

STANDARD

MULCHING (Acre)

Definition

Applying plant residues or other suitable materials not produced on the site to the soil surface.

Purpose

To conserve moisture, prevent surface compaction or crusting, reduce runoff and erosion, improve water quality, control weeds, and help establish plant cover.

Conditions Where Practice Applies

On soils subject to erosion on which low-residue producing crops, such as nursery stock and small fruits are grown, on critical areas, and on soils that have a low infiltration rate.

Planning Considerations for Water Quantity and Quality

QUANTITY

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, and transpiration.
2. Variability of the practice's effects caused by seasonal weather variations.
3. Effects of increased cover on soil moisture.
4. Potential for changes in plant growth and transpiration because of changes in the soil water volume.

QUALITY

1. Effects on erosion and the movement of sediment and soluble and sediment-attached substances carried by runoff.
2. Effects on the visual quality of downstream water resources.

Specifications

1. Mulching materials will be distributed uniformly over the area to be mulched.

2. Materials and rates of application. (These will vary by land use, crops or trees grown, and for each of the purposes enumerated on page 1).
 - a. Dry straw or hay - 3 to 6 tons per acre for weed control; 1 1/2 to 3 tons for other purposes. Straw and hay must be clean, free from mold, noxious weeds and other undesirable plants.
 - b. Sawdust, bark, or woodchips - a layer 2 inches to 6 inches thick.
 - c. Barn manure with bedding - 10 to 20 tons per acre. Use only on areas where weeds, if present, are not expected to be a major problem.
 - d. Other organic residues such as leaves, pine needles, and grass clippings.

3. Anchoring

Mulching materials subject to removal by wind or water will be anchored.*

4. Fertilizer

On cropland applications, add nitrogen in the following quantities to compensate for expected nitrogen deficiencies as a result of mulching (this is in addition to the nitrogen supplied for the crop):

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| Grain straw, per ton | 16 lbs. available N per acre |
| Dry sawdust, per ton | 24 lbs. available N per acre |
| Woodchips, per ton | 11 lbs. available N per acre |

*For methods of anchoring mulching materials, refer to Technical Note MA-90, Index 1.7.