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College of Agriculture,  
Food and Environment

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# EXTENDING KNOWLEDGE *Changing Lives*



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*The “crush” of a bushel of soybeans yields 11 pounds of soybean oil, 44 pounds of soybean meal, 3 pounds of hulls, and 1 pound of waste. Soy hulls are a co-product, adding value to the soybean crop and providing a highly digestible fiber for cattle.*

**When you support Extension, agricultural producers apply research to add value to crops and utilize by-products.**

## **Extension Specialist’s Soybean Hull Research Benefits Kentucky Cattle Producers**

*Soybean hulls were once considered a by-product for soybean producers yet became an added value to the soybean crops serving as highly digestible fiber for cattle.*



In 2013, soybean production in Kentucky was 81.2 million bushels (Crop Reporting Service). At 3 pounds of soy hulls per bushel, that is 121,800 ton being utilized in Kentucky instead of being shipped overseas.

Dr. Roy Burris, Extension Beef Specialist, began research on soybean hulls as supplemental nutrition for cattle in 1996 after learning that soybean hulls were being shipped overseas. Hulls contain highly digestible fiber to supplement a pasture-based diet. The research showed that soybean hulls could replace corn on a pound per pound basis as both contain high amounts of starch. In feeding trials, cattle readily consumed the soy hulls without any acidosis or founder since the soy hulls contain very little starch.

Kentucky producers currently use all of the approximately 120,000 tons of soy hulls each year. What once was a by-product is now added value of the soybean crop. The success of the research led to expanding feeding of other by-products to cattle including corn screening, wheat screening, distillers dried grains and cotton seed hulls.

By providing additional nutritional supplements for cattle, agricultural by-products are being utilized within Kentucky, which increases the profitability of grain producers. Additionally, cattle are not competing for corn



*UK Extension research had led to the expansion of other by-products for cattle nutrition including: corn screenings, wheat screenings, distillers dried grains and cotton seed hulls.*



*Dr. Roy Burris did cattle research on animal nutrition at the University of Kentucky Research and Education Center in Princeton, Kentucky. The research led to utilization of other grain by-products used as nutritional supplements.*

with humans, and corn can be accessible for ethanol production, a renewable energy source.