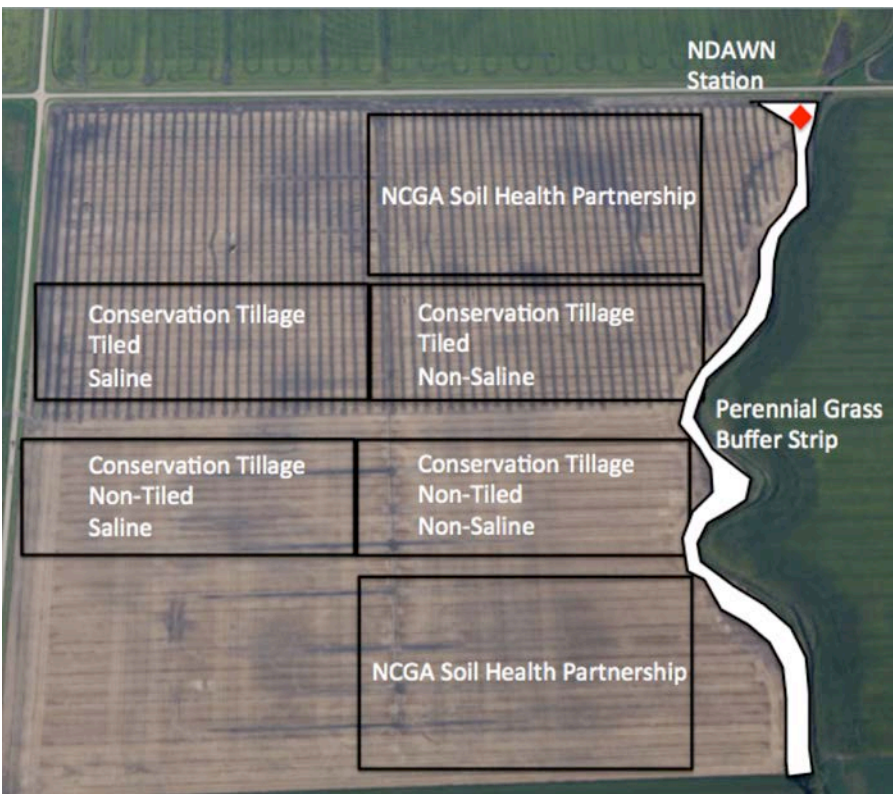




The soil health research program in North Dakota focuses on management options for salt-affected soils, effective use of conservation tillage and cover crops, evaluation of soil health and its relation to crop disease, pest pressures and economic parameters. All projects are directly linked to the Soil Health and Agriculture Research Extension (SHARE) Farm in Mooreton, ND. This project is funded primarily with commodity dollars with the goal of conducting field-scale research and developing extension programming driven by farmer input.

### SOIL HEALTH AND AGRICULTURE RESEARCH EXTENSION (SHARE) FARM



On this quarter of land, owned by cooperating farmer Ken Johnson, we extensively soil sampled and established groundwater monitoring wells (spring, 2013). Tile drainage was installed on the northern half of the field (fall, 2014). We set up conservation tillage plots (fall, 2015) in partnership with University of Minnesota Extension, Minnesota Corn Growers Association, Minnesota Soybean Council and numerous companies providing the tillage equipment used on-site. An NDAWN station was installed (summer, 2015). The SHARE Farm has also recently been linked with the National Corn Growers Association Soil Health Partnership to evaluate soil health properties with the use of cover crops in rotation over tiled and non-tiled parts of the field.

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## SHARE Farm

### Projects:

- are driven by farmer input
- are large scale and long term
- include research and extension components
- are based on whole systems approaches
- are funded by multiple commodities

### Commodity Investment in Soil Health:

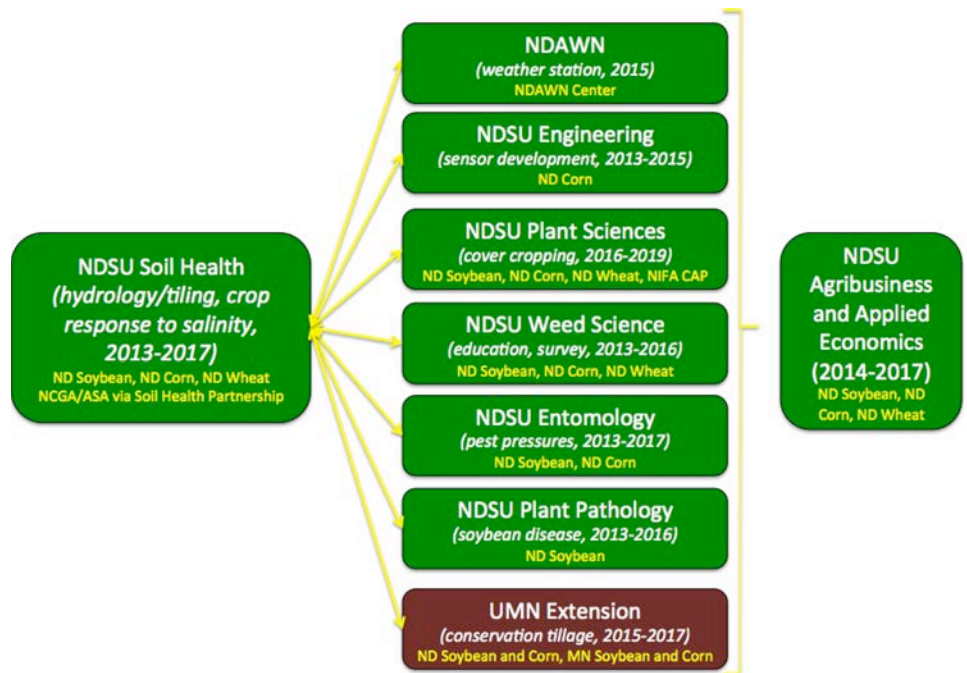
\$1.43 million (2013-2017)

### What we've done with that investment:

- on-going research (14 scientists, 8 disciplines, 2 universities involved)
- held 53 workshops and field days reaching 3,201 people
- initiated café talks to encourage farmer discussions with NDSU about soil health and whole systems management
- produced 30 videos getting over 15,800 views

The uniqueness of this project lies in the approach, where farmers are providing input into the direction of both research and extension programming related to soil health. This happens through communication among farmers, commodity councils, NDSU research faculty and extension specialists. With this approach, soil health can stay relevant and timely. Here are a couple of examples of research questions that have influenced the SHARE Farm based on farmer input – (1) how fast do tiled drained fields build soil health versus fields that aren't tile drained? (2) how do I fit cover crops into corn and soybean phases of the rotation? and (3) what type of conservation tillage should I use on tiled and non-tiled fields?

Farmers are also very interested in a whole system approach. This is why there are so many different specialists and two universities involved in research and extension associated with the SHARE Farm (see figure below). It has led to interactions amongst specialists to determine the best management approaches to recommend to farmers.



How do you provide input? Soil Health Extension holds various field days, field tours, workshops and café talks. These are all opportunities to give feedback along with direct communication with any of the researchers or specialists involved with the SHARE Farm project. See [ndsu.edu/soilhealth](http://ndsu.edu/soilhealth) for more info on programs.