

Do you have problems with:

- Low yields due to weeds, insects, or plant diseases
- Low crop quality due to weeds, insects, or disease
- High pesticide costs
- Seasonal labor shortages

A crop rotation designed to grow different crops can reduce weeds, insect, and disease pressures.



Slug feeding damage on corn plants.

Benefits of crop rotations for pest management:

- Improve crop yields
- Reduce or eliminate the need for pesticides
- Provide higher prices for better quality crops
- Provide higher farm income over the length of the rotation
- Provide better distribution of labor during the crop season by using different crops, planting dates, and harvest periods
- Improve soil and water quality



A rotation with multiple crops is one of the best methods to reduce weeds, insects and diseases on your crops.

Costs?

- Time for pest scout training (4-8 hours/year)
- Pest and crop scouting time (1-3 hours/week)
- Crops with lower market value may be used in some years of the rotation; however, the income may be higher over the life of the rotation
- Generally no capital outlay required



Scouting for weeds, insects, and diseases is critical for management.

Rotations for Pest Management

Crop Rotation Planning Considerations for Pest Management:

- Identify the specific weed, insect and disease problems for each crop and field.
- Choose crops with different planting and harvest dates to help break pest cycles.
- Evaluate and modify the sequence of the present crops to address the pest problems. For example, plant potatoes after sweet corn and sweet corn after cabbage to reduce weed, insect, and diseases.
- If needed, choose additional crops and a rotation order to address the pest problems and market needs.
- Select resistant and tolerant crop varieties. For example, some varieties of muskmelon and cucumbers are resistant to powdery mildew.
- Determine nutrient (fertilizer, manure, or compost) needs.
- Use soil test recommendations to adjust pH and nutrient levels for optimum crop yields and quality.



Example 4 year rotation for 4 fields

Crop Rotation Maintenance:

- Annually, evaluate cropping sequence for income needs and pest pressures
- Crop and pest scouting
- Periodic soil testing
- Calibrate sprayers, planters, and fertilizer applicators to:
 - Apply recommended rates.
 - Establish uniform distributions.
 - Provide uniform seeding depths
- Clean field equipment when moving from one field to another - wash with water or disinfectant and physically remove the soil/plant residue from the equipment

Other Benefits:

- Improved crop emergence, growth and health
- Reduced soil erosion
- Reduced nutrient and pesticide contamination of streams and well water
- Reduced harmful effects of pesticides to wildlife and beneficial insects
- Reduced pesticide risk to humans
- Reduced financial risk by using multiple crops
- Improved air quality

Rotations for Pest Management



Grass filter strips and field borders can serve as habitat for beneficial insects.



Different crops allow for different planting and harvest periods to break pest cycles and distribute labor.



Tillage performed during different periods of the year helps to control weeds.



Scouting for weeds, insects, and crop disease is a critical part of pest management.



Timely hay harvests can reduce insect damage and reduce the need for applying insecticides.



Rotations for pest management provide healthy and productive crops with less input.

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 a rotation for pest management. 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

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