

after the fire

Wood Chips Verses Straw Mulch

Loose mulch, be it straw, wood chips, gorilla hair, gravel, etc., all help to protect the soil from the direct impact of rainfall and those 35mph rain drops. All mulches have distinct advantages but may have some disadvantages as well, it all depends on the situation and what the property owner desires both in the short term and long term from a mulching measure. Everything is site specific and you should not do what your neighbor is doing because it might not be the right thing for you (never mind that your neighbor may not know what he/she is doing).

Some of the disadvantages of wood chips as a mulch to protect bare/disturbed soil include:

1. Wood chips last longer than straw mulch and may slow down regeneration (especially if applied too deep) on some vegetation damaged areas (fire, construction, etc.) where regeneration is desired.
2. If plantings or grass are incorporated under or around wood chips then as they break down over time the wood ties up nitrogen in the soil inhibiting plant growth and that's why wood chips are the mulch of choice when you are trying to control weed growth.
3. If wood chipped areas are subject to concentrated flow, localized flooding or drainage issues then they can easily mobilize because wood floats.
4. Wood chips can be more expensive unless you work with a local tree service to acquire free. The problem with free mulch is you don't know what is in it and it can contain weed seed or invasive plant species parts (even poison oak) that might regenerate.
5. Research shows that wood chips can be a fire hazard if applied in depths greater than 3".

Some advantages include:

1. Wood chips can be produced from trees and shrubs on the property that burned or have had "dead wood" providing a resourceful use and economic cost saving.
2. Wood chips are more aesthetically pleasing to the homeowner and blend in with the landscaping with longer lasting ability to provide soil protection. They also help to retain moisture in the soil helping to conserve water by reducing the need for landscape irrigations.
3. Wood chips are easy to spread.
4. Wood chips lasts longer when placed in areas where you desire mulch year round and weed control without herbicides.

The long and short of it is if any of the disadvantages listed above are an issue then loose straw mulch (and netting or "tracking/punching" in to hold in place if applied on steep slopes) is probably all that is needed for immediate temporary protection. Straw does break down quite quickly and will not slow regeneration of plants if application is no more than two inches in depth.

On the other hand if there are no potential issues and the wood chips are able to stay in place without mobilizing in intense runoff events than I see no reason why chips could not be used. At this point it's just becomes personal preference.

If a cereal grain such as barley or sterile wheat was recommended to be planted under mulch for a quick non-re-seeding grass cover than wood chips would not be a good mulch choice because grass won't come through the chips. Additionally, if you use wood chips in the landscape then don't place them under the canopy of shrubs or under other groundcovers because the chips tie up nitrogen in the soil when they break down and may slow vegetation growth and/or have other negative effects on plant health. Leave a bare soil area around plants or put some loose straw in those places.

Installing one line of fiber roll/straw wattle ("keyed" 2-3 inches into the soil so water does not go under them) close to streets and downslope properties or water bodies is a generally a good idea (when installed correctly) as an insurance measure to protect off site areas from erosion and sedimentation helping to protect water quality. A second roll/wattle may be necessary on longer slopes 3:1 or steeper. Ideally, the wattles should be installed on the contour and staked not less than every 4 feet apart. Unfortunately, many wattles are installed improperly including those installed by many building/landscape contractors not just homeowners. In fact, many wattles are unnecessary and/or improperly located. *Note: An incorrectly installed/located wattle can create problems rather than serve the intended purpose.*

In many cases loose straw is all that is needed in the short term. In some cases the straw will need to be "tucked" in with a shovel or spade so that it makes contact with the top few inches of the soil. On very steep slopes and/or wind prone areas straw mulch can be covered with jute or decomposable plastic netting (securely stabled) to help hold in place.

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.

This fact sheet was developed by Rich Casale who is a natural resource specialist and a Certified Professional Erosion and Sediment Control Specialist (#3). He has assisted many communities and hundreds of property owners throughout California with post-fire restoration needs and information throughout his 46-year career working with the USDA Natural Resources Conservation Service.
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