

Conservation Crop Rotation...growing crops in a recurring sequence on the same field



Soybeans planted after corn, photo courtesy USDA - Natural Resources Conservation Service

Purposes

Conservation crop rotation can be useful in achieving the following goals:

- ☑ **Reducing sheet and rill erosion**
- ☑ **Reducing soil erosion from wind**
- ☑ **Maintaining or improving soil organic matter content**
- ☑ **Managing the balance of plant nutrients**
- ☑ **Improving water use efficiency**
- ☑ **Managing saline seeps**
- ☑ **Managing plant pests (weeds, insects, and diseases)**
- ☑ **Providing food for domestic livestock**
- ☑ **Providing food and cover for wildlife**

Benefits

The benefits that crop rotations have on the land vary with the soil type, crops produced, farming operations, and how the crop residue is managed. Crop rotations can return more organic matter to the soil to improve or maintain tilth, reduce pest problems, effectively control soil erosion, and reduce fertilizer needs. In addition, crop rotations help break insect, disease and weed cycles.

Rotations can also add diversity to farm operations, improve crop yields, increase profit, and reduce economic and environmental risks.

Applications

This practice applies to all land where crops are grown, except permanent hayland. The rotation sequence may involve growing high-residue producing crops such as corn or wheat in rotation with low-residue producing crops such as vegetables or soybeans. The rotation may also involve growing forage crops in rotation with various field crops.

Conservation crop rotation is a cost-effective practice that often forms the basis for other conservation practices. Crop rotations work best in combination with practices such as residue management, contouring, stripcropping, diversions, terraces and grassed waterways.

Design and Installation

The main design and installation considerations for conservation crop rotation include selecting the type of crops and the schedule of rotation. Crops selected should be suitable to the climatic region, soil resources, and goals of the producer. Crops should be grown in a planned, recurring sequence (rotation) designed to achieve the intended purpose.

Soil testing prior to planting is needed to ensure adequate soil fertility. Equipment needed for this practice is dependent on the tillage method and the crop selection.

Maintenance

Crops should be planted according to the planned crop rotation. However, circumstances including weather conditions, unexpected

herbicide carryover, and marketing considerations may require a change to the scheduled crop rotation. In such cases, substituted crops must have similar properties to the planned crop and meet the same criteria for all of the resource concerns identified.

Other maintenance goals for crop rotation include monitoring and maintaining soil fertility and effectively managing crop residues to reduce erosion by wind and/or water.

Relative Cost

Installation low ● ○ ○ ○ ○ high

Maintenance low ● ○ ○ ○ ○ high

For Additional Information...

Visit the Indiana NRCS office online at <http://www.in.nrcs.usda.gov/>, see the Indiana Job Sheet or the Field Office Technical Guide (FOTG) standard for (327) Conservation Crop Rotation, or contact your local USDA-NRCS office

Local USDA-NRCS contact information