

Mulching (484) Technical Reference

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*All materials must be installed according to manufacturer recommendations.

Table 1: Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	Application Rates		Depth of Application	Remarks
		per 1,000 sq. ft.	per acre		
Wood chips or shavings	Green or air dried. Free from objectionable coarse materials.	500-900 lbs.	6 tons	2" – 7"	Has about the same use and application as sawdust, but requires less N/ton (10-12 lb) Resistant to wind blowing. Decomposes slowly.
Wood Fiber Cellulose (Partly digested wood fibers)	Dyed green. No growth inhibiting factors. Air-dried 30% fibers 3.7 mm or longer.	30 lbs.	1500 lbs.	-	When applied for erosion control on critical areas double application rate. Apply with hydroseeder. No tie-down required. Packaged in 100 lb. bags. Use only on short, low-gradient slopes and during optimum seeding dates. Curosol or equiv. may be needed to hold mulch on site.
Leaves	No plastic bags or household debris.	375-700 lbs.	8-15 tons	Do not exceed 6"	Must be spread within 7 days of delivery. Must be incorporated no later than the next tillage season. Spreading can be done with a manure spreader. Incorporation can be accomplished with chisel plow and disk. Distribution should be even. Obtain any necessary state and/or local permits.
Cornstalks, shredded or chopped	Air-dried, shredded into 8" to 12" lengths	150-300 lbs.	4-6 tons	-	Effective for erosion control, relatively slow to decompose. Excellent for mulch on crop fields. Resistant to wind blowing.
Grass Clippings	Free of debris; minimal odor	700-1400 lbs.	15-30 tons	1" - 2"	Obtain necessary permits. Must be spread within 24 hours of delivery. Observe DEP buffer requirements. Incorporate with next tillage season for crop establishment.
Gravel, Crushed Stone, or Slag	Washed; Size 2B or 3A - 1-1/2"	9 cu. yds.	-	3"	Excellent mulch for short slopes and around woody plants and ornamentals. Use 2B when subject to foot traffic.

Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 T 100-120 bales	Cover about 90% of surface	Use straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. This is the most commonly used mulching material. Best micro environment for germinating seeds.
Peat Moss	Dried and compressed	200-400 cu. ft.	1/2-1 T	2" - 4"	Most effective as mulch around ornamentals. Subject to wind blowing unless kept wet. 1lb. bales (6 cu. ft.). Excellent moisture holding capacity.
Jute Twisted Yarn	Undyed, unbleached plain weave. 78 ends/yd. 60-90 lbs./roll	48" x 50 yds. or 48"x 75 yds.	-	-	Use without additional mulch. Tie down as in manufacturing specification.
Excelsior Wood Fiber Mats	Interlocking web of excelsior fibers with Photodegradable plastic netting	48" x 100" 2 sided plastic 48" x 180" 1 sided plastic	-	-	Use without additional mulch. Excellent for seed establishment. Tie down as per manufacturer specifications. Approx. 72 lbs. /roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Glass Fiber	1 /4" thick, 7/16" diameter holes on 1" centers; 56 lb. rolls.	72" x 30 yds.	-	-	Use without additional mulch. Tie down with T bars as per manufacturers specifications.
Filter Fabrics	Woven or Spun	Variable	-	-	Apply to manufacturer's recommendations.
Straw or Coconut Fiber (or combination)	Photodegradable plastic net on one or two sides.	most are 6.5 ft. x 83.5 ft.	81 rolls	-	Designed to tolerate higher velocity water flow in centerlines of waterways. 60 sq. yds. per roll.

Table2: Mulch Anchoring Specifications

Anchoring Method or Material	Mulch to be Anchored	How to Apply
A. Manual		
1. Peg and Twine	Hay or Straw	After mulching, divide areas into blocks approx. 1 sq. yd. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in crisscross pattern on each block. Secure twine around each peg with 2 or more turns. Drive pegs flush with soil where mowing and maintenance is planned.
2. Mulch Netting	Hay or Straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Cut-In	Hay or Straw	Cut mulch into soil surface with square edged spade. Make cuts in contour rows spaced 18" apart. Most successful on contour in sandy soils.
Mechanical		
1. Asphalt Spray Emulsion	Compost, wood chips wood shaving, hay or straw	Apply with suitable spray equipment using the following rates: asphalt emulsion: on slopes use 200 gal/ac, on level, use 150 gal/ac; liquid asphalt: (rapid, medium, or slow setting) 0.10 gallons/sq. yd.; 400 gal/ac.
2. Wood Cellulose Fiber	Hay or Straw	Apply with hydroseeder immediately after mulching. Use 750 lbs. wood fiber per acre. Some products contain an adhesive material.
3. Mulch Anchoring Tool or Disk	Hay or Straw, manure/mostly straw	Set in straight position and pull across slope with suitable power equipment. Mulch material should be "tucked" into soil surface about 3."
4. Pick Chain	Hay or Straw, manure compost	Use on slopes steeper than 3:1. Pull across slopes with suitable power equipment.
5. Chemical	Hay or Straw	Apply Terra Tack AR 120 lbs./ac in 480 gal. of water or Aerospray70 (60 gal/ac) according to manufacturer's instructions. Avoid application during rain. A 24 hour curing period and a soil temperature higher than 45° F are required.