

Cover Crop Job Sheet (340) Organic

Natural Resources Conservation Service (NRCS)

February 2017

Producer Name: _____

Date: _____

INFORMATION ON THIS JOB SHEET IS CONSIDERED TO BE PART OF THE CONTRACT AND/OR CONSERVATION PLAN.

Purpose

This job sheet will be used to assist organic producers to establish green manure cover crops for the explicit purpose of weed suppression and boosting the soil ecosystem. These organic cover crops provide a flush of degradable plant material that will have an alleopathic and smothering effect on weeds while also serving to restore the soil ecosystem to a more sustainable and productive level as soil organic matter levels increase.

Conditions Where Practice Applies

Practice applies on all lands where soil ecosystem improvements are desired and where it is not feasible to implement a complete no-till cropping system. This practice is intended to assist organic producers with increasing soil organic matter levels.

Establishment Specifications

1. Species and seeding rates will be according to **Table 1.**

One of two seeding mixture options are recommended for high biomass green manure cover crops:

A.) Summer Green Manure Cover Crop Mixture: Bell Beans (35 lbs/ac), Magnus Peas (20 lbs/ac), Hairy Vetch (25 lbs/ac), and Oats or Cereal Rye (10 lbs/ac). (*Exclusively a summer annual cover crop*) For more information please see the “Kentucky Cover Crop Guidance” document, Table 2, Option 3.



- B.) Winter Green Manure Cover Crop Mixture:** Cereal Rye (40 lbs/ac), Austrian Winter Peas (30 lbs/ac), Hairy Vetch (10 lbs/ac), and Crimson Clover (10 lbs/ac). (*Exclusively a winter annual cover crop.*) For more information please see the “Kentucky Cover Crop Guidance” document, Table 1, ID # 22.

C.) Other summer annual crops can be utilized depending on the crop they are following.

See the “Kentucky Cover Crop Guidance” document attached to the Cover Crop 340 Standard located in the eFOTG, Section IV for more information.

2. Seed will conform to minimum state standards for purity, germination and other features. Commercially marketed seed in Kentucky meets these requirements. **Organic producers should ensure the use of organic seed when available. Contact the State Organic Certifier for more information.**

Seeding and Seedbed Preparation

No-till establishment is the preferred method since soil disturbance is minimal, thus reducing weed competition and the risk of soil erosion. Conventional seeding may be used for

establishment on areas that have been recently cropped, where weedy competition will be lessened and where the risk of soil erosion is minimal.

Important: If soil is wet avoid no-till planting or cultipacking planted seedbeds. This may result in placing the seed too deep in the ground.

Seeding Dates

The preferred seeding dates for **summer annual green manure cover crop mixtures for all of Kentucky is March 1st through April 15th.**

The preferred seeding dates for **winter annual green manure cover crop mixtures are August 15th through October 1st. Earlier seeding dates are optimal.**

No-Till Seeding

Care should be exercised to insure appropriate cover crop mixture seeding rates and seeding depths are obtained when using no-till drills or planters.

Aerial Seeding

No aerial seeding will be performed when planting summer or winter green manure cover crops.

Conventional Seeding

The importance of a dry firm seedbed cannot be over emphasized to ensure proper planting depth.

Seedbeds may be prepared by disking.

Once seedbed is prepared, broadcast seed, cultipack, harrow or roll the seeded area only once to ensure good seed to soil contact and the proper seeding depth.

Operation and Maintenance

Cover crop growth should be terminated by mowing prior to incorporation. Winter annual green manure cereal rye cover crop mixtures should not be terminated before growth stage 10 of the Purdue University Extension Service "Small Grain Growth Chart (Insert 1).

If landowners desire crop insurance, the latest cover crops can be terminated is at or within 5 days after planting of cash crop but before cash crop emergence to be in compliance with Risk Management Agency insurance guidelines.

It is suggested to allow cover crop to grow to the day of planting cash crop at which time cover crop should be terminated. Nitrogen fixing cover crops allowed to grow until April 15th or later West of Interstate 65 and April 30th or later East of Interstate 65 can fix substantial quantities of nitrogen for cash crops resulting in significant reductions in commercial fertilizer usage.

The cover crop CANNOT be harvested for seed, silage or hay. All crop residues must be left in the field and incorporated. The green manure crop should be disked or plowed into the soil. If a winter cash crop is not planted in the fall after a summer green manure crop, a winter cereal rye cover crop must be seeded to take up the large amounts of nitrogen fixed by the legumes in the summer green manure cover crop.

Insert 1: Purdue University Extension Service

Small Grains Growth Stages

Stage 1

3-Leaf Stage: The first two leaves are completely developed, and the middle, or third, leaf is partially developed.

Stage 2

The tillers (sometimes called side shoots) are beginning to form.

Stage 3

Tillers have formed and are in their primary growth stage.

Stage 4

Tillers have ended their growth and the leaf sheaths (the lower part of the leaf which surrounds the stem) begin to form.

