- Povertyweed, woolyleaf (*Ambrosia grayi*) (syn. *Franseria tomentosa*)
- Rocket, Dame's (*Hesperis matronalis*)
- Rue, African (*Peganum harmala*)
- Sage, Mediterranean (*Salvia aethiopsis*)
- Saltcedar (*Tamarix parviflora*) and (*Tamarix ramosissima*)
- Skeltonweed, rush (*Chondrilla juncea*)
- Sorghum, almum (*Sorghum x almum*)
- Sowthistle, perennial (*Sonchus arvensis*)
- Spurge, cypress (*Euphorbia cyparissias*)
- Spurge, leafy (*Euphorbia esula*)
- Spurge, myrtle (*Euphorbia myrsinites*)
- St. Johnswort, common (*Hypericum perforatum*)
- Starthistle, yellow (*Centaurea solstitialis*)

Tarweed, coast (*Madia sativa*)
 Thistle, Canada (*Cirsium arvense*)
 Thistle, musk (*Carduus nutans*)
 Thistle, plumeless (*Carduus acanthoides*)
 Thistle, Scotch (*Onopordum acanthium*) and (*Onopordum tauricum*)
 Toadflax, Dalmatian (*Linaria dalmatica*)
 Toadflax, yellow (*Linaria vulgaris*)
 Whitetop (*Cardaria draba*)
 Whitetop, hairy (*Cardaria pubescens*)
 Whitetop, tall (*Lepidium latifolium*)
 Woad, dyers (*Isatis tinctoria*)

- B. Restricted (Secondary) Noxious Weeds [limited to]
- Blueweed (*Helianthus ciliaris*) [200/lb]
 - Burdock, common (*Arctium minus*) [200/lb]
 - Butterprint or velvetleaf (*Abutilon theophrasti*) [10/lb]
 - Dock, curly (*Rumex crispus*) [50/lb]
 - Dodder (*Cuscuta* spp.) [20/lb]
 - Foxtail, giant (*Setaria faberi*) [50/lb]
 - Groundcherry, purple (*Quincula lobata*) (syn. *Physalis lobata*) [50/lb]
 - Hemlock, poison (*Conium maculatum*) [10/lb]
 - Henbane, black (*Hyoscyamus niger*) [10/lb]
 - Lettuce, blue (*Lactuca tatarica*, subsp. *pulchella*) (syn. *Lactuca pulchella*) [200/lb]
 - Mustard, black (*Brassica nigra*) [30/lb]
 - Mustard, India (*Brassica juncea*) [30/lb]
 - Mustard, wild (*Sinapsis arvensis*) (syn. *Brassica kaber*) [30/lb]
 - Oat, wild (*Avena fatua*) [10/lb in oats, barley, wheat, rye and triticale; 100/lb in all other species]
 - Plantain, buckhorn (*Plantago lanceolata*) [100/lb]
 - Povertyweed, mouse-ear (*Iva axillaris*) [200/lb]
 - Puncturevine (*Tribulus terrestris*) [50/lb]
 - Quackgrass (*Elytrigia repens*) (syn. *Agropyron repens*) [50/lb]
 - Sandbur, longspine (*Cenchrus longspinus*) [50/lb]
 - Thistle, bull (*Cirsium vulgare*) [10/lb]
 - Velvetleaf or Butterprint (*Abutilon theophrasti*) [10/lb]

XI. Harvesting and Storage

- A. The harvesting of the seed crop must be carried out with the utmost precaution to avoid mechanical mixtures. All machines must be thoroughly cleaned before starting to harvest a crop to be Certified. The first cut around the field with a combine should be discarded. Adjustments should be made that will prevent cracking or other damage to the seed. Cracking causes extra clean-out loss, poor germination and shortens storage life of seed.
- B. A record of the method of cleaning the harvesting equipment, the amount of seed discarded, and the name and address of the harvester shall be available to the Association Manager on request.
- C. All seed for certification shall be stored in clean, well-identified bins or containers. The seed must be protected at all times before becoming mechanically mixed. Seed moisture must be checked repeatedly prior to and during storage to be sure that heating, insects, mold and excessive respiration does not cause a reduction in germination.
- D. It is recommended that a representative sample be probed from the storage facility and submitted for germination and purity as soon as seed moisture has reached equilibrium.

