

Natural Resources Conservation Service
Conservation Practice Standard

COVER AND GREEN MANURE CROP
(Ac.)
CODE 340

DEFINITION

A crop of close growing legumes and/or small grains grown primarily for seasonal protection from soil erosion and soil improvement. Cover and green manure crops are usually grown for one (1) year or less, except where there is permanent cover as in orchards.

PURPOSE

To control soil erosion, add organic matter to the soil and improve water infiltration, aeration and soil tilth. Cover and green manure crops may also provide food and cover for selected wildlife species.

CONDITIONS WHERE PRACTICE APPLIES

On cropland, certain wildlife and recreation areas, orchards, vineyards and small fruit tree areas.

CRITERIA

Seedbed preparation. Seedbeds may be prepared conventionally by disking or chiseling

once or twice, smoothing with a harrow or field cultivated, then planting, either drilled or broad cast. Cover crops may also be no-till seeded or "roughed in" by light disking than harrowing. Cover crops may also be aerial seeded at "leaf drop" of the presently growing crop.

Lime and fertilizer. Apply lime and fertilizer according to the nutrient management standard and specification. Applying lime and fertilizer according to soil test recommendations is generally the best option. If fertilizer rates are not listed in the nutrient management standard use fertilizer rate for the specific cover crop recommended by the Cooperative Extension Service.

Seeding rates dates and mixtures. Use the following table to select plant species, seeding rate, dates and planting depth. Use lower seeding rates when drilling, mid-range seeding rates when planting conventionally and the higher seeding rates when "roughing in" or aerial seeding.

| Plant Species ^{1/} | Seeding Rate Lbs. Per Acre | Planting Dates | Planting Depth (in) |
|-----------------------------|----------------------------|----------------|---------------------|
| Wheat | 60-120 | Sept -Nov 15 | 1/2 - 1 |
| Rye (Cereal) | 60-120 | Sept -Nov 15 | 1/2 - 1 |
| Oats | 60-120 | Sept -Nov 15 | 1/2 - 1 |
| Ryegrass | 25-40 | Sept -Nov 15 | 1/2 - 1 |
| Vetches | 20-30 | Sept -Nov 15 | 1/2 |
| Wild Winter Peas | 20-30 | Sept -Nov 15 | 1/4 |
| Crimson Clover | 20-25 | Sept -Nov 15 | 1/4 |
| Sudangrass | 20-35 | April-June 15 | 1/2 |
| Pearl Millet | 20-35 | April-June 15 | 1/2 |
| Sorghum-Sudan Hybrid | 20-35 | April-June 15 | 1/2 |

^{1/} When grass-legume mixtures are planted, reduce the seeding for each plant specie by 25 percent. For best results seed grasses and legumes separately.

Additional criteria to improve soil organic matter, reduce soil crusting, and reduce soil erosion.

In Mississippi soil organic matter can not be significantly increased when tillage is being performed even though cover crops are used. To significantly increase soil organic matter and reduce crusting plant both cash crop and cover crop no-till. Planting legume cover crops instead of grasses will aid in soil organic matter increases. Significantly increasing organic matter is done over the long term. A return to tillage will greatly reduce soil organic matter in a very short time.

Soil erosion can be increased or decreased by planting cover crops depending on the method of planting. Destroying crop residue by conventional tillage to plant a cover crop will usually increase soil erosion, especially if tillage and planting of cover crop is done after October 15. If cover crops are to be planted to reduce soil erosion and improve organic matter, plant the cover crops no-till, aerial seeded or "rough in".

CONSIDERATIONS

- Consider selecting cover crops that have wildlife benefits.
- Consider the effects of cover crop species and seeding rates on erosion, movement of sediment, pathogen, and soluble and sediment attached substances carried by runoff.
- Consider the effects of insects and diseases as related to cover crops. Example, crimson clover is a host plant for the cotton bollworm. Early planted wheat may increase hessian fly infestation for wheat grain crops.

PLANS AND SPECIFICATIONS

Specifications for the application of cover and green manure crop will be prepared for each site or management unit according to the criteria and considerations described in this standard, and will be recorded using specification sheet, job sheets (approved by the state agronomist) or in narrative statements in the conservation plan.