

Making a difference

Irrigation Water Management Training for NRCS Engineers and Field Technicians

The Situation

A little over one percent of the cultivated land in North Dakota is irrigated yet it uses over 50% of the permitted fresh water allocated by the ND State Water Commission. Economic analysis indicates that generally, one irrigated acre is equal to over 4 dryland acres in economic return to the farmer before government payments. Over the past 15 years, excess precipitation has meant that interest in irrigation water management has been low and therefore it has been a low priority work area for the Natural Resources Conservation Service (NRCS). Many irrigation practices are cost shared by the NRCS through the EQIP program and recently, they have received many requests for cost share assistance to install variable rate irrigation (VRI) systems on existing center pivots.

The NRCS state engineer determined her staff needed more training in irrigation to be able to properly assess the requests for cost share assistance on the new technologies. The NRCS state engineer organized a one-week irrigation training session for her staff and asked for Extensions' assistance.

Extension Response

Prior to the one-week training program, I performed an irrigation pumping plant efficiency test to show two of the NRCS engineers the procedure. In addition, I lent them my equipment for performing a can test of a center pivot sprinkler package. I showed them the procedure and they performed the test the following day. The data obtained from the pumping plant efficiency test and the can test along with the hands-on knowledge gained by the engineers was included in the training program.

During the training, I gave a presentation on the history of irrigation development in North Dakota and another presentation on irrigation water management. The presentation on irrigation water management was an informal session that allowed the participants time to use some of the irrigation water management tools available through NDAWN and Extension publications. On Thursday afternoon of the training week, I organized a field trip to the

Oakes Irrigation Research site where, with help from Dr. Dean Steele, we demonstrated several methods of soil moisture measurement. Part of the training dealt with the technology of remote monitoring that allows producers real time access to soil moisture conditions. The accuracy and calibration of the soil moisture measurement equipment can pose problems for an irrigator and these developments were discussed during the training. As a follow-up to the training, the NRCS irrigation training coordinator gave a presentation at the Bismarck irrigation workshop on irrigation EQIP programs being offered for various practices.

Impacts

A total of 13 ND NRCS engineers and field staff, one NRCS engineer from Wisconsin and two regional NRCS irrigation engineers (Texas and Washington) were educated on issues important to irrigation in North Dakota and upper Midwest.

Feedback

The attendees expressed their gratitude for the training by sending me a card autographed by all the participants. Discussions with the NRCS state engineer after the training session indicated she was very satisfied. She felt the staff was now technically competent to properly evaluate the requests for irrigation system financial assistance. She made the comment that "the training is already paying dividends judging by the number of EQIP applications that have been evaluated this fall."

Contact

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