Agronomic Crops Impact Report 2018–2019

The Agronomic Crops Program delivers research-based integrated information to improve producer management decisions while increasing profitability. Extension offers expertise in agronomy, pathology, entomology, weed science, agricultural engineering, and soil fertility for all major field crops.

Wiregrass Cotton Expo

- The twentieth anniversary Wiregrass Cotton Expo offered planning assistance for the cotton season to more than 175 people who attended from three states and nine different counties.

- Wiregrass farmers reported a $908,212 impact from Extension programs. This is a $445 to $1 return on investment.

- In 2018, producers reported their on-farm cotton acreage changes as 43% increase in acres, 19 percent decrease in acres, and 38 percent had the same acreage.

- Survey respondents estimated that they will save $14.5 per acre as a result of knowledge gained from a soil nutrient management presentation.

- Producers indicated a $16.75 per acre savings/profit when asked how much money they would save by implementing ideas gathered from the weed control in cotton presentation.

- 90 percent of attendees indicated a potential average savings of $17.50 per acre by implementing ideas about whitefly control as needed. Expo represented 14,950 acres and a reported average savings of $60.75 per acre.
Auxin Herbicide Training, Weed Management in Row Crops

- On a scale of 1 to 10 with 10 being most valuable, farmers rated the 2019 auxin and weed control training 9.39.

- 100 percent of the participants at auxin trainings reported that they will adopt the recommended best management practices. After training, 96.93 percent of participants indicated that they feel confident to reduce auxin herbicide off-target drift on their farms.

- Average saving after acquiring weed control information and auxin herbicide application update is $13.45 per acre.

- This savings represents a $7,113,940 to $98,823 return on investment, and $7 million spent on local economic development in rural communities.

- Since auxin herbicide training was initiated in 2016, the number of official dicamba off-target drift complaints to the Alabama Department of Agriculture and Industries was consistently under 10 in each year, which is far below the national average. Alabama row crop growers used this new technology safely and responsibly.

Irrigation Technologies

- Demonstrations of sensor-based irrigation scheduling (SIS) and variable rate irrigation (VRI) practices are being conducted at three fields in north Alabama. These fields are at Posey Farms in Town Creek, 472 acres; Bridgeforth Farms in Tanner, 104 acres; and Haney Farms in Athens, 89 acres. All three fields have center irrigation pivots that apply a uniform rate of water along the entire length of the system.
Posey Farms irrigates 600 acres, which is less than 10 percent of the total acreage. Depending on the growing season weather, the farmer can visualize saving $30,000 to $45,000 in costs of diesel fuel and electricity needed to pump water a mile from a creek to a holding lake. Using less water drops costs considerably. Data from the study will help producers create a positive environmental impact.

Participants were asked for the economic impact the information received during the irrigation short course could have on crop production. 30 percent (53 respondents) estimated a $10 to $20 per acre impact, and 35 percent estimated a $5 to $10 per acre impact, and 9.4 percent estimated a more than $40 per acre impact.

All of the respondents indicated an increased knowledge or irrigation, 23 percent will implement changes in crop management, 29 percent have an greater understanding of the impact management changes could have on final yield, 18 percent acquired new skills, and 12 percent received information that will help them reduce input use.

Alabama Row Crops Short Course

The Alabama Row Crops Short Course is gaining recognition among farmers in Alabama and neighboring states. These large meetings attract both in-state and out-of-state speakers covering cutting-edge topics. The 2018 Short Course had two mornings of general sessions and one afternoon of crop-based breakout sessions (cotton/peanut and cotton/soybean) and 25 speakers. The 260 participants included farmers, industry representatives, crop consultants, Extension agents and faculty, USDA-ARS scientists and NRCS employees, and students. The majority of producers farm between 250 and 500 acres with some managing farms of more than 5,000 acres.

Participants learned the most about cotton market outlook, weed resistance to auxin herbicides, variable rate seeding, and seed global market outlook. Topics that interested farmers the most were cotton market outlook, cotton varieties and their nutrient demand, and variable rate seeding.

Course impact was measured in increased knowledge, a better understanding of the effect management changes can have on final yield, and new skills. 20 percent of participants indicated that the short course could help them improve crop management that could result in a $5 to $10 per acre profit. Another 20 percent indicated a higher possible profit of $10 to $20 per acre.
Cotton Mildew Response

- A widespread outbreak of areolate mildew occurred in August in central Alabama cotton.
- Defoliation levels in excess of 50 percent were noted across a minimum of 20,000 cotton acres with the heaviest defoliation noted on the widely planted Deltapine 1646 B2XF.
- The Wiregrass cotton production region has similarly high defoliation levels particularly in home-planted cotton.
- A timely fungicide application across the above cotton acreage resulted in 120-pound lint per acre yield protection valued at $0.75 per pound for a total increase in farm gate income of $1.8 million for central Alabama cotton producers.

New Cotton Virus

- A new virus-incited disease, which is similar to cotton Blue Disease, was confirmed in Alabama’s cotton crop in September 2018.
- Disease incidence in some commercial fields, particularly late-planted cotton in Baldwin County reached 100 percent and resulted in a partial to total yield loss.
- The losses to this disease are only in the $10 to $20 million range, but it has potential to cripple Alabama’s cotton production.

Bollworm Resistance

- The entomology cotton IPM team at Auburn is focused on several issues with insect resistance to both chemicals and genetic traits. One of the most economical problems for cotton growers is how to best manage escape bollworms on two gene cotton.
- Bollworms are now resistant to the pyrethroid class of chemistry that has dictated that growers move to the newer expensive diamide chemistry. Scouting techniques, treatment thresholds, and the proper timing of application are issues being addressed by Extension entomologists.