

# 2019 Drainage Water Management Education

## Public Value Statement

According to ND Century Code, local water resource board members are required to obtain training on water issues and 19 board members were educated. Knowledge of water management issues and resources will benefit society, growers and the environment.

## The Situation

Subsurface drainage systems (tile) are being installed in farm fields throughout North Dakota. The general public and government officials may have heard of this technology, but do not always understand the principles of subsurface water management, its impacts or limitations, and why farmers have so rapidly adopted this practice.

## Extension Response

NDSU Extension organized and conducted a one-day tile drainage design workshop in Devils Lake and a three-hour training session for the Upper Sheyenne Joint Water Board. The total registered attendance was 47, including 19 water resource board members and two county extension agents.

## Impacts

Workshop participants were asked to place a dollar figure on the knowledge received when applied to their business and the average estimated value was \$46.45 per acre. All growers who answered the survey (26) collectively farm a total of about 97,000 acres, of which 4.2% is tiled. Forty-two percent of the farmers indicated they will tile in 2019 and beyond. If these 42% participants tile 5% of their fields annually, the first-year benefit will be \$94,600. In year five, the annual benefit will be \$473,000 and will increase by \$94,600 in each year until year 20, after which annual benefits will stay constant. Others were still considering their options. Participants rated the workshop 3.6 on a 4-point scale.

## Feedback

- One previous attendee stated, "Potato yield and quality has been good on tiled ground. However, I lost 30% of my non-tiled acres due to excess rains."
- Another said, "I plan to be able to contribute more into the prep work needed to have tile plans made or executed and troubleshoot any issues that arise in execution."

- "In 2015 soybean yields were only 5 to 7 bushel. In 2016 we got 50 bu/a. With all the rain in 2016 the field could have been a disaster but it was tiled. Tile pays for itself."
- "I found the drainage design very useful as well as the economic info about drain tile."
- "Do my own tiling this fall or in 2020."

## Evaluation

Of the participants, 29% stated that they learned something new and useful, and 64% gained important insight in tile drainage and received information that can be used on the farm. Most mentioned an increase in knowledge about how to design a tile system. One attendee wrote about what he learned:

"Basic tile pattern design, and small details that must be incorporated, really enjoyed the examples of scenarios shared today." Another stated, "I have been going to your workshops since 2009. I learn something new every time!" One participant mentioned, "reuse of tile water by way of control structures and limiting flow during certain times of the season will increase my profits!"



Water control structure.

## Contacts

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