

### Breeding a Better Bean

A new partnership between Kansas State University and The Farm Research Center, **Garden City, Missouri**, aims to develop a new variety of soybean.

Through the partnership, made official at a Dec. 30 signing ceremony, The Farm is providing \$60,000 in grant funding to [William "Bill" Schapaugh](#), professor of agronomy, for research on two tasks:

- Develop new maturity group 4 soybean varieties with protein and oil levels to meet sponsor criteria for commercialization for \$45,000.
- Assess genetic diversity in current germplasm for amino acid profiles — specifically, methionine, threonine and lysine — for \$15,000.

"Our aim with these tasks is to improve soybean varieties to better meet the needs of farmers and end-users," Schapaugh said. "The funding will allow us to develop populations to combine specific traits into high-yielding varieties and screen germplasm to identify unique and beneficial sources of new genes to use in the breeding program."

Schapaugh's research focuses on developing new varieties with unique combinations of genes that result in a soybean plant that produces a better commercial product. Schapaugh said the U.S. industry has developed excellent soybean varieties, but is far from using the available germplasm that has been collected around the world. The partnership will help magnify the plant's potential.

"We are interested in looking at unique sources of genes — genes that could potentially be helpful in developing a new variety," Schapaugh said.

The partnership has outlined two of potentially many additional tasks to improve soybean commercialization. Additional tasks might focus on priorities such as: enhancing the plant's stress tolerance or improving oil quality or resistance to diseases and pests, Schapaugh said.

"The collaboration between K-State scientists and The Farm's progressive field research will help increase yield and productivity in the agriculture industry," said Rich Sell, Kansas State University executive director of outreach. "These first two tasks are part of what we hope will be a long and fruitful partnership to ultimately produce more and better food and feed for the consumer at a reduced price."

[The Farm Research Center](#) specializes in research to attain the highest yield possible for growers, while using environmentally friendly practices. The Farm's also has researched biologicals, starter fertilizers, foliar applications, farming practices and many other areas to produce high yields in crops.

"Already, we at The Farm have a history of testing and bringing to market soybean varieties," said Kent Kauffman, CEO of The Farm Research Center. "We look forward to working with Kansas State University, a preeminent land-grant institution, on developing high-yielding soybeans that offer the compositional characteristics, including protein, oil and amino acid content, that the industry demands. This research partnership will expand our capabilities and enable all parties to

better serve the agriculture industry."