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COMMERCIALLY AVAILABLE ALTERNATIVES FOR ANCHORING STRAW MULCHES

The best method of anchoring straw mulches for temporary protection of critical areas is a variable depending upon topography, soil type, size of project, materials and equipment available, and other factors. The following information is an attempt to itemize commercial materials and equipment available for anchoring straw mulch.

Stubble Punchers (require loose, stone free seedbeds)

Small or "home size" projects can often be conveniently handled by punching the straw with a spade in rows about one foot apart, working across the slope.

Gangs of corregated rolling coulters mounted on a straight axle at approximate eight-inch intervals also make effective punchers when weighted sufficiently and pulled across properly prepared mulched areas. Such a machine, the "Imco Landscape," is available in six and eight foot widths at current prices ranging from $325 to $468. Specifications and detailed price lists are available from: Independent Manufacturing Company, Neodesha, Kansas.

On slopes too steep for cross slope operation, machines of this type must be suspended by cables and pulled from the top of the slope. Even so, operation is not generally satisfactory on slopes steeper than 2:1. Moist, soft straw punches best. Brittle straw tends to cut or break rather than punch.

Asphalt Stabilizers

On large jobs with slopes unsuitable for punching straw mulch (too steep, rocky, uneven), use of asphalt emulsion to tack the mulch in place has received considerable use when equipment suitable for applying the asphalt is available. Ordinarily, about 100 gallons of asphalt emulsion per ton of straw is required to tack straw firmly in place. Thus, about 200 gallons per acre would be required for the usual 4,000 pound straw mulching rate. Asphalt emulsions suspendable in

water may be applied using hydro applicators equipped with agitators and with sufficient pressure, volume, and capacity to apply the material. Most hydromulching or hydroseeding equipment makes satisfactory applicators for water suspendable asphalt emulsions. Dilution rate of the emulsion will vary with type of applicator used and is determined by amount of water necessary to get uniform coverage of the area being treated. Mixing 200 gallons emulsion with 2,200 gallons water (1:11 mix) would provide about 2,400 gallons of mix, sufficient to apply about one-half gallon per square yard, or 55 gallons per 1,000 square feet.

Cost of straw tacking with asphalt emulsions is quite variable but, in general, appears to be the least costly method for jobs with several acres on slopes or terrain not suited to punching the straw.

Information on their particular asphalt soil stabilizers is available from the chemical departments of several petroleum companies. The most recent information is from Phillips Petroleum Company, Bartelsville, Oklahoma 74003, and describes a newly developed asphalt emulsion suspendable in water and containing a soil aggregating polymer.

Nettings

A number of companies manufacture nettings specifically for holding organic mulches in place. Plastic, jute, paper, and other materials are used to make rolls of netting in various widths and weights that may be unrolled and stapled over straw mulch to hold it in place. These have replaced chicken wire that was occasionally used before the other products were available.

While cost of materials and labor makes the nettings unattractive for large jobs, they are often the most economical for treating small areas. In using nettings to hold straw in place, it is very important to staple the netting at sufficiently close intervals to keep it from being lifted and torn loose by wind or water.

Companies from which information was obtained are listed in the table on the following page, along with information on their products.

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Table 1

Company	Trade Name and Type Material	Color and Mesh	Roll Width (Inches)	Roll Length (Feet)	Approx. Roll Wt. (Pounds)	Approx. 2/ Price Per Square Yard
1/ Bennis Bros. Bag Co.	"Mulchnet"	Brown	54	1,500	65	5 cents
2400 South 2nd Street	Rolled kraft	1/2x2"				
St. Louis, MO	paper					
	"Erosionet"	1/3x1/3"	54	1,500	210(est.)	10 cents
Union Carbide	"Zendel"	Black				
Plastics Division	polyethylene	1/4"	60	100	15	37 cents
Films Department	extruded	1/2"	84	100	11	17 cents
270 Park Avenue	netting	3/4"	48	100	17	55 cents
New York, NY		1"	60	100	14	55 cents
		1-1/4"	78	100	11	17 cents
		1-1/2"	84	100	19	37 cents
Conwed Corporation	"Erosion	Black				
332 Minnesota Street	Control	1/2"	90	2,500	100	16 cents
St. Paul, MN 55101	Netting"	1/2"	144	2,500	160	16 cents
	extruded	1/2"	180	2,500	200	16 cents
	polyethylene					
Ludlow Textile Products	"Soil Saver"	Brown				
P.O. Box 832	Heavy jute	3/5"	48	225	50	18 cents
Stockton, CA	netting	(approx.)				

1/ Bennis advertises wire staples and staple guns for use in anchoring nettings.

2/ Prices are from lists of various ages, and probably have increased in most instances since the lists used were published; prices are from factory or other shipping point.