Project Overview

Intern: Kristen Cope
Major: Environmental Engineering
School: University of Nebraska-Lincoln

Project Description

Utilizing existing relationships between producers and Extension Educators, intern Kristen Cope worked with local farmers to increase their water use efficiency. Early in the summer, Watermark soil moisture sensors and ETgages were installed in irrigated fields with producers (and a golf course) unfamiliar with the technology. Kristen helped these producers learn to use the ETgage, sensors and digital meters in order to optimize their water use. She was also able to follow up with cooperators who have participated in the program previously to do a more in depth assessment of their irrigation systems.

Pollution Prevention Benefits

Possible pollution prevention (P2) direct benefits include water, cost, and energy savings as well as greenhouse gas reductions from the implementation of recommendations. Other indirect benefits may include increased crop yield due to better water distribution and a reduction in time spent working on older, malfunctioning equipment.

Assessment Results

If recommendations are implemented, the following table shows the potential benefits for both clients who had in-depth assessments performed on their irrigation systems and producers participating in the irrigation scheduling program:

Table 1: Summary of P2 Recommendation Benefits

Cooperator	Water Savings per Year	Cost Savings per Year	Energy Savings per Year	GHG Reduction per Year
Crooked Creek Country Club	1.4 million gallons of water	$165	2,100 kWh of electricity	2.3 MT-CO_2 Equivalent
Two producers provided assistance in improving equipment	19.1 million gallons of water and more efficient water distribution.	$2,200	1,300 gallons propane 6,400 kWh electricity 580 therms natural gas	74.3 MT-CO_2 Equivalent
20 Producers assisted with Sensors	211.2 million gallons of water	$17,200	43,200 therms natural gas	893 MT-CO_2 Equivalent