



CHECK YOUR SEED QUALITY BEFORE YOU PLANT IN 2005

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High quality seed is critical for establishing a good stand. Over the last several years, producers have scrutinized costs and benefits of numerous new cotton varieties. With the current price of most cotton varieties and the increased use of new planting equipment, many producers are reducing seeding rates. Consequently, this places even more importance on planting high quality seed. Many growers have opted to continue to plant conventional varieties in many of their fields. In the process of doing so, they have continued the practice of saving seed to have delinted, treated, and bagged for planting in the following season. Cool, wet fall conditions and immature cotton (low micronaire) can reduce the quality of seed. These issues become more critical with reduced seeding rates to which many growers have become accustomed. Producers who are going to save seed from conventional varieties are strongly advised to consider ways to evaluate seed quality and not get caught with poor quality cottonseed.

Determine Free-Fatty Acid For Fuzzy Seed

First, it is suggested that producers have a free-fatty acid (FFA) test performed on each lot of 2004 fuzzy cottonseed. In order to obtain a good random sample, the seed lot should be sampled at perhaps 8-10 locations. Take about 1 quart of seed from each location, place into a tub or other large container, then mix well. After mixing, it is advised that at least a two-pound (about a half-gallon) final sample be taken and submitted for FFA testing. A&L Plains Laboratories in Lubbock (806-763-4278) performs this analysis for \$15/sample, with generally a 1 to 2-day turnaround time.

When FFA is greater than 1% - 1.5%, the seed quality is very suspect and an indication that the seed certainly have started deteriorating. It is recommended that this seed not be used for planting purposes. Also, just because FFA level is 1% or less, it does not necessarily guarantee that seed is of high quality.

If FFA is less than 1%, it is suggested to have a standard warm germination test (\$9/sample) and a cool germination test (\$12/sample) conducted by the Texas

Department of Agriculture (TDA) Seed Testing Laboratory at Lubbock (806-799-0519). Expect at least a 2-week turnaround time. For standard warm germination and cool germination tests, one can use fuzzy seed, however, one should recognize that after delinting and gravity table separation, these germination percentages will usually be higher. It is not unusual to see the germination percentages increased by 10-20 percentage units after acid delinting and gravity table separation.

Determine Cool-Warm Vigor Index For Delinted Seed

After delinting, lower quality seed may have to be “cut” using a gravity table at a level which is significantly greater than is usually the case to insure that higher quality planting seed is obtained. After delinting and gravity separation, one should go one step further and have a cool-warm vigor index (CWVI) test performed by TDA. This will give the best indication of the overall quality of the seed.

The CWVI is actually the combined percentage germination for the standard warm germination test (counted at 4 days) and the cool germination test. To obtain CWVI analysis, submit a 1-pound representative sample of acid delinted seed to the TDA Seed Laboratory. There is a charge of \$21 per sample. Expect at least a 2-week turnaround time. A representative sample should be obtained from several bags of the same seed lot. Make sure to not combine lots or varieties. A separate sample should be sent for each variety and for each lot. Upon completion of the two tests (warm germination test counted at 4 days and the cool germination test), these results are added together to provide the CWVI.

After obtaining the CWVI test results, seed quality can be categorized into the following groups: Excellent = 160 or greater; Good = 140 - 159; Fair = 120 - 139; Poor = Less than 120. This information allows producers to make more informed decisions on planting time and planting rates of various seed lots. Seed with the highest possible vigor should be planted earlier in the season or when planting conditions are less than optimum. Lower vigor seed should be planted later in the season when soils have warmed or conditions are more optimum for cotton stand establishment. There is nothing generally wrong with seed in the Good category, however, most certainly the Fair category should be used mostly for late plantings or replanting, and the poor category should not be planted.