

## Extending Soil Health Education

### The Situation

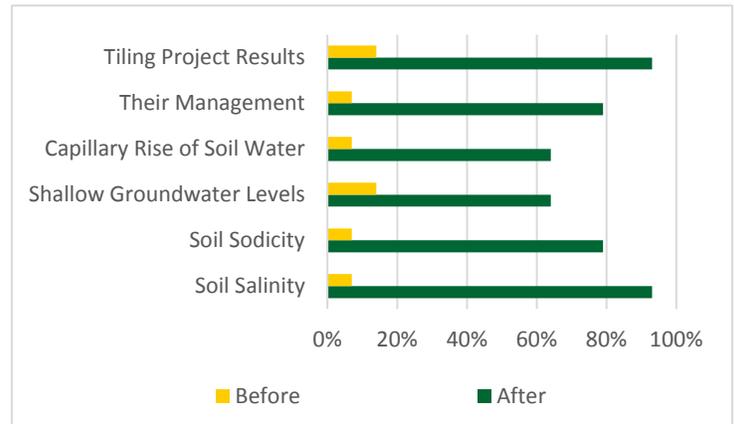
Lake Region State College Precision Agriculture Program offers a two-year Associate of Applied Science degree. Courses teach general agronomy, crop production, soils and soil fertility, geographic information system (GIS) and global positioning system (GPS). However, considering the importance of “soil health and its effect on farm profitability”, students needed in-depth information regarding soil health issues facing North Dakota producers.

### Extension Response

Since 2014, NDSU Langdon Research Extension Center Soil Health Specialist has been providing the additional information through an annual session, dedicated to soil health education. In 2017, shallow groundwater levels, resulting soil salinity and sodicity issues and soil water movement were presented in detail along with management practices and results of the Langdon REC groundwater management research project. The 2017 class included 14 students and 1 faculty. These students either intended to farm or aspired to be crop consultants. Collectively, they could extend the knowledge to several hundred landowners.

### Impacts

Despite 86% of the students responding that, soil health is very important to them, 91% of them had “no to moderate knowledge” of the major soil health issues before attending the session in 2017. The following results show the percentage of participants who indicated either “knowledgeable” or “very knowledgeable” on each of the topics before and after attending the class.



### Feedback

Participants reported:

- “I will watch for soil health and conditions more closely. Because I learned how important that was”.
- “I plan to soil sample for salinity and sodicity on our land that has troubles producing crops”.
- “Everything I learn from class and speaker I will bring back to the farm and to my future work place”.

### Public Value Statement

Out of the 39 million acres of cropland, nearly 5.8 million acres in North Dakota are affected by soil salinity alone (Brennan et al., 2010). The 2017 class can help reclaim thousands of saline-sodic acres back into cash crops.

### Primary Contact

Naeem Kalwar  
 Extension Area Specialist/Soil Health  
 9280, 107<sup>th</sup> Avenue NE, Langdon, ND 58249  
 701-370-0209  
[naeem.kalwar@ndsu.edu](mailto:naeem.kalwar@ndsu.edu)