

## **IRRIGATION SCHEDULING APPROACHES IN THE FAR WEST**

**Daniel Munk, Bob Hutmacher, and Jonathan Wroble**

**Cooperative Extension**

**University of California**

**Fresno, CA**

### **Abstract**

There is an ever-increasing need to improve irrigation management decisions in the irrigated west. Increased water costs, diversions for environmental enhancements and municipal needs continue to increase thereby requiring the grower to be more efficient with this limited resource. Cotton's long growing season and high water requirement during the effective flowering period also make the crop particularly vulnerable to yield decline caused by improper irrigation scheduling. Irrigation management that allows periodic but modest levels of plant stress are appropriate for achieving high yields in cotton. There is currently no single irrigation scheduling method that suits all growers and conditions, however there are 2 to 3 basic approaches that have been successful at minimizing the risk to the producer. Soil- and plant-based measurements have been used successfully and can be enhanced by using direct or indirect estimates of reference evapotranspiration (ET<sub>o</sub>) using energy balance methods. Many western U.S. cotton farmers successfully use soil- or plant-based methods combined with input obtained from area ET networks such as CIMIS, which provide real time and long-term ET<sub>o</sub> estimates.