

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

BERKELEY, CALIFORNIA

SOIL CONSERVATION SERVICE

-S-

TN - Range - 15

TN - Range - 15

September 9, 1960

MODERATE GRAZING PROTECTS FUTURE FORAGE PRODUCTION

This short report was published in the August 1960 issue of "California Agriculture." The author, Dr. Harold F. Heady, gave us permission to reprint it in our Technical Note series.

Fred A. Haughton, Jr.
Soil Conservationist
on State Program Staff

Forage production from annual-type range vegetation depends to a large extent on the amount of dry-plant material -- mulch -- left ungrazed at the end of the dry season. At the Hopland Field Station, plots from which all the mulch had been removed in September each year produced about one-third the forage produced on plots where adequate mulch remained. Without mulch the next crop was likely to consist mostly of small varieties of grasses and unpalatable annual weeds. Desirable species -- including soft chess, wild oats, and filaree -- were promoted with ample mulch. Where less than 700 to 1,000 pounds of plant material per acre was left, rapid deterioration of the forage resulted.

A previous experiment left open the question whether the results were due to the amount of mulch or to stubble height, because some plots were clipped at various heights. For the last three years a new experiment has allowed the separate evaluation of effects due to height of stubble and amount of material. Preliminary results indicate that higher stubble height with the same amount of mulch promotes better range forage than lower stubble.

The experiment indicates that ranges should be grazed moderately to ensure that the next forage crop will be composed of the best kind of plants and as large as the climate and soil will permit. That stubble height is important suggests that grazing animals should be allowed to select the nutritious leaves and to avoid the

less valuable stems. Such grazing can be accomplished more easily with a small number of animals grazing for long periods than with large numbers of animals in a pasture for a short time.

Harold F. Heady,
School of Forestry, Berkeley

Fred A. Haughton, Jr.
Soil Conservationist
on State Program Staff

Forage production from annual-type range vegetation depends to a large extent on the amount of dry-plant material -- mulch -- left ungrazed at the end of the dry season. At the Hopland Field Station, plots from which all the mulch had been removed in September each year produced about one-third the forage produced on plots where adequate mulch remained. Without mulch the next crop was likely to consist mostly of small varieties of grasses and unpalatable annual weeds. Desirable species -- including soft chess, wild oats, and filaree -- were promoted with ample mulch. Where less than 700 to 1,000 pounds of plant material per acre was left, rapid deterioration of the forage resulted. A previous experiment left open the question whether the results were due to the amount of mulch or to stubble height, because some plots were clipped at various heights. For the last three years a new experiment has allowed the separate evaluation of effects due to height of stubble and amount of material. Preliminary results indicate that higher stubble height with the same amount of mulch promotes better range forage than lower stubble. The experiment indicates that ranges should be grazed moderately to ensure that the next forage crop will be composed of the best kind of plants and as large as the climate and soil will permit. That stubble height is important suggests that grazing animals should be allowed to select the nutritious leaves and to avoid the