

CIG- NRCS 68-3A75-5-195 Summary
“Irrigation Management Technology for Water Conservation in Georgia”

Irrigator Pro for peanuts, cotton, and corn were developed at the UADA/ARS National Peanut Research Laboratory in Dawson, Georgia. Irrigator Pro uses min/max thermometers and soil moisture sensors to obtain data for computer models that generate irrigation recommendations for these crops based on their physiological needs. This practice allows farmers to better manage irrigation scheduling to ensure sustainability by scheduling irrigation (time and amount) to increase crop yield and conserve natural resources. The Conservation Incentive Grant allowed the partnership between the National Peanut Research Laboratory and the Georgia Soil and Water Conservation Commission to be successful in transferring Irrigator Pro technology to producers. Even though Georgia has experienced an extreme drought during the spring and summer for three consecutive years; the Irrigator Pro program helped growers better utilize their water and energy resources and increase yields and quality of their products. Yield increases of over 300 pounds of peanuts per acre and 2 percentage point increases in sound mature kernels and sound splits have been demonstrated using Irrigator Pro. The sensors must be properly installed and placed in an area that is representative of each field for Irrigator Pro to work properly. Also, the correct data (such as soil type, planting dates, variety, etc.) must be properly entered into the computer model for each field and crop for Irrigator Pro to provide accurate recommendations. Some producers suggested that fewer sensors placed at different depths may be desirable. Others suggested that the corn model should be more aggressive for sandy type soils.

NPRL is cooperating with scientist (USDA and Land Grant) to evaluate Irrigator Pro and make the models specific to their growing regions because those scientist believe that it could benefit growers in those areas. Irrigator Pro trials are being conducted in Alabama, Texas, Florida, and North Carolina. A model is also in development for Mississippi. Even though Irrigator Pro may be useful for other crops; models are not being developed by NPRL at this time.