

## **Arkansas Soybean Research Verification Program Update December 14, 2007**

The 2007 Soybean Research Verification Program (SRVP) consisted of 15 fields located in the following counties: Ashley, Clay, Craighead, Crittenden (2), Cross, Desha, Greene, Jefferson, Lawrence, Mississippi, Phillips, Poinsett, Prairie, and Randolph. The Easter freeze had an indirect impact on the number of Early Season Production System (ESPS) in the program. Although seven were planned, re-planting of rice and corn affected by the freeze only allowed four ESPS SRVP fields to be planted. Of these four, three were planted on May 1, a late date for the ESPS. The program also consisted of eight full-season and three double-cropped fields.

The 2007 program kept up most of the trends we have seen in recent years regarding Arkansas soybean production. As mentioned before, only one field was planted prior to May 1, while April plantings have become common in all areas of the state in the past few years. We expect to have a better balance with regard to planting date in the coming year. Ten of the 15 fields were planted on some type of raised bed, allowing increased irrigation efficiency. Four of these 10 were planted in a twin-row pattern which has become common especially in cotton growing areas. The use of Group IV maturity varieties continues to increase in the state and in the SRVP, with 9 of 15 present in 2007. Only one field was planted to a maturity later than 5.6.

Irrigation was a challenge for SRVP producers in 2007. Many fields were hit with excessive rainfall in July and early September with some occurring just after irrigation. The extended wet period in early July followed by extremely high temperatures without rainfall through August put most fields in excessively stressed conditions. The two cooperators who utilized center pivot irrigation were challenged in keeping up with the water demand of the plants. Ten fields were furrow irrigated, while one was border irrigated and another flood irrigated. The three production systems differed significantly when observing the number of irrigations applied. The ESPS fields were irrigated an average of two times, while the full season and double-cropped fields were irrigated an average of 5.9 and 11 times, respectively.

Insect and disease management was also a challenge. Six of 15 fields were sprayed with a fungicide for common foliar diseases, not soybean rust. Soybean rust was present in several fields late in the season where treatment was not warranted. Insects were treated in seven of 15 fields with three of the seven treated multiple times. All three double-cropped fields were treated with an insecticide with two receiving multiple treatments. As a result of intensive scouting, five of 15 fields were not treated with a fungicide or insecticide despite a heavy pest year.

Overall yields were a bit lower in 2007 compared to 2006 due to excessively hot, dry conditions throughout July and August. Three fields exceeded 60 bu/ac, with a high of 67.1. All three fields were intensively furrow irrigated and managed. Six fields averaged in the 50-bu/ac range, three in the 40-bu/ac range, and three yielded below 30-bu/ac. The overall SRVP yield average was 48.7 bu/ac compared to an estimated state average yield of 37 bu/ac. Economic data is being compiled at this time and a more thorough report will be presented in February.