

# Vote Yes on SB 2342



## WHY DOES SOIL HEALTH MATTER?



### Require Less Fertilizer

The abundant life in healthy soils provides much of the nutritional needs for crops. Fungi and bacteria have co-evolved with plants to provide essential nutrients in exchange for carbon (in the form of sugars).

### Protect Water Quality



Healthy soils retain more of the fertilizers applied. This reduces downstream pollution, which can lead to dangerous algae blooms, contaminate drinking water, and other biological disruptions.

### HEALTHY SOILS



### Hold More Water

Healthy soils act as a sponge, providing reserves of water when precipitation is low and absorbing excess during high precipitation events. Healthy soils improve surface stability during wet periods.<sup>1</sup>



### Increase Farm Profits

A 2017 study by the National Association of Conservation Districts found that using cover crops and no-till can result in an economic return of over \$100 per acre.<sup>2</sup>



### Result In Better, Healthier Crops

Healthy soils provide a steady supply of nutrients and moisture. Healthy plants are able to photosynthesize more effectively and produce the necessary metabolites that defend them from disease and pests. In short, healthy soils grow healthier plants, which reduce the need for pesticide and fertilizer use.



### Increase Carbon Storage

Healthy soils can increase carbon storage by one to three tons per acre per year.<sup>3</sup>

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## ELEMENTS OF SB 2342

- Builds on existing ND Soil Conservation infrastructure
- Coordinates healthy soils principles statewide
- Establishes a statewide network of champions to promote soil health stewardship
- Adds healthy soil education to soil conservation districts
- Provide statewide healthy soil grants and financial incentive programs
- Provides technical assistance to achieve healthy soil goals

### FUN FACT:

A 1% increase in soil organic matter on just one acre enables the land to hold an additional 20,000 gallons of water.<sup>5</sup>



### DID YOU KNOW?

North Dakota is losing on average 3-5 tons/acre of soil per year on cultivated lands<sup>4</sup>

North Dakota's Healthy Soils Act would create a new subsection under NDCC 4.1-20 Soil Conservation. SB 2342 adds the principle of soil restoration to soil conservation. It creates a statewide infrastructure to connect soil experts, conservation groups, producer groups, and individuals championing the principles of soil health.

Agriculture is one of North Dakota's most important industries. The amount of soil we are losing is not sustainable. The principles of healthy soils connect the dots between healthy soil, healthy air, healthy water, food security, carbon sequestration, and local sustainable economic prosperity.

1 USDA Natural Resources and Conservation Service. 2019. South Dakota. *No-till farming reaches milestone in South Dakota*.

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/sd/newroom/releases/?cid=nrcseprd1517222>

2 National Assoc. of Conservation Districts, Soil Health Research, <http://www.nacdn.org/soil-health-research>

3 Machmuler, M. et al. Emerging land use practices rapidly increase soil organic matter. *Nature Comm.*, 6:6995 (2015). <https://go.nature.com/2G087FM>

4 <https://www.ndsu.edu/soilhealth/wp-content/uploads/2014/09/reduce-wind-erosion-for-productivity-2014.pdf>

5 NRDC. *Climate-Ready Soil: How Cover Crops Can Make Farms More Resilient to Extreme Weather Risks*.

<https://www.nrdc.org/sites/default/files/climate-ready-soil-appendix.pdf>