XII. Conditioning of Seed

All seed that is eligible for final certification shall only be cleaned or conditioned by an approved conditioner. It is the responsibility of the grower to see that each lot of seed is properly cleaned. The grower may condition his own seed only if he is a Class V approved conditioner. Approval of approved conditioners shall be on an annual basis. For specific Certified seed conditioner requirements see the

Approved Certified Seed Conditioner Standards. Please refer to Appendix II (Class I) and Appendix III (Class V) of these Standards or contact the Colorado Seed Growers Association, Department of Soil and Crop Sciences, Colorado State University, Fort Collins, CO 80523.

XIII. Transfer of Field-Approved Unconditioned Seed

- A. Certifiable unconditioned seed may only be transferred from the grower to a Colorado Seed Growers Association Class I Approved Conditioner.
- B. The conditioner must obtain proper information from the grower for each lot of seed and provide the information of the seed transfer on the Sample Seed Identification form (Form D) when submitting the seed sample for analysis. This must be mailed to the **Colorado Seed Growers Association, Department of Soil and Crop Sciences, Colorado State University, Fort Collins, Colorado 80523.**
- C. If the entire lot of seed is not conditioned in a continuous operation, each run or separate conditioning produces separate lots of seed. Separate seed samples and information forms must be submitted for each lot of seed.
- D. When an approved conditioner takes the seed into his plant and recleans it, he must take a representative sample and send it to the Colorado Seed Growers Association. The sample should be obtained by a sampling device or by hand throughout the cleaning operation.
- E. The approved conditioner may order tags and seals or labels, and assumes the responsibility for proper labeling.
- F. The Colorado Seed Growers Association reserves the privilege of making inspections and taking samples without notice during or after the conditioning and labeling of the seed. Seedlots found to be out of compliance are subject to revocation of certification.

XIV. Blending Lots of Seed

- A. A grower may combine the production of two or more fields of the same crop variety. If seed lots of different classes are combined, the lowest class shall be applied to the resultant combination. The grower shall report this combination on the Seed Sample Identification form (Form D) when sending seed samples or test results to the association office.
- B. Different lots of certifiable seed of the same variety produced by two or more growers may be blended only by a Class I approved conditioner working with regularly transferred field inspected seed lots. Separate samples of each lot must be submitted prior to blending, and a sample of the blended lot must be submitted. The Colorado Seed Growers Association must be notified of the amount of each lot used in the blend.

XV. Seed Sampling

- A. A cleaned representative sample of each lot of seed conditioned must be sent to the Seed Growers Association for laboratory analysis to determine the purity and germination of the seed. A two-pound sample is required for most crops, but only one pound of alfalfa, sweet clover, red clover and small-seeded grasses is required.
- B. The representative sample shall be drawn by the producer, approved conditioner or an authorized agent of the certifying agency. The sample should be obtained by a sampling device or by hand throughout the cleaning operation. If a sample was not obtained during conditioning, sample the top, middle and bottom of all sacks. In lots of 10 sacks or less, sample all sacks. In large lots, never sample less than 10 bags and/or at least 25% of the bags. Recleaned seed in bins should be sampled in at least 7 different places with a deep bin probe.
- C. Non-free-flowing seed, such as certain grasses and other seeds difficult to sample with a probe shall be sampled by thrusting the hand into the bag or bulk and withdrawing representative portions. The hand is inserted in an open position and the fingers are held closely together while the hand is being inserted and the portion withdrawn.
- D. 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.

