Good Range Management

practices are especially important to stockmen during years of deficient rainfall

R. Merton Love

The California range now is predominantly the annual type.

The chief forage cover is composed of annual grasses, filaree and bur clover. If 80 to 100% of the cover is soft chess, wild oats, filaree, and bur clover, the range is in good shape. If there is less than 20 to 40% of these desirable plants and 60 to 90% of the cover is broncho grass, rat-tail fescue, foxtail barley, and if summer weeds are common, the feed has deteriorated. Steps should be taken to graze these earlier next year and make use of them before they head out. Mowing may be called for.

The production of bur clover forage can be increased materially by removing the stock from a field about the middle of April and keeping them off for a month. This allows the bur clover plants to set an abundance of seed, and the mature burs will provide late spring nutritious feed.

This was checked one year at Davis. Field 1 was grazed from February 26 to May 20. The average weight of mature burs was 640 pounds per acre.

Field 2 was grazed from February 26 to April 20, rested to May 20 and grazed again to June 20. Here the average weight of mature burs was 2,260 pounds per acre. Chemical analysis showed the burs had 19% protein.

By applying this practice—a rest period during the time bur clover is flowering—to a different field each year, the returns per acre can be definitely increased.

This photograph was taken in April, 1948. Veldt grass is a palatable and drouth resistant perennial.

Seeding

Only annuals such as rye grass, wild oats, bur clover, subclover, roseclover and filaree, and the perennial herb burnet can be expected to succeed following seeding on sod. All but burnet are short-lived species, so this is only a substitution of desirable annuals for weedy annuals already present, and does not solve the main problem—that of extending the grazing season. Seeding of adapted perennials must await research on methods of establishment. It is a waste of money to seed sod now with anything but annuals.

If such a seeding of annuals is to be made on sod this fall, the field should be grazed heavily this spring. Seed should be broadcast before the fall rains start and be trampled in by livestock.

The office of the local Farm Advisor should be consulted for the latest information on preëmergence sprays as a help in range seeding.

Plot trials are the cheapest method of ascertaining whether fertilization will increase the forage production. The county Farm Advisor can make such tests.

In general, where a response is obtained, phosphorus, gypsum or sulfur increases legume growth, and nitrogen encourages grasses. On many ranges, however, nitrogen is deficient and even legume response is not obtained without a combination of nitrogen and phosphorus.

Perennial Range

Those who are fortunate enough to have some perennials on their range, even though a scattered stand, can increase the size and number of those plants by management alone. The secret is to allow them to go to seed every year for two or three years, and then at least once every second on third year. One field should be improved at a time. This is done by grazing heavily in the spring to make use of the annuals when they are palatable and nutritious.

Remove the stock before the last rains. The perennials will then mature and shatter seed. Before the fall rains begin, the field should be grazed lightly to trample the seeds into the ground. This experimental field should be treated the same way for three years, after which the entire range can be brought in on the same treatment.

The stockman who plans to seed permanent dryland pasture this fall should summerfallow the field this spring. If the field is very weedy, one or more crops of barley and vetch—or oats and vetch, or sudan—should be grown. This practice will help clean up the field.

A firm seedbed is required and the perennials should be drilled—or broadcast—early in the fall so that advantage may be taken of all the precipitation. Drilling conserves seed. Preëmergence sprays appear promising in initial trials. If annuals, such as ryegrass, are included in the mixture at all, not more than one or two pounds per acre should be used. A typical mixture would be two pounds Harding, one pound burnet, three pounds subclover or bur clover, two pounds alfalfa. If necessary annuals may be broadcast later to thicken the stand.

A heavy grazing or mowing may be required the first spring after seeding in order to reduce the competition from weedy annuals. Then stock should be removed to allow the perennials to seed. Light grazing before the fall rains will trample in the seed.

Plans should be made in advance in improving brushland. Under permit from the State Division of Forestry, many acres of brush are being burned and planted to perennial grasses each year.

In any one year, burning should be confined to the acreage from which stock can be kept off the next summer. Perennials broadcast in the fall in fresh ash should not be grazed the next summer until the plants are mature.

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For the procedure of converting brushland to grassland, read California Agricultural Experiment Station Circular 371, obtainable from your local Farm Advisor or by addressing a request to Publications Office, University of California College of Agriculture, Berkeley 4, California.