

**SEED SELECTION: A SEED INDUSTRY
PERSPECTIVE**
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Abstract

Selecting cotton seed has become more complicated in recent years as farmers and their advisors sort through a growing catalogue of germplasm and transgenic choices. Cottonseed companies like Stoneville Pedigreed Seed are increasing their customer focus to assist with decisions that can have a tremendous impact on profitability. I would like to briefly discuss several issues that concern both cotton farmers and seed companies: the role of technology in the variety selection process, the economics of transgenic varieties, the importance of proper seed treatment and evaluating variety performance.

The cotton variety selection process appears to have changed with the advent of transgenics. Yield used to be the primary consideration in selecting varieties as the number of total pounds largely determines revenue. Growers adopted new varieties over several years. Recent history suggests growers will plant an unknown variety on a large portion of their acreage because it contains a certain technology package. This approach can lead to grower dissatisfaction if the transgenic trait performs as represented, but the variety is not adapted to the environment or to the grower's management scheme. We suggest that variety selection should be based on yield and stability first. Once these criteria are met, other variety characteristics such as transgenic trait(s) can be considered. In short, make sure the transgene fits your system.

A second issue that has attracted much discussion surrounds the economics of selecting transgenic varieties. Put simply, are growers making more money by using transgenics? Sometimes they are, sometimes they aren't. My view is that these decisions must be based on the specifics of the situation, frequently on a field-by-field basis. There are several choices in transgenic technologies and additional options in chemistries that can be employed in a conventional program. The transgenic technologies are available in an array of genetic backgrounds. Growers must seek out the full complement of information from company and university sources to make informed decisions on what combination of technologies and genetics will afford them the best opportunity for success in each situation. The new technologies are tools that can be used to manage risk and increase profit.

The increased value of transgenic varieties has prompted growers to seek means to limit their seed cost and optimize the return on their investment. From my perspective, conscientious treatment of seeds starts, but does not end with the seed company. Growers must employ thoughtful management choices to improve seed and variety performance. Seed companies are responsible for maintaining both seed and transgenic purity that exceeds seed laws and industry standards. To my knowledge, all seed companies will provide actual warm and cool germination results of any seed lot purchased by a farmer. In addition, seed companies are constantly evaluating seed treatments to ensure that they provide customers with treatment packages that have demonstrated performance. That said, growers can have a tremendous impact on seed performance after planting by following extension recommendations regarding soil temperatures and forecast weather guidelines. Growers can further protect their investment by utilizing appropriate in-furrow applications to expand seedling protection from insects and diseases.

More cotton varieties are being commercialized than ever before. This fact has placed greater demands on universities to evaluate and characterize variety performance and management. Not surprisingly, growers are questioning how to best evaluate the myriad choices. In my opinion, there are a series of steps that are all a part of variety evaluation. All promising, private cotton lines are entered in a series of company trials over several years. Once these lines demonstrate their competitiveness in our trials, we enter the prospective variety in university-run trials throughout the Cotton Belt to allow researchers and growers to assess its performance relative to other competitive entries. This approach allows growers to consult unbiased performance information prior to making purchase decisions. This sequence of evaluation has been in place for many years. The marked change, as mentioned earlier, is that some farmers make farm-wide decisions on these new introductions. The best way to measure a variety's performance is on-farm, using a growers management system. Stoneville recommends that growers plant new varieties on representative portions of their farm operation, then expand their acreage after they become familiar with its performance.