

**Water Conservation Advisory Council
Addition for Potential Legislative Recommendation for the 2020 Legislative Report**

Draft language for possible addition to TAWC recommendation

Approximately three-quarters of all groundwater usage in Texas is for agricultural irrigation. Even small improvements in water use efficiency can produce groundwater savings measured in thousands of acre feet of water. The Texas High Plains is one of the most important agricultural regions of the United States but is highly dependent on water for irrigation from the Ogallala Aquifer at non-sustainable rates of use. Approximately 90 percent of the water withdrawn from the aquifer is used for agricultural irrigation. TAWC education and demonstration projects are located in the heart of this region.

Research efforts are constantly producing advances in technology and agricultural practices to conserve water. In order for those advances to result in more efficient or reduced water usage, water users must be made aware of and implement the new technology and practices. TAWC is a vital link between researchers and agricultural water users. TAWC recruits agricultural producers who agree to implement specific practices and technology, keep detailed multi-year records of costs and yields and then demonstrate the results to other producers. This peer-to-peer sharing of experience, data and results is highly effective in increasing the rate of adoption of water conserving best management practices. TAWC demonstration projects provide convincing proof of new methods that not only reduce water usage but also increase profitability for producers, which is a key factor in promoting adoption.

One recent example is a demonstration project comparing the results of flat rate irrigation to variable rate irrigation. Variable rate irrigation uses irrigation technology to match water application to the needs of crops based on soil, yield potential and topography. Over a period of three growing seasons, 2017-2019, this project demonstrated that variable rate irrigation can result in a 115 pound per acre increase in cotton yield over conventional irrigation with a water savings of 0.4 inches over the whole growing season. For a 100 acre cotton field, this would produce a water savings of 1,086,168 gallons while increasing the net return to the producer of \$4,881. This type of information from a fellow producer showing that conserving water can increase profits is a powerful means of increasing the adoption of best management practices.

For Discussion during the 2-27-20 Ag Workgroup Call