

SOIL HEALTH

The principles and practices

CROPLAND SOIL HEALTH- WHY IS IT IMPORTANT?

To keep up with the food demands of the world, producing higher yielding crops is often the main objective in farming. This combined with less acres available to produce these crops puts a high level of stress on one of our most important natural resources—SOIL.

Managing for soil health is one of the most effective ways for farmers to increase crop productivity and profitability while improving the environment.



FACT: 1% of organic matter in the top 6” of soil would hold approximately 27,000 gallons of water per acre!

BASIC SOIL HEALTH PRINCIPLES

- Till the soil as little as possible
- Grow as many different species of plants as possible through rotations and a diverse mixture of cover crops
- Keep living plants in the soil as long as possible with crops and cover crops
- Keep the soil surface covered with residue year round

PRACTICES USED TO ADDRESS SOIL HEALTH CONCERNS

- Cover crop
- Conservation Crop Rotation
- No-till
- Strip till
- Nutrient Management
- Pest Management

COVER CROP OPTIONS

Small Grain in Rotation

- Typical Scenario: Improve organic matter, Scavenge N,
Improve compaction issues
- Seed Mix: 1.5 bu/ac Cereal Rye, 6 lbs/ac oilseed radish
- Seed Method: Drill seed using no-till drill immediately after
small grain harvest
Follow above for corn or soybeans
- Termination: Tillage or herbicide at or before spring planting
- Considerations: Plant soon after harvest for best radish benefits



Full Season/Prevented Planting

- Typical Scenario: Reduce soil erosion, Utilize nutrients,
Increase plant diversity
- Seed Mix: Cocktail mix of oilseed radish, field pea, rye,
oat, clover species
- Seed Method: Broadcast or drill
- Termination: Tillage or herbicide at or before spring
planting
- Considerations: Check crop insurance regulations

CROP ROTATION OPTIONS:

Establish a rotation that provides high residue and/or perennial crop to reduce erosion, improve soil quality, increase diversity and break pest cycles. *High residue crops: barley, buckwheat, rye, oats, sorghum, wheat, triticale, flax*

Grazing Cover Crops (Supplemental Forage)

- ☑ Leave adequate biomass after grazing to meet alternative cover crop objectives
- ☑ Extend the grazing season in the fall by grazing cover crops
- ☑ Graze cover crops early in spring for early season grazing
- ☑ Cover crop must be seeded early to ensure adequate growth before grazing
- ☑ Increase seeding rate when grazing is main objective
- ☑ Check herbicide restrictions from previous crop before grazing forage
- ☑ When grazing cover crops keep livestock health in mind—evaluate forage for potential livestock health concerns