

after the fire

Straw Mulching in the Aftermath of Wildfire

What is it? The application of straw as a protective cover over seeded or non-seeded areas to: reduce soil erosion and sedimentation; slow runoff and mobilization of ash and/or toxic debris; and aid in revegetation on bare soils from wildfire or from soil/slope disturbances caused by the wildfire fighting effort.

When is it used? Straw Mulching is used on bare and disturbed soil areas including slopes which need protection from winter rains and/or runoff and that have a high potential for erosion. In some circumstances, such as steep slopes and where wind is an issue, straw mulching requires some type of anchoring by crimping/”punching,” netting or other methods to prevent blowing, sliding or washing away. Straw mulching is not suitable in waterways areas, including channel banks where it could easily mobilize and present issues for downstream culverts, stream crossings, drains, etc. Straw mulch forms a loose layer when applied over the soil surface.

Where necessary straw can be covered with jute or decomposable plastic netting or “punched/tucked” into the soil with a shovel, spade or by equipment on excessively steep slopes or sites exposed to high winds. The mulch should cover all areas that are seeded. On larger areas where and where no seeding will be done it is generally not feasible to cover the entire area with straw. In these critical area mulch strips 10’ wide placed on the contour of the slope no further than 100’ apart will help protect soil, slow runoff and trap sediment.

Methods and Materials: On gentle to moderate slopes, straw mulch can be applied by hand broadcasting to a uniform depth of no more than 2 inches. On steep slopes, the straw can be spread by hand, if accessible, or can be blown onto the slope by a straw blower contractor to achieve the same degree of cover. When applied properly, approximately 30 percent of the original ground surface can be seen. The application rate per acre should be about 2 tons (or one 75 pound bale per 800 square feet). Straw should be clean rice, barley, or wheat straw.

Anchoring of straw mulch (when necessary) can be accomplished using the following methods:

Hand Punching: A spade or shovel is used to punch straw into the slope until all areas have straw standing perpendicularly to the slope and embedded at least 3-4 inches into the slope. It should be punched about 1-2 feet apart.

Roller Punching: An equipment roller equipped with straight studs not less than 6 inches long, from 4 - 6 inches wide and approximately one inch thick is rolled over the slope.

Netting: Netting is used on large, excessively steep areas which cannot be punched with a roller or by hand. Jute, wood excelsior or decomposable plastic netting is applied over a 2” layer of straw.

IMPORTANT NOTE: Mulch can be a fire hazard if installed when fire is still a danger especially in the interface of burned and unburned landscapes which happens to be where many firebreaks are located. Mulching should not be used while ground is still hot from fire and be delayed until just before the first rains.

Where to Get Help: Technical Assistance and practice details and guidelines are available from your local USDA Natural Resources Conservation Service office or your local Resource Conservation District regarding straw mulching and other erosion and sediment control treatments. www.ca.nrcs.usda.gov.