obtain the average ungrazed height.

Analyses of the utilization data indicate that there is an optimum value to use with a given species to obtain the highest correlations with percent of weight grazed. Additional study is needed to determine this optimum value for each species.

Summary

The percent-of-plants grazed method is a rapid and "easy-to-use" method for estimating degree of utilization, and it has given satisfactory results for some species in the areas where standards were developed.

Attempts by the Forest Service to use this system in the central Rocky Mountain area have been unsatisfactory for some of the important key grass species because of inconsistencies in the way livestock graze those species under different climatic conditions and between different seasons or years.

The adaptation of the percent-of-plants-grazed method described here has given satisfactory results over a 3-year trial period where data were gathered from various National Forests by several different examiners. This system, based upon utilization data from height-weight transects, accurately estimates percent utilization within the limits of the data.

LITERATURE CITED


MANAGEMENT NOTES

Brush Control—An Unfinished Job

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The photographs in this note were the authors' prize-winning entry in the picture story contest at the ASRM Annual Meeting in New Orleans in 1966. The series of photos was started in 1952, when a study of rangeland brush control was started at the San Joaquin Experimental Range, near O'Neals, California. The Range is maintained by the Pacific Southwest Forest and Range Experiment Station of the Forest Service, U.S.D.A.

Fig. 1. Let's get that brush! A small tractor was brought in to do the job — July 1952.

Fig. 2. We'll get'er! It's a good thing the oak was small.
Some of the common brush and tree species found on the Experimental Range are: interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), digger pine (*Pinus sabina*), wedgeleaf ceanothus (*Ceanothus cuneatus*), and deerbrush (*Ceanothus leucodermis*).

In the illustrations, live oak is being treated. The first three photographs illustrate a common method of preparing brush for burning. In this particular demonstration, a small track-type tractor was used, but a larger tractor crushes brush more efficiently. The effectiveness of the July 1952 burn is illustrated in Fig. 4.

Brush that has the ability to sprout from the root crown, such as interior live oak, returns after a fire. By September 1953, the new sprouts were about 18 inches tall (Fig. 5). This was the year to start herbicide treatments — spraying in two or three consecutive years would have eliminated this live oak. The brush sprouts were not sprayed and the results are shown in Fig. 6, taken in October 1965. This photo illustrates a common fault with so-called brush control jobs—a good start but no follow through.