- E. The **Seed Sample Identification Form (Form D)** should be completely filled out and submitted with the representative sample. Sample bags and Seed Sample Identification Forms may be obtained from the Colorado Seed Growers Association.
- F. Pilot samples of bin-run seed are encouraged, since such a sample will allow the determination of other crop, weed seed content and germination. This information will aid the conditioner or potential buyer of the seed in determining clean-out losses and actual value of the seed.
- G. A representative sample of carry-over Certified seed shall be submitted to one of the following:
 - 1. Colorado Seed Laboratory - Colorado State University.
 - 2. A commercial seed lab supervised by a registered seed technologist in good standing with the Society of Commercial Seed Technologists or the Association of Official Seed Analysts.
- H. A sample of carry-over Certified seed must be submitted for new germination and date of test, if the previous test date has expired. The expiration time for Colorado is one year for most kinds of seed. Check with the State Department of Agriculture in the state where the seed is to be marketed for additional information. The owner of the seed lot is responsible for re-labeling of seed which has an outdated germination test.

XVI. Seed Testing and Labeling

- A. Germination and purity analyses will generally be made by the Colorado Seed Laboratory, and must be made in accordance with the Rules for Testing Seeds established by the Association of Official Seed Analysts.
- B. Seeds found to be “Dormant” or “Hard Seeds” in a normal germination test performed in accordance with AOSA Standards may contribute to the total germination of the seed lot. The percentage of Dormant or Hard Seed shall be listed on the tags, labels or bulk sales certificate for the seedlot.
- C. Germination or Purity factors found in a lab analysis may be downgraded for labeling purposes as long as the downgraded figures fall into the tolerances set by the standards. Dormant or hard seed cannot be downgraded and must be reported on the tags, labels or bulk sales certificates exactly as received from the Seed Testing Lab.
- D. Plant varieties which have been approved to receive protection under the Plant Variety Protection Act of 1970, and amended in 1994, shall be labeled with the words: “***U.S. Protected Variety - Unauthorized Propagation Prohibited***”.
- E. The use of the Seed Sample Identification Form -- Form D is recommended.

XVII. Bags, Tags and Labels

- A. All bags of seed sold as Colorado Breeders, Foundation, Registered, Certified, Tested, Selected or Source-Identified seed must have the appropriate tag or stick-on label properly affixed to the bag, except small grains sold in bulk, as prescribed in Section XVIII.
- B. The certification tag or label which is attached to the bag, serves to identify the variety, grower and/or processor and the lot number of the seed enclosed.
 - 1. An official Colorado Seed Growers Association tag or label shall be used for identifying Breeders, Foundation, Registered, Certified, Tested, Selected and Source-Identified seed.
 - 2. The official tags or labels of the Colorado Seed Growers Association are: black and white for Breeders or Foundation seed, purple for Registered seed, blue for Certified or Tested seed, green for Selected and yellow for Source-Identified seed. Tags and labels must meet the specifications of the Association of Official Seed Certifying Agencies.
- C. The certification tag or label shall be attached to the container in a manner which prevents easy removal and reattachment.
 - 1. With fabric bags or open top paper bags, it is recommended the tag be sewn on the top of the bag. Tying the bag is satisfactory if the tag is attached so it cannot be removed and reused.
 - 2. Pressure sensitive or glue-on labels may be used for paper and plastic bags and all containers, including metal ones, except burlap bags. Labels must be glued to the container with an adhesive which prevents removal without destroying the label.
 - 3. Other methods for sealing of paper, plastic and metal containers may be used with prior approval of the Colorado Seed Growers Association.
 - 4. Valve-filled paper bags shall be considered adequately closed, and sufficiently tamper-proof

without sealing. However, sealing is preferred where practical by cementing the valve shut, by a sealing strip cemented over the valve or by a special stapling device.

