

TexasET Network will benefit Winter Garden area producers

Provides 'customizable' data for irrigation scheduling

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Writer(s): Paul Schattenberg, 210-467-6575, paschattenberg@ag.tamu.edu

Contact(s): Dr. Guy Fipps, 979-845-7454, g-fipps@tamu.edu

Dr. Bill Holloway, 830-278-9151, jw-holloway@tamu.edu

Marvin Ensor, 325-653-4576, m-ensor@tamu.edu

UVALDE - Producers in Texas' Winter Garden area can benefit from data provided through the TexasET (Evapotranspiration) Network and website, according to experts from Texas AgriLife and a regional agribusiness consultant.

TexasET is a project of the Irrigation Technology Center and the Texas AgriLife Extension Service, according to the TexasET website at <http://texaset.tamu.edu>.

According to the site, evapotranspiration, or ET, is the total amount of water plants need to grow and develop and includes how much water plants transpire and the amount of moisture lost through evaporation. Atmospheric factors affecting ET include temperature, wind, solar radiation and relative humidity.

"The TexasET Network and website uses data from weather stations set up throughout the state and provides daily ET summaries, irrigation requirements for crops, and other information such as heat units," said Guy Fipps, an AgriLife Extension agricultural engineer who oversees the network. "There are currently eight online weather stations throughout the Winter Garden area, and two temporarily offline with communication problems."

The TexasET Network was begun in 1995 and over the next few years expanded to a total of six weather stations in Bexar and Uvalde counties. Each station had a local sponsor including the San Antonio Water System, Texas AgriLife Research and Extension Center in Uvalde, the AgriLife Extension office for Uvalde County and several private farms.

In 2004, the Winter Garden network was expanded to 12 weather stations located in Bexar, Dimmit, Frio, Medina, Uvalde and Zapata counties as a part of the Precision Irrigators Network, or PIN, project. This project, initiated through the Texas AgriLife Research and Experiment Center in Uvalde, was a joint research-Extension-producer project funded by the Texas Water Development Board and supported by area conservation districts. The project ended in 2009, and its funding covered most of the costs of these weather stations while it was active.

"The PIN project's mission was to help area farmers reduce irrigation-water use, meet any applicable watering restrictions and maintain good crop yield and quality," said Dr. Bill Holloway, the Uvalde center's resident director of research. "And while that mission remains the same, what we're doing to achieve that mission has changed."

Holloway said while PIN was successful in helping many Winter Garden producers develop methods to maximize irrigation efficiency, the loss of the project's lead researcher to private industry and changes in research methodology by the new lead researcher for such water conservation projects have negated the center's need for these stations.

"In addition, producers involved in the PIN project also used to help us by sharing responsibility for weather station staffing and maintenance, and budget cuts have made it difficult to find funds to keep them up," he added.

Fipps said that now Precision Irrigation Network research has ended, Winter Garden producers who once obtained data from those weather stations and irrigation recommendations from the PIN program can now get that data, along with additional information and applications, from the TexasET Network and website.

He said Winter Garden data related to evapotranspiration will benefit area producers trying to determine "the proper amount of irrigation to maximize crop yields while conserving valuable water resources."

The TexasET Network will now be responsible for gathering data from Winter Garden-area weather stations and will assume oversight of the stations, said Marvin Ensor, AgriLife Extension's West regional program director for agriculture and natural resources.

"However, with a reduction in available funds, we found alternative funding sources and developed new partnerships to help with the resources needed to maintain the weather stations," Ensor said. "Fortunately, based on our initial contact with Winter Garden producers and agribusinesses, most appear to be willing to support these efforts."

He added that data from the weather stations has not only been useful to Winter Garden producers, but also area residents needing atmospheric information to help them make decisions related to agribusiness operations and land-management activities.

"TexasET provides irrigation recommendations and other information differently than the way the PIN program did," Fipps said. "It allows data acquired from these and other weather stations throughout the state to be highly 'customizable' for Winter Garden producers, as well as other producers throughout the state."

"This is a sophisticated system with a lot of functions," he said. "The website has calculators producers can use to adapt the data to their specific needs. They can even set up profiles of their farms and the crops they produce, and set up automatic emails sent to them daily or weekly with customized irrigation recommendations."

"Weather stations in the Winter Garden which provide data to the TexasET Network will give producers here the kind of information they need to make informed decisions about irrigation," said Charles Stichler, a crop consultant in the region. "I use the site to get data on water use and to apply it toward keeping 'water balance sheets' for some of the producers I work with. I get information on heat unit accumulations, crop water use and daily ET."

Stichler said the network and website provide information producers need to help them fulfill Natural Resources Conservation Service requirements for water management practices as part of the agency's Environmental Quality Incentives Program, which provides per-acre payments to producers for efforts to conserve water resources.

"Most importantly, the network and website are useful decision-making tools for Winter Garden producers in determining their irrigation scheduling," he added.

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Editor's Note: The TexasET Network is partially supported through a federal program, the "Rio Grande Basin Initiative," and administered by the Texas Water Resources Institute of the Texas A&M System, the Cooperative State Research, Education and Extension Service and the U.S. Department of Agriculture.