Stage 5

Leaf sheaths are strongly erected and the stems formed start to grow in length.

Stage 6

One-Joint Stage: The first joint develops near the soil surface and can be felt inside the stem. The joints, or nodes, produce a swelled appearance in the lower portion of the stem.

Stage 7

Two-Joint Stage: The second joint has formed, marking the beginning of the reproductive phase.

Stage 8

Appearance of the last leaf.

Stage 9

Ligule Stage: The ligule (a membrane at the junction of the leaf sheath and leaf base) of the last leaf is fully developed, and the leaf sheath is swollen at the level of the capsuled head of grain.

Stage 10 (Organic Cover Crop Mixtures Listed In Job Sheet Should Not Be Terminated Until They Reach Stage 10 Or After)

"Boot" Stage: At this stage, the immature head of grain presses the rolled leaf sheath apart and becomes visible.

Stage 10.1

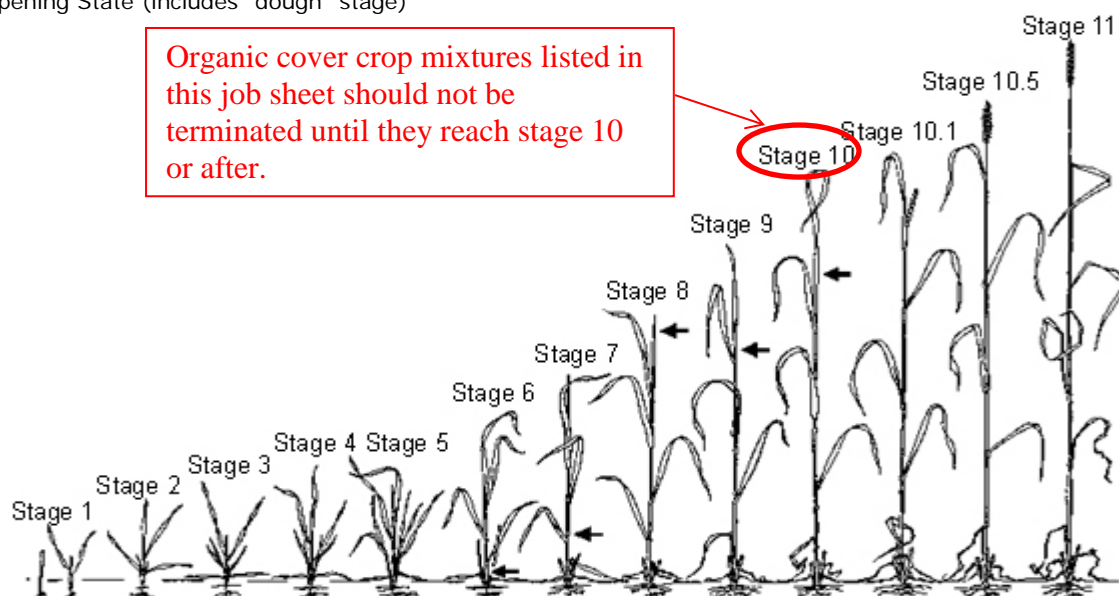
Head Emergence Stage

Stage 10.5

Flowering Stage

Stage 11

Ripening State (includes "dough" stage)



Producer Name: _____

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Table 1. Species and seeding rates will be according to the information provided in the table below. If additional room is needed, make copies of this table and attach it to the back of the job sheet.

Tract Number

Field No. (s)	Acres	Cover Crop Mixture Species*	Lbs./Ac Seed	Total Lbs. Seed	Seeding Method (No-Till or Conventional)	Seeding Date

Common Organic Cover Crops*

Summer Annual Green Manure Cover Crop:
Seeding Dates: **March 1st through April 15th for all of Kentucky**

Bell Beans- 35 lbs/ac Magnus
Peas- 20 lbs/ac Hairy Vetch-
25 lbs/ac Oats or Cereal Rye-
10 lbs/ac

Winter Annual Green Manure Cover Crop:
Seeding Dates: **August 15th through October 1st for all of Kentucky**

Cereal Rye- 40 lbs/ac
Winter Peas- 30 lbs/ac
Hairy Vetch- 10 lbs/ac
Crimson Clover- 10 lbs/ac

Seeding Rates and Dates were interpreted from University of Kentucky AGR-18 Pub. and SARE Managing Cover Crops Profitably Manual

*See “Kentucky Cover Crop Guidance” document attached to the Cover Crop 340 Standard (located in the eFOTG, section IV) for other organic cover crop options.

NOTE:

- Early September seeding dates are preferred for winter annual green manure cover crops.
- Organic producers should contact the State Organic Certifier to ensure the use of appropriate organic seed and chemicals.

Certifications

Job Sheet	Prepared by:	Title:	Date:
	Approved by:	Title:	Date:
Installation	Meets NRCS standards and specifications.		
	Certification by:	Title:	Date:
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