

## **Cotton Seed Quality Assurance**

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There are a lot of steps in cotton seed production to assure seed quality and viability. Those steps are monitored closely by seed companies to ensure compliance with internal control systems and federal and state seed laws, and to give growers confidence in the seed they are planting. The seed label, or tag as it is often referred, tells you everything that's important about your bag of seed. The United States is frequently cited as one of the most reliable producers of food in the world. One of the reasons for that is because we have some of the most stringent seed laws in the world. The seed label reflects those laws. Strong seed laws provide the means to ensure plant breeder's rights, encourage biodiversity, and greater opportunity for financial success by the grower community. Of course, the ultimate beneficiary is the consumer.

In reality, the label conveys the same information as a lab test. Thus, a grower can find out all they need to know by studying the seed bag label.

### What's on the label?

Everything on a seed bag label is significant and nearly all of the information is required by the Federal Seed Act and state seed laws, although each state varies slightly in their specific requirements. Here's an explanation of the information on the label:

- Kind: The crop species/ common name of the crop
- Product name: the seed company's brand name for the product
- Variety Name: the legal cultivar/release name of the seed, which may be different from the Product name
- Germination: the percentage of seed in the bag that is expected to germinate in ideal conditions (based on a lab test)
- Germination Test date: month and year that the lot was tested. The date of the warm germination test must be listed and may differ from other testing, not required by law, the seed company performs
- Pure seed: percentage by weight of each named variety in the bag, based on the entire contents of the bag
- Other crops seed: percentage by weight of seeds not considered as a weed.
- Weed seed: the percentage by weight of weed seeds unless they are considered restricted noxious weed seeds by law where the seed will be sold. If they are restricted noxious weed seeds, then they are limited to the amount in the state law (usually around 0.25%). All restricted noxious weed seed must be listed individually by name and the number of seeds per pound. (NOTE: prohibited noxious weed seeds are not allowed at all)
- Inert matter: the percentage by weight of other material in the package that is not seed (i.e. plant debris, broken seed, seed coats, etc.).
- Address: the contact information for the company providing the seed
- Origin: state or country where the seed was grown
- Lot number: a unique series of letters or numbers assigned by the seller so that the seed can be identified and traced
- Treatment: coatings generally used to enhance germination, protect the seed, or assist in growth
- Other items deemed necessary by the state, as this list is not all-inclusive.

### How is this information determined?

In general, the information related to seed quality is determined by a test from a seed lab. It is required that the person signing the seed lab report of analysis be certified in testing or that the person conducting the testing be certified. The Association of Official Seed Analysts (AOSA, which is composed of state, federal, university and some crop improvement labs) and the Society of Commercial Seed Technologists (which is composed of analysts from seed companies, private labs, crop improvement labs and some AOSA labs) jointly give certification exams and monitor continuing education.

### What about the rules for lab tests?

Many states require testing for the label to be done according to the AOSA Rules for Testing Seeds and seed produced in one state and sold in another must meet the requirements of the Federal Seed Act and its regulations. It is important to remember that the standard (or warm) germination test is conducted under conditions considered ideal and so its results are likely the maximum germination rate of that seed. It must be remembered that fields (gardens, etc.) vary in soil type, fertility, fungal & insect population, environmental conditions, etc. and so the germination percentage may not be equal to the field emergence. A "cool" germination test, also referred to as a vigor test, is often used with cotton seed, however, that test is solely for the evaluation of the seed's performance in less than ideal conditions—e.g. cool wet soils. Unlike warm germination tests, there is no standard method to determine the cool germ and the results provided by different entities are not necessarily comparable against one another. The "cool" germination lab test is not required by law and, therefore, the results of the test should not be on the label.

### ***For more information, contact:***

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