

**PRESENTATION TO THE TEXAS ALLIANCE FOR WATER CONSERVATION**  
***PIONEERS IN AGRICULTURE FIELD DAY***  
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**Muncy, TX**

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Thank you for the opportunity to speak to you today. It is truly an honor to speak with pioneering people like yourselves. Because Senator Duncan is not here to defend himself, I can safely say that he would be proud of all of your accomplishments. You are all here because you understand that water is THE defining issue of our time. But, because of the pioneering spirit expressed here and the research and experiments on your farms, we are learning a lot on how to better utilize this resource. This is important because irrigation contributes a significant portion to the regional economic activity...roughly \$6 billion annually in the Texas Panhandle alone.

Here are a couple things we can take home from what has transpired in the TAWC project so far:

1. **Water meters can make a difference.** We have learned that any many cases, we are using less water than we even thought, which translates into over-application of other inputs.

As an economist, I often puzzle over the question as to why one would want to produce a product with little or no information about the quantity used of their most important input. Imagine McDonalds not knowing the quantity of potatoes purchased for French fries. Water inputs may be more imprecise than potatoes, but the information about water usage can be extremely valuable. We know to the pound what we put out in fertilizer. Why? Because fertilizer is expensive. But, water is expensive too. You need accurate information on water usage to make better input decisions.

2. **Irrigation timing is feasible.** Traditionally, we think of turning the wells on after planting and turning them off just before harvest.

If we have the ability to monitor water and better match water to inputs, we may actually be able to match water to plant needs rather than using water to make us feel better. As the presenters this morning have demonstrated, better planning can mean less applied water. Of course, this type of system will not work for everyone, but this project has shown that it can be feasible in many cases.

3. **Diversification can be profitable.** Diversification across one's operation has agronomic, risk, and water usage benefits.

We have definitively learned that forage crops, grains, cotton, and livestock can all coexist in an operation and not adversely affect long-term profitability. This kind of diversification can provide a management challenge, but can also mean significant reductions in water demand, and, therefore, provide sufficient water for a smaller mix of crops over a longer period of time. The management challenges should not be underestimated. But, with AgriLife Extension and Texas Tech, producers have many resources to draw upon to help reduce the cost of learning.

We have also learned some key items through research at Texas Tech.

1. **One-size fits all policies are not likely to be effective, and may even be counter-productive.**

Water is not equally distributed across the South Plains, so the benefits of conserving water are not equally distributed across the region. This is not to suggest that setting reasonable conservation goals is not prudent or necessary. Quite the contrary. Rather, these research results suggest that economic variables like pumping costs/returns will drive some out of irrigation faster than others. Said another way, conserve where you have water, don't worry about it where you don't.

We are compelled by law to develop management plans. The water district staff are diligently working at that end. We should all get involved, but by bringing *constructive* ideas for implementation and management, not by needlessly trying to delay the inevitable.

## **2. Economic variables can change the economics of pumping.**

That sounds redundant, but what I mean is that variables like commodity prices, interest rates, electricity costs, etc., have a lot to do with what will and will not be pumped over time. Although we often discuss water usage with the *status quo* in mind, we should be cognizant of how changes in these other variables will change projections of future water use. For example, energy legislation (be it ethanol policy or cap and trade) can significantly alter irrigation and water usage.

## **3. There is no such thing as a free lunch.**

Management and/or policy changes have costs. If it were optimal to have been doing the new management technique, we would have already been doing it. If it were more profitable under a new policy, we would not need the policy in the first place. The question is whether the benefits of the new outcome are worth the costs. Or, stated another way, when we are facing new constraints like reduced water availability, what is the least cost way to respond.

Make no mistake. We are managing depletion of a stock resource. How we choose to deplete the resource now will have ramifications far into the future. Jim Conkright and the Board at the water district here and those further north have been dealt a difficult hand. Producers in the region also face difficult, but important decisions about how to operate now and into the future. Only by facing these challenges with pioneering spirits can we learn how to cope and adapt.