

# BUILDING CLIMATE RESILIENCY: INVESTING IN ON-FARM RESILIENCY EMPOWERS FARMERS AND LANDOWNERS

Investing in soil health on your farm through implementation of conservation practices helps build your resiliency in the face of our changing climate. These investments can range from reducing tillage to retiring marginal land in perennials. Not only are there on-farm benefits to investing in soil health, there are improvements to watersheds, wildlife, and the environment.

Conservation practices that improve soil health and sequester carbon are:

- > No-till,
- > Conservation tillage (strip-till, vertical till),
- > Prairie and grasslands/land retirement,
- > Prairie strips and buffers,
- > Wetlands,
- > Forests and forest buffers, and
- > Extended rotation.



## On-farm benefits to investing in resiliency

- Reduced weed pressure,
- Reduced need for nutrients,
- Increased biological activity,
- Increased soil organic matter,
- Increased water holding capacity,
- Increased soil porosity,
- Improved soil structure,
- Improved aggregate stability, and
- Decreased soil erosion.



Each 1 percent increase in soil organic matter helps soil hold 20,000 gallons more water per acre.<sup>1</sup>

When farms are more resilient, we all benefit.

- > Water quality in your local watershed improves.
  - > Healthy watersheds benefit wildlife and recreators, and protects the watershed from frequent flooding.
- > Wildlife and pollinators benefit.
  - > Pheasant habitat,
  - > Bird and butterfly habitat,
  - > Pollinator food and habitat, and
  - > Other wildlife—including mammals.
- > Reduction in emissions.
  - > Reduced passes for no-tillage and less nutrients/pesticide applications reduce fuel—reducing CO<sub>2</sub> emissions.
  - > Reduction in use of fertilizer nitrous oxide (N<sub>2</sub>O), a greenhouse gas.



Watersheds with intact natural land cover and soil resources are capable of sequestering carbon, thereby offsetting greenhouse gas emissions.<sup>2</sup>

## Sources

1 Bryant, L. “Organic Matter Can Improve Your Soil’s Water Holding Capacity.” Natural Resources Defense Council, May 27, 2015, [nrdc.org/experts/lara-bryant/organic-matter-can-improve-your-soils-water-holding-capacity](http://nrdc.org/experts/lara-bryant/organic-matter-can-improve-your-soils-water-holding-capacity). Accessed November 2019.

2 “Benefits of Healthy Watersheds.” U.S. Environmental Protection Agency, March 5, 2018, [epa.gov/hwp/benefits-healthy-watersheds](http://epa.gov/hwp/benefits-healthy-watersheds). Accessed November 2019.

