

Cover Crops

Iowa Job Sheet

Natural Resources Conservation Service (NRCS)
Des Moines, Iowa

Iowa Conservation Practice 340
October 2009

Definition

Cover crops are planted in the late summer or fall around harvest and before spring planting of the following year's crops. Common cover crops used in Iowa include winter hardy plants like rye and wheat. Other less common, but also effective cover crops include oats, spring wheat, hairy vetch, red clover, sweet clover, turnips, rapeseed, radishes, and triticale.

Purpose

Cover crops reduce soil erosion, limit nitrogen leaching, suppress weeds, increase soil organic matter and improve overall soil quality. Small grain cover crops increase surface cover, anchor corn and soybean residues, increase water infiltration and reduce erosion.

In addition to the environmental and soil quality benefits, several cover crops may be used for grazing forage for livestock and wildlife.

Conditions Where Practice Applies

Cover crops may be used on all lands needing vegetative cover for natural resource protection and improvement. They are an excellent tool for helping to improve soil quality.

General Specifications

Seeding: Establish cover crops according to the recommended seeding rates, dates, and methods provided by NRCS. For prepared seedbeds, crops should be seeded at the proper depth for fast emergence— .25 to .5 inches deep for legumes and grasses and up to 1.5 inches deep for cereal grains.

If seeding the cover crop prior to harvest, broadcast the seed by a method that allows for good coverage and prevents damaging the standing crop. No seedbed preparation is necessary, and seeding dates are prior to soybean leaf drop.

If seeding the cover crop after harvest, seed may be no-till or broadcast seeded into existing residue cover. To ensure good seed-to-soil contact, be sure to roll or cultipack the area immediately after broadcast seeding on a prepared seedbed.

Inoculate legume seed with species-specific Rhizobia bacteria before seeding. Control weeds by mowing or herbicide application and control pests as needed to ensure cover crop development.

Cover Crop Termination: Cover crops can be terminated by harvest, crimpers, frost, mowing, tillage and herbicides. Make sure any herbicides are compatible with the following crop. Follow all Federal, State and local laws and regulations as well as manufacture's label with all herbicides. Do not burn cover crop residue.

Maintenance

Cover crops should be terminated as late as feasible to maximize plant growth and residual nutrient accumulation, while allowing sufficient time for the cover crop to decompose, release nutrients, and recharge soil moisture.

Acceptable benefits, for most purposes, are usually accomplished when the combined canopy and surface cover is at least 60 percent and the above ground dry biomass production is at least 2,700 lb./Acre.



Young soybean plants emerge through a rye cover crop that was burned down using herbicide.

Cover Crops (340)

Date:

Prepared by:

Owner/Client:

Farm #:

Tract #:

Acres:

Definition:

Grasses, legumes, forbs or other herbaceous plants established for seasonal cover and conservation.

Application:

This practice applies on all lands requiring vegetative cover for natural resource protection.

Purpose (mark all that apply)

- Reduce erosion from wind and water
- Increase soil organic matter
- Manage excess nutrients in the soil
- Promote biological nitrogen fixation
- Increase biodiversity
- Suppress weeds
- Provide supplemental forage
- Manage soil moisture

Seeding and Management: Fill in the following table with the appropriate cover crop information for each field.

Field	Total Acres	Species	Seeding Rate (lbs/ac PLS*)	Seeding date	Seeding method	Termination date or stage	Termination method

*To figure Pure Live Seed (PLS) rates, multiply the percent purity by the percent germination. Divide the seeding rate by the percent PLS to find the bulk seed needed per acre.

For example: 98% purity X 60% germination = 0.588% PLS
 10 lbs/acre X 0.588% PLS = 17 lbs/acre

Soil Amendments, based on recent soil test (less than 4 years old) : Apply soil amendments prior to seedbed preparation or before seeding if a no-till drill is used.

Field	N fertilizer needed (lbs/acre)	K ₂ O fertilizer needed (lbs/acre)	P ₂ O ₅ fertilizer needed (lbs/acre)	Lime needed (tons/acre)

Additional Specifications:

Seeding Completion Certification:

Producer Signature	Date
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