

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

MULCHING

CODE 484

SPECIFICATIONS

What is mulching?

It is defined as applying plant residues or other suitable materials, produced off site, to the land surface. There are several reasons why producers and landowners might want to use mulch. They include:

- Conserving soil moisture so plants will experience less wet/dry cycling stress
- Reduce energy use associated with irrigation by reducing evaporation
- Moderate soil temperature through shading
- Provide erosion control by reducing the energy generated by raindrop impact and subsequent soil detachment
- Suppress weed growth through shading
- Facilitate the establishment of vegetative cover by holding maintaining soil moisture, reducing erosion and loss of seeds or seedlings, and/or suppressing weed growth
- Improve soil quality by adding organic matter
- Reduce airborne particulates by reducing wind erosion

When to mulch

A mulch is typically utilized to either stabilize the soil (reducing erosion) and encourage grass growth following construction activities **or** to increase moisture retention and reduce weed pressure when growing high-value crops. Although the

practice standard does an excellent job describing most of the scenarios mulch may be appropriate, this specification sheet is an attempt the focus on the two situations above. As with all conservation practices, if you need additional assistance in planning or designing please contact an area or state specialist for assistance.

Practical guidance for Louisiana - using mulch after construction activities

When applying mulch after construction activities, conservationists will almost always suggest a plant-based material (wood chips, hay, etc.) or a biodegradable material to the client. Natural or biodegradable materials are going to be the most cost-effective, may provide grass seeds to supplement any planted, will more effectively allow seed germination to occur (for permanent stabilization of the soil), may add organic matter after decomposition, and do not have to be removed at some time in the future. When applying mulch to control erosion, the national standard requires at least 70% ground cover. One thing to note, however, is that if a supporting practice like Critical Area Planting (342) is planned in conjunction with mulching, the mulch should not be applied to thick. The minimum amount of mulch required to achieve 100% coverage should not be exceeded. Utilizing hay, this comes out to:

**60 (50 lb.) square bales / acre =
approximately 70% coverage**

At this rate, seeds planted under the critical area standard will have enough sunlight to grow and the majority of soil erosion will be stopped during plant establishment. This is just guidance, however, and the conservation planner should use his/her knowledge and reference texts when creating a custom plan for mulching.

On limited construction sites, hand application of the hay may be the best alternative to control erosion. On larger construction sites, however, producers and/or landowners may choose to use hydro-seeding technology to both apply mulch and plant seeds for revegetation.

Practical guidance for Louisiana - using mulch on high-value crops

The most common mulch used on high value crops is plastic mulch. Plastic mulch will require anchoring either by soil or some sort of pins. It can either be installed by hand, or with machinery. When planning this type of mulch in a conservation plan, there are a few items to note:

- Conservationists should encourage producers to either use biodegradable plastic mulches or remove plastic mulch after the growing season(s) and dispose of the mulch properly
- Organic producers should be aware that not all plastic mulch products are acceptable under the National Organic Program (NOP) rules
- Plastic mulches may increase erosion on unmulched areas.
- Clear mulches allow profuse weed growth and may negate the benefits of soil warming. Black mulches provide effective weed control and allow adequate soil warming.

The other most common type of mulch used on high-value crops is hay (or straw) from the production of forage grasses and agronomic crops. The recommendation of 60 square bales/acre is a good starting point, but

conservationists should consider landowner objectives, abilities, equipment, and site-specific weed pressure when developing a custom plan. Although hay is typically inexpensive and easy to obtain, conservationists should consider:

- Weed seeds may be introduced with the use of hay
- It is more labor-intensive to mulch with hay than with plastic
- Hay will often tie up nitrogen during decomposition. Additional nitrogen may have to be added to offset this effect.
- Square bales are typically easier to work with than round bales, especially if the round bales are old and have partially decomposed.
- Mulch should never be placed against plant stems. This is to prevent disease and pest problems.
- Mulch may introduce other pests to the agronomic system (such as slugs) or may provide protection from freezing weather.

Guidance for using the Mulching practice standard for other scenarios, or for other common mulching material, can be found in the practice standard.