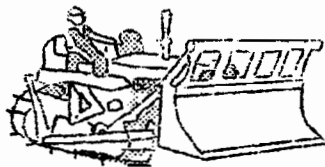


ESTABLISHING  
GRASS HAY OR  
PASTURE ON  
JUNIPER-SAGE  
RANGELAND

By

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**POINTS TO CONSIDER IN CONVERTING JUNIPER-SAGE RANGELAND TO PERENNIAL GRASS**

Removal of Trees - Juniper trees may be bulldozed into windrows for burning when dry. It is quite important, on these shallow soils, for the operator to refrain from pushing topsoil along with the trees into the windrow.

Seedbed Preparation - A firm seedbed is highly desirable for the establishment of grass. A good rule to gauge the correct firmness of the seedbed is when you can press your heel into the soil not more than one inch.

Seeding - Seed should be planted from 1/2 to 1 inch in depth depending on the size of the seed. If the soil is dry and loose, a cultipacker should be pulled behind the drill or a press wheel drill can be used.

Topar or Greenar Intermediate wheatgrass are well adapted for areas that have a soil depth from 10-18 inches. On deeper soil, 18 inches or more, Greenar is recommended. Both of these varieties have the ability to spread through the production of rhizomes which produce new plants.

Recommended seeding rate for Topar is from 5-7 lbs. per acre. Greenar should be seeded at 7-10 lbs. per acre. If legumes such as alfalfa are seeded along with the grass, the seeding rate may be reduced.

Additional Operations - Weeds may be a serious problem after disturbing the soil on this type of land. Weed competition can be greatly reduced by working the land during the summer following juniper removal. If weeds are a problem after seeding the next year, spraying with 2,4-D may be necessary.

If the land is to be used for hay production, the surface must be relatively smooth. This may be accomplished by pulling a heavy drag over the field several times. In some instances, large rocks as well as larger pieces of brush may have to be removed.

**SAMPLE COSTS TO ESTABLISH GRASS HAY OR PASTURE ON JUNIPER-SAGE RANGE**

Based on a 1,000 acre operation with tractor drivers at \$2.75 per hour for large tractor and \$1.65 for small tractor.

		Cost per Acre
<u>Cash and Labor Costs</u>		
<u>First Year</u>		
Remove trees with dozer - .4 hrs. @ \$4.80		\$ 1.90
Disk .5 hrs. @ \$5.25		2.65
Miscellaneous		.45
Total direct first year cost		<u>\$ 5.00</u>
<u>Second Year</u>		
Rip and seed .5 hrs @ \$5.60		2.80
Seed 10 lbs @ 55¢		5.50
Weed spray - contract		2.50
Miscellaneous		.20
Total direct second year cost		<u>\$11.00</u>
<u>Overhead - 2 years</u>		
Taxes 2 years @ 50¢		1.00
Miscellaneous		2.20
Interest @ 6% for 2 years		9.00
Land \$75		1.80
Equipment - 1/2 of \$30		6.00
Depreciation \$30 for 10 years		<u>\$20.00</u>
Total overhead for 2 years		\$20.00
Total cost to establish pasture		<u>\$36.00</u>
<u>Additional Cost to Establish Hay</u>		
Rake brush .3 hrs @ \$3.00		.90
Disk or drag 4 times 1.2 hrs @ \$5.25		<u>6.30</u>
Total additional		\$ 7.20
Total cost to establish hay		<u>\$43.20</u>

Contract rates for the above operations would cost an additional \$8 - \$10 per acre.

Equipment used in computing sample costs:

	<u>Cost</u>	<u>Fuel &amp; Repairs per hour</u>
Tractor - 60 HP	\$18,000	\$2.00
Tractor - 30 HP	3,370	1.00
Dozer	1,300	.05
Graham plow	1,200	.35
Drill 10'	1,000	.50
Disk 9'	1,500	.50
Brush Rake	800	.35
Miscellaneous	<u>2,450</u>	
Total	\$30,000	
Per Acre	\$30.00	