

CERTIFIED SEED

What is really in the seed bag?

Quality Seed

It is well known that seed quality is a very important factor in growing successful and productive crops. So, what does high quality seed consist of?

Mechanical Purity

High quality seed is seed that has been conditioned by a seed company to remove most weed seed and other undesirable material such as plant parts, dirt, rocks, and sticks. The resulting seed is then tested by a seed analysis

laboratory to determine the important quality factors of pure seed, other crops, weed seed, and germination. These are all required by state and federal seed laws to be displayed as percentages on a seed analysis tag or bag.



Genetic Purity

Possibly the most important seed quality factor is genetic purity. Genetically pure seed has all of the yield potential, disease resistance, and other desirable characteristics as it was developed by the plant breeder/developer. Variety identity and genetic purity are not guaranteed by a seed separate analysis tag, but are verified by a separate certified seed tag. Tracking genetic purity is the most important



and unique responsibility of a seed certification agency.

Certified Seed

The best way to ensure that your seed is genetically pure and meets high standards for other quality standards is to buy certified seed.

Seed certification is a third party process meaning that it serves as a intermediary between the producer and consumer. A seed certification agency makes sure that isolation and field and seed genetic standards are observed. State certification agencies have the processes in place to track the genetic purity and seed quality from the plant breeder/developer to the seed the consumer buys. This means that a seed buyer gets the variety as it was developed and not a diluted or contaminated substitute that will not yield as well as expected and could also have low germination and excessive weed content.



New Plant Releases

The plant breeder/developer provides small amounts of "breeder" seed to seed growers (usually under contract) and then additional generations of seed are produced. These are: Foundation Class, Registered Class (optional), and Certified Class. The generational sequence is breeder seed → foundation class seed → registered class seed → certified class seed. Certified class



seed is intended for commercial crop growing purposes.

Source Identified Seed

The seed certification program certifies many crops and there are always new varieties being developed. Seed certification has a process in place such that if there is seed of a certain species needed, for which there is no variety developed of that species, the seed can be certified as a pre-variety germplasm. This process is called the Source Identification Program. There are three classes within the source identification program in which seed can be tagged. These classes are



Source Identified Class, Selected Class, and Tested Class.

The selected and tested classes are used when a particular accession of a species has had some selection and testing research done on it and may have potential but, has not gone through the extensive testing and developmental research required for a variety.



Certifying Agencies

Each state in the United States has a state certifying agency. These certifying agencies cooperate and coordinate with each other to maintain records that verify the genetic purity and seed quality in each bag of certified seed. Certifying agencies are often called Crop Improvement Associations, Seed Certification Services, or Seed Growers Associations. Some examples are the Utah Crop Improvement Association, Wyoming Seed Certification Services, or



Colorado Seed Growers Association. Each state certifying agency belongs to a national organization called the Association of Official Seed Certifying Agencies (AOSCA). AOSCA also functions internationally.



Seed Quality

Through a series of inspections at the field and seed conditioner, the certifying agency inspects field and seed lots looking for weeds, diseases, and genetic indications that the seed will be pure after the seed is conditioned. And finally when the seed is bagged it is sampled to test for seed quality where the amount of weeds, other crops, and germination rates are determined. If the seed meets all the field and conditioner inspection requirements as well as pass the seed analysis test, the seed is tagged as certified seed.



Things you should know

When purchasing seed you should be aware of three things.

1. Seed quality. You need to know what portion of the seed in the bag is the seed you want. As part of the federal seed laws each bag of seed must be tagged or labeled with an analysis label. This label lists by percentage the

- materials in the bag. The analysis label also lists the percent germination. This information can and should be used to determine the amount of pure live seed in the bag. Percent pure live seed (pls) is calculated by (pure seed % X germination % = pls%). Pounds of pure live seed is then calculated by (pounds of seed in bag / pls% = pls pounds.)
2. Buy certified seed. The bag of seed you buy MUST have a Certified Seed Tag (Blue Tag) on it in order to be certified. The exceptions are if the seed has been mixed with other species to meet the customer requests, or if the seed is sold in bulk (not bags) in which a "Certified Seed Bulk Sale Certificate" must be given to you by the seed dealer.
 3. Do your homework. Find out what variety of a specific crop will fit your needs best. If you use the best fit variety for your land you will get the best yield. It is always worth investing the money to have a crop that will yield well. After all, the yield is what pays off.

Seed Mixtures

A mixture of species are often used in pasture and reclamation plantings. When seed is mixed the components of the mix can be specified by the customer. These components can and should be from certified seed. When certified seed is used in a mix there are no certified tags attached to the bags. The bag will contain a label similar to an analysis label which states the components of the mix by percentage including weeds and inert matter. When purchasing a mixture specify that the components used are to be certified and ask for verification that the parts of the mix are certified.

Other Information

The seed certification program certifies many crops and there are always new varieties being developed. Seed certification has a process in place such that if there is seed of a certain species needed for which there is no variety developed for that species the seed can be certified as a different class of certified seed. This process is called the Source Identification Program. Source Identified Seed is seed for which the collection site or field site is known. This information can be used to match harvest sites to similar planting sites.

For more information contact the Utah Crop Improvement Association at 435 797-2082 or visit our website at www.utahcrop.org or visit the AOSCA website at www.aosca.org to find contact information for your local seed certification agency.

