

Do you have a problem with:

- Soil crusting
- Cloddy soil
- Water stress (too wet or too dry) for crops
- Soil erosion
- Soil compaction
- Low yields

A crop rotation can help to manage your soil and fertility, reduce erosion, improve your soil's health, and increase nutrients available for crops.

Benefits of Crop Rotations:

- Improve crop yields
- Improve the workability of the soil
- Reduce soil crusting
- Increase water available for plants
- Reduce erosion and sedimentation
- Recycle plant nutrients in the soil
- Provide better distribution of labor during the crop season by using different crops, planting dates, and harvest periods
- Reduce fertilizer & insecticide inputs
- More money in your pocket



Rotations need to include crops that provide good cover and root development to control erosion and improve soil health.



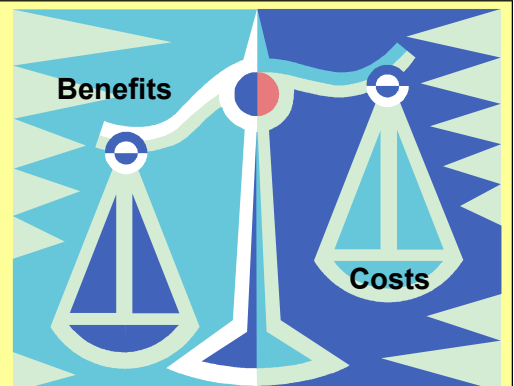
Rotations that include high residue crops build healthy soils and improve production.

How much does it cost?

There is little to no cost to implement this practice.

Financial Benefits:

- Reduced fertilizer inputs
- Reduced pesticide inputs



Rotations for Soil Fertility

Crop Rotation Planning Considerations:

- Identify soil erosion, nutrient, and soil health concerns.
- Soil test (every 1-3 years) for pH, organic matter, and nutrients. Use soil test recommendations to adjust pH and nutrient levels for optimum crop yields and quality.
- Determine nutrient (fertilizer, manure, or composts) needs.
- Choose the crops/varieties to meet the erosion, soil health, nutrient concerns, and other producer objectives.
- Evaluate and modify the crop sequence based on the identified concerns.
- Attend training needed for crop, soil, and pest scouting.
- Evaluate cover crop needs.
- Clean field equipment when moving from one field to another. Wash with water and/or physically remove the soil and plant residue from the equipment.

Other Benefits:

- Reduces soil loss
- Reduces nutrient and pesticide contamination of streams and well water
- Improves crop emergence, growth, and health
- Reduces financial risk by using multiple crops
- Improves air quality

Practice Application:

- Using a map, lay out a rotation for the crops by year for the length of the rotation.
- Plan the rotation for the operation to establish a nearly equal acreage of each crop each year.

| | |
|--|----------------------|
| Corn Grain - Yr 1 Oats - Yr 2 Hay - Yr 3 Hay - Yr 4 | Field 1 Crops 9.3 |
| Oats - Yr 1 Hay - Yr 2 Hay - Yr 3 Corn Grain - Yr 4 | Field 2 Crops 9.7 |
| Hay - Yr 1 Hay - Yr 2 Corn Grain - Yr 3 Oats - Yr 4 | Field 3 Crops 9.7 |
| Farm HQ's 3.2 Hay - Yr 1 Corn Grain - Yr 2 Oats - Yr 3 Hay - Yr 4 | Field 4 Crops 7.5 |

Example 4 year Crop Rotation:

Corn – Oats – Hay – Hay

Crop Rotation Maintenance:

- Periodic soil testing (initially every 1-3 years, then later at 3-5 years)
- Crop and pest scouting
- Annually, evaluate cropping sequence for income needs and soil concerns
- Calibrate sprayers, planters, and fertilizer applicators to:
 - apply the recommended rates
 - establish uniform distributions
 - provide uniform seeding depths

Rotations for Soil Fertility



A good rotation begins with planning.



Rotations involving hay or cover crops improve soil



Multiple crops in a rotation break weed, insect, and disease cycles.



Rotations produce healthy and productive crops.



Rotations are planned to produce residue cover for erosion control and moisture conservation.



Rotations with hay or cover crops can reduce fertilizer and pesticide inputs.

SMALL SCALE SOLUTIONS FOR YOUR FARM

Technical Help Is Available

Your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can assist you with developing rotations for soil fertility. They can also help you develop a Conservation Plan to solve other problems you have identified on your farm.

There is no charge for our assistance. Simply call your local office at the number listed below to set up an appointment and we will come to your farm.

You may also be eligible to receive financial assistance, through a state or federal program. Your NRCS office will explain any programs that are available so you can make the best decision for your operation. All NRCS programs and services are voluntary.



Helping People Help the Land

For More Information Contact the:

Natural Resources Conservation Service

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Ave., SW, Washington, D.C., 20250-9410, or call (202) 720-5964 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity provider and employer.