## Reseeding Controlled Burns

## records of 45 controlled brush burns in woodlandgrass areas indicate self-reseeding predominates

H. H. Biswell, J. L. Launchbaugh, and A. M. Schultz

Less than 6% of the 3,740 acres of Madera County brush areas—controlled burned in 1953—required reseeding.

The need for reseeding controlled burned brush areas was studied during the four-year period of 1950 through 1953. During this time, 52,033 acres—12,390 above 2,500' elevation—were included in 45 different burns in the foothills of Madera County. Of this total amount, only some 9,250 acres were reburned.

Reseeding of burned areas is done for four principal reasons: 1, to furnish forage for livestock and game; 2, to offer competition to reduce the number of brush seedlings that might otherwise be too thick in some places; 3, to obtain a plant cover beneficial in protecting the soil; and 4, to make sure that there is adequate fuel available for any subsequent reburn.

Previous studies have shown that only the areas of brush ash are suitable for reseeding. Furthermore, ash spots less than 100 feet in diameter-which seed in naturally the second year-do not need to be reseeded. During the four years of the study, surveys were made after the controlled burns each year and estimates made of the total amount of brush ash, all of which was recorded as suitable for reseeding. Those spots greater than 100' in diameter were recorded as essential to reseed. The following spring, a second survey was made to determine how much reseeding was accomplished. The figures are contained in the accompanying table.



A large area of almost continuous brush ash at approximately 3,000' elevation where reseeding is essential to obtain a satisfactory grass cover.

Acres

Year	No. of burns	Acres incl. in burns	able for re- seed- ing	sen- tial for re- seed- ing	Acres re- seed- ed
1950	12	13,760	2,485	2,100	1,445
1951	13	24,200	3,075	2,820	3,690
1952	9	10,333	877	727	1,055
1053	11	3 740	354	200	521

In three years out of the four, a greater acreage was actually reseeded than the figures indicate as either essential or suitable for it. This happened because in some instances areas of grass ash were reseeded. A large amount of the reseeding was done by airplane, and it was

more practical to seed uniformly than to try to avoid those areas of grass ash. The percentages of area reseeded, where it was regarded as essential, for the four years were: 1950, 65%; 1951, 97%; 1952, 93%; 1953, 96%. This means that a few of the areas listed as essential were missed in the reseeding operation; however, for the past three years the reseeding of essential areas was almost complete.

It was found that a larger percentage of the area above 2,500' elevation needed reseeding than that lower down, simply because the brush at this elevation is denser and there are more areas of brush ash. Above 2,500' elevation, this amounted to 41% of the area controlled burned, whereas below this elevation, it amounted to only 2% of the total area burned.

It was also found that following reburns, less reseeding is needed than after the original burns. At this time, reseeding is essential only in those places where the first burn was ineffective in removing the brush but where the brush was destroyed in the reburn.

- H. H. Biswell is Professor of Forestry, University of California, Berkeley.
- J. L. Launchbaugh is Assistant Specialist in Forestry, University of California, Berkeley.
- A. M. Schultz is Associate Specialist in Forestry, University of California, Berkeley.

The studies were made cooperatively by the University of California College of Agriculture and the California Department of Fish and Game, with funds provided in Wildlife Restoration Act, Project California 31-R.

Left: Area with scattered small spots of brush ash at approximately 1,200' elevation that was not reseeded following controlled burning. Right: Same area showing complete grass cover from natural reseeding.