- D. Official tags and labels shall be furnished by the Colorado Seed Growers Association and must be affixed to the seed containers either by the grower, approved conditioner, or representative of CSGA.
- E. Tags and labels shall be issued only to producers of Breeders, Foundation, Registered, Certified, Tested, Selected, or Source-Identified seed or propagating materials or to approved conditioners.
- F. Unused tags or labels must be destroyed or returned to the Colorado Seed Growers Association. Unattached certification tags or labels must not be mailed or handed from one party to another.
- G. New bags must be used to bag all Breeders, Foundation, Registered, Certified, Tested, Selected or Source-Identified seed or propagating materials.
- H. On request, new certification tags or labels will be issued for carry-over seed after a new analysis report is received and certification requirements are met. All old tags and labels must be removed and destroyed and new tags or labels must be properly attached. New pressure sensitive labels must be attached directly upon old labels. The firm or person who has possession of carry-over Certified seed may attach separate analysis tags showing germination, date of test and other information if that seed meets Colorado Certification Standards and the procedure conforms to the seed law in the state where the seed is sold.
- I. In order to allow seedsmen to bag and label in one operation, certification tags or labels may be pre-issued upon receipt of a completed field inspection report showing that field production standards have been met, even though final laboratory tests have not been completed. Any analysis information listed on the tag shall be reported as a figure that is reasonably achievable through normal conditioning and still within standards. In the event that final analysis shows lower figures than reported on the tag, the tags must be removed and new tags issued, or certification will be revoked. Such seedlots are not to leave the control of the conditioner until final certification is completed.

XVIII. Bulk Sales of Small Grains

- A. Cleaned Registered or Certified seed of small grains may be sold directly to the planter by the grower or Class I conditioner specifically approved to handle Certified seed in bulk. The bulk sales certificate shall be filled out completely with one copy supplied to the purchaser, one copy forwarded to the Colorado Seed Growers Association and one copy retained by the seller.
- B. Bulk sales certificates are available from Colorado Seed Growers Association at a cost of \$7.50 each.
- C. Bulk sales certificates are required to be filled out at the time of sale and are to accompany the load of seed as it leaves the seller. Failure to do so results in the revocation of certification for the seedlot.

XIX. Seed Treatment

Seed treatment to control seed borne diseases may be required in the Certification Standards for individual crops. State and Federal laws require that treated seed be labeled with the name of the treatment used and carry a warning statement to prevent such seed from being used in food or feed products. Certified seed shall comply with State and Federal laws governing the labeling of treated seeds. For the latest information it is suggested that the seed producer or conditioner contact the **Division of Plant Industry, Colorado Department of Agriculture, 700 Kipling Street, Suite 4000, Lakewood, Colorado 80215-5894. Phone (303) 239-4100.** It is very important that treated seed be labeled properly and handled in such a way to prevent injury to humans or animals.

XX. Substandard Seed in Emergency Situations

It is recognized that in certain situations, seeds may not germinate properly or minimum pure seed requirements cannot be met. Seed failing to meet certification standards in factors other than those affecting genetic purity may be Certified, providing there is no injury to the reputation of Certified seed. Therefore under such circumstances and by Action of the Board of Directors of the Colorado Seed Growers Association, the above seed may be Certified. Such seed will carry a regular tag plainly marked SUB-STANDARD for the specific reaction.

XXI. County Associations

Active county and area seed growers associations will be refunded \$3 per each paid membership and 50¢ for each junior membership on request of the treasurer of said organization. The request for such refunds must be accompanied by a copy of the minutes of a meeting of the association held within the previous 12 months. In the event of multiple association meetings in a 12-month period, CSGA will refund a maximum of \$3 per member even if the member attends more than 1 meeting.

XXII. Federal and State Seed Laws

Federal and State laws must be complied with in the production, conditioning, labeling, sampling, shipment and sale of Certified seed. Responsibility for any obligation other than those concerned with certification, arising from the sale or shipment of seed which has been Certified, rests with the grower or subsequent handler making the sale or shipment. The Colorado Seed Law is administered by the **Colorado Division of Plant Industry, Colorado Department of Agriculture, 700 Kipling Street, Suite 4000, Lakewood, Colorado 80215.**

All Certified seed growers must register annually with the Colorado Department of Agriculture in order to sell seed in Colorado. Contact the Department of Ag at the above address or phone 303-239-4100 for cost and application form.

XXIII. Interagency Certification

Interagency certification is the participation of two or more certifying agencies in performing the services required to certify the final lot or lots of seed. The standards and procedures used will be those as prescribed by the Association of Official Seed Certifying agencies and the certification standards of the states involved.

