Title of the Practice: Mulching (NRCS Conservation Practice 484)

Definition: Applying plant residues or other acceptable materials produced off-site to the land surface.

Purposes: Mulches reduce soil erosion and improve soil quality, suppress weed growth, conserve soil moisture (reducing energy usage associated with additional irrigation), increase infiltration rates, decrease runoff, moderate soil temperature, facilitate the establishment of vegetative cover (e.g. grasses) and reduce airborne particulates (including dust, plant pathogens, manure, etc.). Mulches may also provide habitat for beneficial insects and provide pest suppression.

General Expectations: Mulches shall consist of evenly applied, natural and/or artificial materials that are environmentally safe, such as plant residues, wood bark or chips, gravel, plastic, fabric. Application of mulch material cannot occur until after all growing system field operations have been completed (i.e. soil disturbance shall not take place after mulches have been applied). Depending on the purpose, mulches may need to be anchored to the soil surface (e.g. row covers). Manufactured materials should be applied according to manufacturers’ specifications. Mulching operations shall comply with federal, state and/or local laws and regulations during the installation, operation and maintenance of the practice. Mulches applied to transitional or certified organic cropland must meet requirements of the National Organic Program (NOP) and the Organic System Plan (OSP). Mulch material shall be relatedly free of disease, pesticides, chemical, noxious weed seeds and other pests and pathogens.

Additional management expectations for specific resource concerns:

* For purposes of soil moisture conservation, mulches shall provide at least 60% surface cover. Apply prior to moisture loss.
* For purposes of soil temperature moderation, mulches shall provide at least 100% surface cover and be thick enough to last through the desirable moderating period.
* For purposes of erosion control, mulches shall provide at least 70% surface cover
* When mulching with spunbonded row covers to reduce sprinkler irrigation use for frost/freeze protection, apply materials weighing a minimum of 1.0 ounces per square yard.
* Desirable organic mulching materials have C:N ratios between 20:1 and 30:1. C:N ratios above those levels are likely to result in immobilization of soil N. Materials with C:N below that range may decompose more quickly than desirable (released nutrients may be moved to surface or ground water).
* Full coverage occurs when both row middles and areas surrounding crop plants are mulched to 100% cover.

General practice recommendations: Mulch materials, including compost, may have a high water holding capacity and/or high impermeability to water and adversely affect water needs of plants. Similarly, fine textured mulches may allow less oxygen penetration than coarser materials, especially when more than two inches are applied. IRT plastic mulches are desirable as they provide the greatest warming potential while controlling weed growth. Impermeable (e.g. plastic) mulches may increase erosion by concentrating flow onto non-mulched areas. Consider potential toxic allelopathic effects of mulches (e.g. black walnut leaf mulch). In some instances, mulching close to plant stems and crowns may cause disease and insect problems. Deep mulch provides nesting areas and habitat for ground-burrowing rodents.

Operation and Maintenance: Inspect mulched areas regularly and reinstall/repair as needed. Do not compromise intended purposes through the operation of farm equipment. Removal/disposal or incorporation of mulch materials shall be consistent with the intended purpose, local and site conditions and requirements of the NOP and the OSP. Be vigilant that mulch materials do not catch fire. Evaluate results from mulching practices and adjust management as needed.

Practice Financing (2014):

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| Practice | Component | Unit | Payment Rate NC/SC |
| Mulching | Natural material: Full coverage | Acre | $388.62/315 |
| Mulching | Natural material: Full coverage HU\* | Acre | $468.34/378 |
| Mulching\*\* | Natural material: Partial coverage  | Acre | $245.64 |
| Mulching\*\* | Natural material: Partial coverage HU | Acre | $294.77 |
| Mulching | Erosion control blanket | Square foot | $0.12/0.15 |
| Mulching | Erosion control blanket HU | Square foot | $0.14/0.18 |
| Mulching | Synthetic material | Square foot/acre | $0.05/1253 |
| Mulching | Synthetic material HU | Square foot/acre | $0.05/1504 |

\* HU = Historically Underserved and Beginning Farmer Rates

\*\*NC only