TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE BOISE, IDAHO SOIL CONSERVATION SERVICE

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Sagebrush Seedling Production As Related to Time of Mechanical Eradication

Reduction of competition from sagebrush is stated by the authors as basic to effective revegetation on ranges. Sagebrush has both highly developed root laterals for use of water near the surface, and deep tap-roots that can draw on deeper moisture. It has been reported that yields of individual plants of crested wheatgrass near sagebrush were only about one-fourth of the yields away from sagebrush plants. Re-invasion by sagebrush has been frequent on reseeded ranges. Work here reported was done in Nevada in Paradise Valley south of Harney County. Elevation, 4,500 feet; average precipitation, 8 inches; area involved was 10,000 acres. Offset discs and wheatland-type plows were used for brush eradication. Areas were plowed at various times, and crested wheatgrass seeded in November. Here are some results:

a. Proportion of original sagebrush plants surviving was greatest for April-May work. It then declined regularly as the work went on, but increased again in the areas worked in the fall.

b. Brush eradication in April and May, followed by a summer-fallowing, favored the rapid increase of cheatgrass. On areas treated in the summer or early fall, there were only thin stands of annuals.

c. Heavy stands of annuals also resulted along roadsides or where fires had occurred in the past.

d. Numbers of crested wheatgrass or sagebrush seedlings did not appear to be influenced by the presence of each other.

e. Fewer seedlings of crested wheatgrass and sagebrush both were found in dense stands of cheatgrass brome. In other words, a heavy stand of cheatgrass in itself tends to keep out sagebrush and also makes it difficult to establish crested wheatgrass.

f. When the sagebrush clearing work was done from April to May, such plots had the smallest number of crested wheatgrass seedlings.

g. Very few sagebrush seedlings were present where the clearing work was done in July, August, or September, but a great many occurred when the sagebrush was cleared in the early spring or in October, and there was still further increase of sagebrush for November work.

Authors conclude that all sagebrush eradication work should be done in the summer time rather than spring or fall.

Submitted by Roy L. Shipley, range conservationist, Boise, Idaho.
REFERENCE MATERIAL: (1) The Grazier, No. 44, April 5, 1957, Oregon State College, Corvallis, Ore.; (2) Journal of Range Management, Vol. 8, March 1955.

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