- A. The seed shall meet standards at least equal to the minimum standards of Colorado for the seed in question.
- B. Seed to be recognized for interagency certification must be received in containers carrying official certification labels or evidence of its eligibility from another official certifying agency (request Transfer of Seed Pending Certification Certificate from CSGA Office) which includes the following information:
 1. Variety and kind
 2. Quantity of seed (pounds or bushels)
 3. Class of seed
 4. Inspection of lot number traceable to the previous certifying agency's records
- C. A signed copy of the official field inspection report and other pertinent records will accompany the request for certification.

XXIV. Distribution Summaries

Final seed distribution summaries shall be required of the grower after the normal sales season. Such reports shall be made on forms furnished by the Colorado Seed Growers Association and at such a time as specified on the form.

XXV. Interpretation and Implementation of Rules

The Manager of the Colorado Seed Growers Association, with the consent of the Board of Directors shall have the authority to interpret and implement the rules of certification. Violators of the rules may be denied certification of seedlots and/or membership in the association subject to review by the board. A member of CSGA may appeal the Manager's interpretation of the rules of certification to the Board of Directors. If a field must be inspected before the Board can meet, the grower must pay actual inspection cost, regardless of the outcome of appeal.

XXVI. Definitions

A. Off-Types

“Off-type” means any seed or plant not a part of the variety in that it deviates in one or more characteristics from the variety as described, and may include, seeds or plants of other varieties; seeds or plants not necessarily any variety; seed 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.

B. Inbred Line

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

C. Single Cross

The first generation of a cross of two inbred lines, an inbred line and a foundation backcross, or of two foundation backcrosses.

D. Foundation Single Cross

A foundation single cross is a single cross used in the production of foundation backcrosses or of double, three-way, or top crosses.

E. Foundation Backcrosses

1. A first generation foundation backcross shall be the first cross between a foundation single cross of related inbred lines and an inbred line which shall be the same as the one of the inbreds in the foundation single cross.
2. A second generation foundation backcross shall be the cross of a first generation backcross (ear parent) with its recurrent inbred parent (pollen parent).

F. Double Cross

A double cross is the first generation hybrid between two foundation single crosses.

G. Top Cross

The first generation of a cross between an open pollinated variety and an inbred line, a foundation backcross, or a foundation single cross.

H. Three-Way Cross

The first generation of a cross of a foundation single cross and an inbred line or a foundation backcross.

I. Open-Pollination

Open-pollinated seed is seed produced as a result of natural pollination as opposed to hybrid seed produced as a result of controlled pollination.

J. Variants

1. Variants are defined as seeds or plants which are (a) distinct within the variety but occur naturally in the variety, (b) are 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, and (c) which were originally a part of the variety as released. Variants are not to be considered off-types.
2. The breeder should identify variants as part of the variety description, but the expected rate of occurrence of the variant needs to be stated only when the Breeder considers the variant to be an aid in identifying the variety.
3. The tolerances in Table 4, Section 201.62, Part 201 of the Federal Seed Act must be applied to those variants which are described by the breeder as useful in identification of the variety.

K. Variety

The term “variety” (cultivar) 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, physical 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.

- L. Genetically engineered varieties are progeny of plants which have been produced by transformation and/or tissue culture selection to insert genes and/or select for value-added traits.
 - 1. When certifying genetically engineered varieties with genes for specific value-added traits, the Certification Agency should confirm the presence of these genes or traits, and that they occur at or above the minimum acceptable levels as indicated by the owners of such varieties.
 - 2. In cases where the Certification Agency has not been provided test protocols and/or does not possess capability for making such determinations, a representative of the Certification Agency may observe tests being performed by personnel of the owners of such varieties. In such cases, the Certification Agency must be provided with these test results, along with descriptions of procedures used in performing these tests. The test protocols and procedures may be designated as “confidential” by the company.
- M. Genetic Manipulation
Genetic manipulation involves “purposeful selection,” such as recurrent selection, crosses within or between species, mutation inducement, biotechnology methods, etc.
- N. Protocols should be established to minimize involuntary “non-purposeful” selection. If desired, the (Natural) designation may be printed on Source-Identified, Selected or Tested class or variety/cultivar, Foundation, Registered or Certified tags to indicate the “natural” genetic integrity of the germplasm collection, accessing or ecotype.