PIN project sees shot at saving water

By **PAUL SCHATTENBERG**

A NUMBER of Texas irrigators have been involved in a two-year study that shows, despite drought and concern for pumping costs, many of their crops could still be produced using less water.

The findings came in late 2006 as the members of the Precision Irrigators Network, producers, and researchers and educators from Texas A&M University came together to compare notes.

"These initial PIN program results come from research done on 20 farms in counties of south-central Texas," says Giovanni Piccinni, program manager. "We researched the effects of precision irrigation on four different crops in a total of 25 fields throughout these counties. Information on rainfall, soil moisture evaporation, growth stages of the different crops — corn, cotton, sorghum and wheat — and other factors were used in the initial research. These data were then compared with irrigation data provided by participating producers," adds Piccinni.

Precise water-use data were obtained through water evapotranspiration measurements taken from in-ground lysimeters. Rainfall data were obtained from weather stations set up throughout south-central Texas to support the network.

More efficiency possible

"While initial results were affected by unusually high irrigation needs due to this year's drought, they still show possibilities for producing similar yields using less water," explains Piccinni. "We saw many instances where we feel area farmers could reduce their amount of irrigation and improve profitability."

One of the selected corn production case studies demonstrated how irrigation could have been reduced by 3 inches, while still keeping yield high and increasing profitability for the producer. This could be achieved by reallocating that water to a different crop or using the pumping cost savings, Piccinni says.

"We saw several places where there is the potential for water savings, but this was a very dry year and required extra irrigation," he adds.

Key Points

- Texans see data to show they can still water more efficiently, even in drought.
- Research crossed the Valley and Wintergarden area to study water loss.
- Goal of study is to reduce irrigation water loss by 20% in long run.

"Alternative timings of irrigation application also affect crop yields and the timeliness of irrigation is far more important in dry seasons than wet."

Researchers are encouraged by the initial results of PIN project efforts, he says. And while it will take years to develop a database containing information on all factors affecting irrigation, this represents a positive start.

"This is already providing us with localized data that can be used on farms in this area," according to Kenneth White, Texas Cooperative Extension agent for agriculture and natural resources for Uvalde County. "Using advanced technology, we are now able to help growers determine soil moisture so they can make more accurate irrigation decisions."

The PIN program was formed with the goal of saving millions of gallons of water annually by reducing irrigation water use by as much as 20% over several years.

Schattenberg writes for Texas A&M.