



Conservation Crop Rotation

Iowa Job Sheet

Natural Resources Conservation Service (NRCS)
Des Moines, Iowa

Iowa Conservation Practice 328
May 2015

Definition

Growing different crops in a recurring sequence on the same piece of land. This may include alternating row crop production from a high residue producing crop, such as corn, to a low residue producing crop like soybeans. It may also involve rotation to a small grain or grass-legume meadow.

Purpose

This practice is applied to support one or more of the following purposes:

- » Reduce sheet, rill and wind erosion.
- » Maintain or improve soil health, and increase organic matter content.
- » Reduce water quality degradation due to excess nutrients.
- » Improve soil moisture efficiency.
- » Reduce plant pest pressures.
- » Provide feed and forage for domestic livestock.
- » Provide food and cover habitat for wildlife, including pollinator forage, and nesting.

Crop Rotation Requirements

To reach the planned level of erosion reduction or Soil Conditioning Index (SCI), you must follow the crop sequence shown in the “Conservation System Summary” in your conservation plan.

Applying the Practice

This practice is considered applied when the most conserving crop has been planted at least once in each specified field, or conservation treatment unit (ctu), or it is clear the specified crop ratio is currently in place for all affected fields or treatment units. The “most conserving”



Corn



Soybeans



Oats



Alfalfa

crop is the crop with the lowest overall erosion potential in the specified crop rotation.

Other Considerations

In general, crops can be categorized into high and low residue producing groups. The high residue producing crops are considered more conserving because they provide better protection to the land than the low residue producing crops. Knowing which kind of crop you are growing can be useful in planning any crop substitutions.

Common Iowa crops are listed below, by category:

High Residue Crops

- corn (grain)
- corn (grain and cobs)
- sorghum (grain)
- small grain (winter or spring)
- forages (grass or legume)
- all crops with winter cover crop

Low Residue Crops

- corn (silage)
- corn (grain and residue)
- sorghum (silage)
- soybeans
- sunflower
- root crops
- vegetable crops

Maintenance

After the most conserving crop is established, it will continue to be rotated with the other crops in subsequent years.

Adjusting the rotation

Weather conditions, unexpected herbicide carryover, and marketing considerations may affect year to year cropping decisions which may require a change in your scheduled rotation. Simple adjustments to rotations can often be made by following these guidelines:

- » Small grains and meadow can always be used to replace any row crop or low residue crop.

- » Corn (grain) can always be used to replace soybeans or any other low residue crop in the rotation.
- » For crop rotations which include hay (meadow), the rotation can be lengthened by maintaining the existing hay stand for additional years.
- » Any crop substitution which is outside of those identified in this job sheet should be evaluated to ensure sufficient quantities of biomass to reduce erosion to acceptable soil loss levels is used. Contact your local NRCS office prior to planting the crop.

Conservation Crop Rotation - Job Sheet

Rotation Schedule and Documentation

Name _____

Farm #	Tract #
Field(s):	Rotation Years:
Designed by:	Approved By:
Date:	Signature:
	Date:

Purpose (check all that apply)

<input type="checkbox"/> Reduce soil erosion from wind and water	<input type="checkbox"/> Manage plant pests (weeds, insects, and diseases)
<input type="checkbox"/> Maintain or improve soil organic matter content	<input type="checkbox"/> Provide food for domestic livestock
<input type="checkbox"/> Manage the balance of plant nutrients	<input type="checkbox"/> Provide food and cover for wildlife, including pollinators
<input type="checkbox"/> Conserve water	<input type="checkbox"/> Reduce water quality degradation due to excess nutrients

Field	Rotation Year	Crop (s)	Additional notes: Seeding date and rate, Tillage, Soil Amendments, etc.
	1		
	2		
	3		
	4		
	5		
	6		

General Specifications

- Crops shall be grown in a planned recurring rotation, unless a suitable substitution crop is used.
- Use crops and varieties adapted for your soil and region.
- Cover and green manure crops may be grazed as long as enough biomass remains for the intended purpose.
- A conservation crop rotation may include crops planted for cover or nutrient enhancement or weed control.

Conservation Crop Rotation (328)

Field	Rotation Year	Crop (s)	Additional notes: Seeding date and rate, Tillage, Soil Amendments, etc.
	1		
	2		
	3		
	4		
	5		
	6		

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