

Mulching Materials and Application Rates

Material Organic Mulches	Rate Per Acre	Quality	Notes
Straw	1-2 tons	Dry, unchopped, unweathered; avoid weeds.	Should come from wheat or oats; spread by hand or machine; must be tacked down.
Wood Chips	5-6 tons	Air dry	Treat with 12 lbs nitrogen/ton. Apply with mulch blower, chip handle, or by hand. Not for use in fine turf.
Wood Fiber	0.5-1 tons		Also referred to as wood cellulose. May be hydroseeded. Do not use in hot, dry weather.
Bark	35 cubic yards	Air dry, shredded or hammer-milled, or chips.	Apply with mulch blower, chip handler, or by hand. Do not use asphalt tack.
Corn Stalks	4-6 tons	Cut or shredded in 4-6 inch lengths.	Apply with mulch blower or by hand. Not for use in fine turf.
Sericea Lespedeza seed-bearing stems	1-3 tons	Green or dry; should contain mature seed.	
Nets and Mats*			
Jute net	Cover area	Heavy, uniform; woven of single jute yarn.	Withstands waterflow. Best when used with organic mulch
Fiberglass net	Cover area		Withstands waterflow. Best when used with organic mulch
Excelsior (wood fiber net)	Cover area		Withstands waterflow.
Fiberglass roving	0.5-1 tons	Continuous fibers of drawn glass bound together with a non-toxic agent.	Apply with a compressed air ejector. Tack with emulsified asphalt at a rate of 25-35 gal/1,000 sq. ft.
Chemical Stabilizers**			
Aquatain Aerospray Curasol AK Pertroset SB Terra Tack Crust 500 Genaqua 743 M-145	Follow Manufacturer's specifications		Not beneficial to plant growth

*Refer to Practice No. 6.30, Grass Lined Channels in the NC DEQ E&SC Planning and Design Manual

**Use of trade names does not imply endorsement of product.

NOTES:

1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching **except** when seed is applied as part of a hydroseeder slurry containing wood fiber mulch or a hydroseeder slurry is applied over straw.

APPLICATION OF ORGANIC MULCH

1. Spread mulch uniformly by hand, or with a mulch blower.
2. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1,000 ft², and place 70-90 lb. of straw (1 1/2 to 2 bales) in each section to facilitate uniform distribution.
3. After Spreading, no more than 25% of the ground surface should be visible.
4. In hydroseeding operations a green dye, added to the slurry, assures a uniform application.

ANCHORING ORGANIC MULCH

1. Straw mulch must be anchored immediately after spreading.
2. A tractor-drawn implement designed to punch mulch into the soil or a mulch anchoring tool provides maximum erosion control with straw. A regular farm disk, weighted and set nearly straight, may substitute, but will not do a job comparable to the mulch anchoring tool. The disk should not be sharp enough to cut the straw. These methods are limited to slopes no steeper than 3:1, where equipment can operate safely.
3. Application of liquid mulch binders and tackifiers should be heaviest at the edges of areas and at crests of ridges and banks, to resist winds. Binder should be applied uniformly to the rest of the area. Binders may be applied after mulch is spread, or may be sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is the most effective method.
4. Emulsified asphalt should be applied at 0.10 gallons per square yard (10 gal/1,000 ft²). Heavier applications cause straw to "perch" over rills. Use Rapid setting (RS or CRS) designated asphalt in traffic areas to prevent uncured asphalt from being picked up on shoes and causing damage to rugs, clothes, etc.
5. Synthetic binders may be used as recommended by the manufacturer.
6. Lightweight plastic, cotton, jute, wire or paper nets may be stapled over the mulch according to the manufacturer's recommendations.
7. For small areas where other methods cannot be used, peg and twine anchoring can be used. Drive 8-10 inch wooden pegs to within 3 inches of the soil surface, every 4 feet in all directions. Stakes can be driven before or after straw is spread. Secure mulch by stretching twine between pegs in a criss-cross-within-a-square pattern. Turn twine two or more times around each peg.
8. Rye Grain may be used to anchor mulch in fall plantings, and German Millet in spring. Broadcast at 15 lb/acre before applying mulch.

CHEMICAL MULCHES

1. May be effective for soil stabilization if used between May 1 and June 15, or Sept. 15 and Oct. 15, provided that they are used on slopes **no steeper** than 4:1, and that proper seedbed preparation has been accomplished, including surface roughening where required.
2. Chemical mulches cannot be used to bind other mulches, or with wood fiber in a hydroseeded slurry at any time. Follow the manufacturer's recommendations for application.

FIBERGLASS ROVING

1. Spread roving uniformly over the area at a rate of 0.25 to 0.35 lb/yd². Anchor with asphalt immediately after application, at a rate of 0.25-0.35 gal/yd²
2. As a channel lining, and at other sites of concentrated flow, the roving mat must be further anchored to prevent undermining.
3. It may be secured with stakes placed at intervals no greater than 10 feet along the drainageway, and randomly throughout its width, but not more than 10 feet apart.
4. As an option to staking, the roving can be buried to a depth of 5 inches at the upgrade end and at intervals of 50 feet along the length of the channel.

NETS AND MATS

1. Nests alone generally provide little moisture conservation benefits and only limited erosion protection. Therefore, typically use in conjunction with an organic mulch such as straw.
2. Except when wood fiber slurry is used, netting should always be installed **over** the mulch. Wood fiber may be sprayed on top of an installed net.
3. Mats, including "excelsior" (wood fiber) blankets, are considered protective mulches and may be used alone.
4. Place the matting in firm contact with the soil, and staple securely.