

# Soil Testing Clinic

## Debunking the myths of soil testing and fertilizers

### Public Value Statement

Proper fertilizer applications are needed to raise good agronomic crops. Even though fertilizer cost is one of the more expensive crop inputs, many crop producers report that they lack soil fertility knowledge. This project improved crop producers' knowledge of soil fertility management.

### The Situation

Fertilizer is needed by crop producers to grow high yielding and nutritious food. Fertilizers tend to be one of the highest input costs for crop producers.

The average farmer spent \$84,649 for fertilizer in 2018 (2018 Annual Report of State Averages North Dakota, North Dakota Farm and Ranch Business Management Education).

However, many crop producers report that they do not have a good understanding of soil testing and soil fertility. Too much or too little fertilizer can cause yield loss and decrease crop producers' bottom line.

### Extension Response

A series of four to five hour workshops (Soil Testing Clinics) were held in Mountrail, Stutsman, Pembina, Williams and Kittson counties to educate crops producers and consultants on soil fertility.

The Soil Testing Clinics will help improve farmers' bottom line by being more efficient in soil fertility from the use of agronomic fertilizer application rates. This will also benefit the environment by decreasing over fertilization that causes algae blooms and eutrophication.

Soil Testing Clinic topics included: which soil tests are needed for each specific crop grown in the region, how to interpret the soil test report, soil sample collection, and determining fertilizer applications, and soil fertility trends.

Several producers brought their own soil test results where NDSU Extension personnel coached the producers on fertilizer applications for their specific field.

### Impacts

Sixty-seven producers and agronomists attended the workshops.

A multiple choice (20 question) pre- and post-assessment was administered at each event. Soil Testing Clinic attendees' knowledge increased greatly as a result of their participation at the workshop. The average pre-assessment score was 38%. The average post-assessment score was 66%.

### Feedback

Sixteen participants indicated that soil salinity is one of their biggest issues. Twenty-three participants expressed that they will implement some sort of salinity management practice learned at the soil testing clinic. Eleven participants indicated that they are currently spending too much on fertilizer and implementing what they learned at the Soil Testing Clinic will save them money.

### Primary Contact

Chris Augustin  
Extension Soil Health Specialist  
5400 Hwy. 83 S. Minot, ND 58701  
701-857-7682  
[Chris.augustin@ndsu.edu](mailto:Chris.augustin@ndsu.edu)

### Collaborators

Alicia Harstad  
Jim Hennessey  
Samantha Lahman  
Jamie Osowski