UK Recommendations Hold Up In Soybean Study

LEXINGTON, KY.

With its second harvest on the books, results from the University of Kentucky Soybean Management Verification Program show that UK College of Agriculture recommendations have an economic advantage over field-management practices that some farmers use.

UK agronomists began the Kentucky Soybean Board-funded study two years ago. Their purpose was to see how UK recommendations held up against farmer practices in large-scale plots under typical field conditions in Western Kentucky.

UK crop specialists conduct research and develop grower recommendations based on small, controlled plots and to a lesser extent, on larger field plots. However, fields across the state have different soil types, and at times, different conditions than the test plots. Farmers generally are a little skeptical of small-plot research and how it will apply on their fields.

Chad Lee, UK grain crops specialist, and Jason Sarver, UK agronomist, work with farmers well before planting season to identify fields, conduct soil tests and make fertilizer recommendations. With field sizes between 30 and 80 acres, Sarver asked farmers to apply UK recommendations on half the field and use their normal soybean management practices on the other half. This allowed for side-by-side comparisons of the two management practices.

"This study not only allows us to test the effectiveness of our recommendations in large field plots, but we also get to see what producer practices work well," Sarver said. "They are learning from us, and we're learning from them."

At the end of each season, Sarver recorded the yields from each half of the field, tallied the input costs from both sides and developed an economic analysis of the studies. While the complete report includes all of the field notes and inputs, the two items of most interest to most producers are final yields and the difference in economics.

In 2009, Sarver, worked with soybean producers in Lyon, Trigg, Hickman, Fulton, Graves and Muhlenberg counties. That year, fields on average using UK recommendations yielded 0.5 bushel more per acre and had an economic advantage of $12.49 per acre when compared to producer managed fields.

Producers from Trigg, Marshall, Calloway, Butler, Henderson and Muhlenberg counties participated in the 2010 study. Fields with UK recommendations yielded 1.3 bushels per acre less than producer fields but had an economic advantage of $13.56 per acre.

"The main monetary savings are coming from seeding rates and the use of chemicals," Sarver said. "UK seeding rates are typically lower than producers use, and some producers apply chemicals according to a predetermined schedule rather than on an as needed basis."

Both years have been unique not only because the study was conducted in different counties, but 2009 was a relatively wet, cool year for the area while 2010 was a drought year with above-average temperatures.

Lee and Sarver presented the findings to members of the Kentucky Soybean Board, farmers and Cooperative Extension agents across the state. Sarver also presented the results at the 2010 American Society of Agronomy meeting in California.

"It's been received well by farmers because the results have been applied to their fields," Sarver said. "With some farmers this year, we've even expanded on the study to make comparisons between some of the results from fields in the 2009 study and their fields" Δ