

James Anderson

August 2013

A Saluki Focused on Research

James Anderson, a doctoral student in Agricultural Sciences, was busy conducting research this summer about **improving biodiesel efficiency**. The four-part research began with a honeycomb field plot design to get multiple replications within a small area while giving the most space possible to increase the growing habit of the plants. The result was a 21-plot honeycomb consisting of about 900 individual plants in the field. Flower notes were taken each day to document the color of the flower on the plant. At the end of the season, the oil profile for each line will be obtained to help make selections for oil quality.

The second aspect of the research included maintaining the USDA field and SCN trials. This included maintaining them as well as collecting data on them regarding flower notes and growth habit. More data will be taken post-harvest, which comes in September.

The third part of the research was the creation of crosses for breeding. The team had interest in six lines for crossing, so the lines were planted close to each other. When the flowers opened up in mid-July, pollen from one plant was moved to the stamen of the other plant in order to induce a cross-pollinated line. These lines will be grown during the winter in order to determine whether or not the cross was successful.

The last part of James' summer research involved a seed increase for mutant soybeans. Third generation soybeans, created two years ago, were planted in the greenhouse with the help of Travis from the lab. The hope is to phenotype both the oil and protein content for the lines. Once the lines are grown and harvested in mid-September, the lines of interest will be sent to Puerto Rico for another increase and to test the lines in a honeycomb design next year.

WOW! Congratulations James, on a summer well spent!



James Anderson is a doctoral student in Agricultural Sciences