

NEWS

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Bill

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10-YEAR STUDY SHOWS PROFIT IN BRUSH CLEARING

REDDING--Livestock ranchers can make a tidy profit by clearing brush from foothill slopes and seeding them with grasses and clover, a co-operative range improvement project has proved.

A 10-year Shasta county study shows as high a profit gain as \$6.32 an acre over costs--with increased livestock production more than justifying the expense of the brush clearing.

Results of the Shasta county study have just been released in a publication, "Brush Range Improvement. A Report of the Cooperative Backbone Project."

Copies are available from the University of California Agricultural Extension Service, Shasta county, 1855 Placer Street, Redding.

Cooperating in the study were the Agricultural Extension Service and the California Resources Agency Division of Forestry.

Four 40-acre plots containing manzanita, live oak, yerba santa and species of ceanothus were studied. The land is at an elevation which ranges from 700 to 950 feet. Rainfall records were kept eight years during the project and an average of 46.8 inches recorded. Annual rainfall varied from 26.8 inches to 66 inches during the eight-year period.

In one plot, brush was burned standing with no other treatment. Brush was first crushed or mashed and then burned in another plot. A third plot was cleared mechanically by bulldozer then the brush was burned in piles or windrows. The fourth plot was left in its natural state to provide a comparison.

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Crushing and bulldozing was done in the fall of 1954, then both the crushed brush and standing brush plots were burned in July, 1955. In the crushed plot, a clean burn was achieved while 90 per cent of the standing brush was consumed in the plot that received no treatment other than fire.

All three of the plots--crushed and burned, standing-burn and mechanically cleared--were seeded in September, 1955, by plane with a mixture of rose and crimson clover, sub clovers, hardinggrass, annual rye grass and blando brome.

All three fields were reburned in July, 1958, and reseeded the following October, but the second burn was considered "not very successful."

According to the report, it would have cost ranchers at the time of the first treatment: \$13.66 an acre to burn standing brush, \$21.44 an acre to crush and then burn brush and \$36.29 an acre to bulldoze and windrow brush. Seed and seeding costs were included in each case.

All four fields were stocked with cattle four seasons--the springs of 1957, 1958, 1960 and 1963. From eight to 15 head were put on the cleared fields and three to five head on the untreated control field.

Four-year average production in terms of pounds of gain made by the cattle were 30.5 pounds on the standing-burn plot, 32.4 pounds on the crush-burn plot, 35.2 pounds on the bulldoze-windrow plot and 8.8 pounds on the control plot.

Farm advisors and forestry personnel agreed that burning standing brush was the most profitable practice and that production increases were great enough to pay all costs of treatment in less than three grazing seasons.

All three methods of brush removal were satisfactory, but despite the fact that greatest production per acre was achieved by mechanically clearing, the increase was not enough to pay the substantially higher costs during the course of the study.

Authors of the Backbone project publication are Walter H. Johnson, county director and farm advisor for the Agricultural Extension Service in Shasta county and William Harrington, forester, California Division of Forestry, District II.

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