

Practical Irrigation Scheduling In Cotton

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Irrigation management is of paramount importance to maximize yield potential in cotton. Lint quality and quantity are affected by water management. A 2008 irrigation survey conducted by the Cotton Advisory Committee indicated that irrigation water pumping represents 49% of the energy consumption in cotton production. The survey results revealed needed improvements in scheduling cotton irrigation. More than half of the growers responding to the survey stated that visual assessment was the preferred method to schedule irrigation, which normally results in excessive irrigation. For the last 5 years, a demonstration project using atmometers or ET gages, to schedule irrigation, has been

underway in Arkansas. Results show the atmometers provide reproducible estimates of potential evapotranspiration and can be placed 3 miles apart. Evapotranspiration readings were collected every 3 days, with soil moisture deficit to trigger irrigation set at 2 inches for silt loams and 3 inches for clayey soils. Significant water savings have been achieved using this approach. During the 2010 season, more than 10,000 acres were irrigated following this approach, but this figure may increase as collaborators plan on increasing the number of acres. The objective of this talk is to present results of such project, including experiences implementing such approach at a whole farm scale. Δ

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