Water *for* Texas

Agricultural Water Conservation Demonstration Initiatives

Agriculture in Texas has a long history of providing food and fiber to the people of Texas, the nation, and the world. With projected increases in population across the state, the demand for agricultural products will continue to rise even as competition for scarce water resources increases. To remain competitive in these markets and to ensure the future of irrigated agriculture in the state, Texans must continue to enhance conservation of our precious and limited water.

In an effort to increase water conservation efforts in the agricultural sector, the Texas Water Development Board initiated a program in 2004 designed to implement projects for the Agricultural Water Conservation Demonstration Initiative in several major irrigated areas of the state. The purpose of these projects is to evaluate and demonstrate the integration of enhanced irrigation water management techniques and diversified farming systems to advance water conservation while maintaining or increasing farm profitability. Demonstrating the appropriate use of this scarce resource and adopting water conservation practices within important economic regions is of paramount importance in maintaining the viability of our agricultural communities. The following is a brief narrative of the two active projects.

An Integrated Approach to Water Conservation in the Texas Southern High Plains

In 2004, an eight-year grant of up to $6.2 million was awarded to Texas Tech University for "An Integrated Approach to Water Conservation in the Texas Southern High Plains." This project is designed to identify, demonstrate, and quantify water-saving agricultural production practices and technologies that will reduce the depletion of groundwater from the Ogallala Aquifer.

Texas Tech University, the primary grant recipient, is partnering with Texas AgriLife Extension, the High Plains Underground Water Conservation District, and agricultural producers in Floyd and Hale counties. The project is producer led and is widely known in the Texas High Plains as the Texas Alliance for Water Conservation.

The project is being implemented within an approximate 15-mile square area located east of Plainview, Texas. There are 26 demonstration sites established in the project area. This project demonstrates systems ranging from monoculture cropping systems to fully integrated crop/livestock/forage systems with a broad range of dry land and irrigation technologies, including subsurface drip irrigation and low-pressure center pivot irrigation systems.

Informational meetings and field days are conducted regularly to disseminate research findings and to distribute educational materials to the area producers and the general public.

For more information, visit the Texas Alliance for Water Conservation Web site at http://www.depts.ttu.edu/tawc.

Maximization of On-Farm Surface Water Use Efficiency by Integration of On-Farm Application and District Delivery Systems in the Lower Rio Grande Valley

A 10-year grant of up to $3.8 million was also awarded in 2004 to the Harlingen Irrigation District for implementing the "Maximization of On-Farm Surface Water Use Efficiency by Integration of On-Farm Application and District Delivery Systems." The project is located in the Lower Rio Grande Valley with demonstration sites distributed in Cameron, Hidalgo, and Willacy counties.

Texas Water Development Board

The objective of the project is to integrate state-of-the-art irrigation water distribution network control and management techniques with on-farm irrigation management.

Harlingen Irrigation District, the primary grant recipient, is managing this project in partnership with Texas AgriLife Extension–Farm Assist Program, Texas A&M–Kingsville, Texas AgriLife Extension–Weslaco and in collaboration with agricultural producers in the area. Currently 24 demonstration sites have been established involving 12 producers. The project is widely known in the Lower Rio Grande Valley as the Agricultural Demonstration Initiative.

During the initial phase of the Agricultural Demonstration Initiative project, a flow meter calibration facility was constructed. The facility is currently being used for training irrigation district personnel from across the state. The facility is extensively used by Texas AgriLife Extension experts for conducting educational workshops benefiting area producers. An Internet-based water delivery and tracking system, which can monitor real-time water flow, weather, and water use, was installed at the Harlingen Irrigation District office. The project also oversees demonstration projects to disseminate knowledge of on-farm irrigation water conservation technologies and adaptive management strategies.

For more information, visit the Harlingen Irrigation District Web site at http://www.hidcc1.org.

Contact Information

To obtain more information for the Southern High Plains Agricultural Demonstration Initiative Project or the Lower Rio Grande Valley Agricultural Demonstration Initiative Project, contact conservation staff at (512) 463-7955 or agconservation@twdb.texas.gov.