

MANAGEMENT PLAN^{1/} HARVEY VALLEY RANGE ALLOTMENT

LASSEN NATIONAL FOREST

The California Forest and Range Experiment Station, in cooperation with the Lassen National Forest, the Range Management Division of the Regional Office, Lassen Forest grazing permittees and the Lassen County Farm Advisor, has been carrying on grazing studies at the Burgess Spring Experimental Range on the Lassen National Forest since 1936. These studies were aimed at improving and increasing production on mountain summer cattle ranges in northeastern California through the development of better grazing management and cultural practices. From the results of the work carried on to date, a system of grazing has been formulated which promises to yield efficient and sustained forage and livestock production. In addition, progress has been made in the development of some cultural practices like artificial reseeding and chemical weed control.

It is now planned to test the grazing system and the cultural practices on a range allotment basis. The Harvey Valley allotment on the Lassen National Forest was selected for this purpose. It encompasses 32,352 acres of which 20,645 is usable range. The proportion of the major cover types on the allotment are shown in Table 1.

Table 1.--Cover types, Harvey Valley range allotment

Cover type :	Acres :	Percent
Grassland	505	1.5
Meadow	1,322	4.1
Sagebrush	4,105	12.7
Conifer	11,713	45.5
Waste	11,707	36.2
Totals	32,352	100.0

The Plan of Management

1. Class of livestock -- beef cattle
2. Stocking rate

At the beginning of the test, 500 animal units -- the present permitted number -- will be used. This number will be increased as increased grazing capacity is assured.

^{1/} Prepared by the California Forest and Range Experiment Station, the Lassen National Forest, and the Regional Range Management office of the Forest Service.

3. Season of grazing

The range will be grazed for about four months, from the time the flower stalks of Idaho fescue start surpassing the basal leaves (average date June 1) until the cattle reach peak weight (average date October 1).

4. Livestock distribution

Satisfactory distribution of livestock over the range is expected to result from the fence and water developments called for in the grazing plan described below.

The Plan of Grazing Management

The key point in this plan is the provision for resting the range in relation to the growth requirements of the key forage species on the range for the purpose of (1) restoring the vigor of grazed plants, (2) providing for the establishment of forage reproduction, and (3) improving soil fertility.

This grazing plan is based on the growth requirements of Idaho fescue (Festuca idahoensis), the species most easily destroyed by grazing. The plan thus also satisfies the growth requirements of the other less easily damaged forage species that are associated with Idaho fescue.

The range is divided into five pastures of equal grazing capacity. Each pasture is given five basic grazing treatments during a 5-year cycle, as outlined in Table A. Heavy grazing (60 to 70 percent forage use) is employed the first year to insure full use of the available forage. Rest is provided the entire second year and half of the third to permit the grazed plants to recover vigor and produce seed. Heavy grazing during the latter half of the third year is needed to get as much seed as possible trampled into the soil. Complete rest the fourth year gives the young seedlings a chance to become established. Moderate grazing (30 to 35 percent forage use) is provided during the first half of the fifth season to give the young plants further opportunity to become established. The particular treatment called for in the fifth season is necessary to make the plan work; that is, to stock the pastures at given intensities and move the livestock about as required. The grazing schedule for all five pastures for a 5-year cycle is outlined in Table B.

Table A.--Schedule of grazing for any one pasture during a 5-year cycle

<u>Year</u>	<u>No.</u>	<u>Character</u>	<u>Treatment</u>	<u>Main purpose</u>
1st	A	Heavy use season-long		Maximum forage utilization
2nd	B	Rest season-long		Recovery of plant vigor
3rd	C	Rest until mid-season		Permit plants to ripen seed
		Graze heavily second half of season		Effect planting of seed by heavy trampling
4th	D	Rest season-long		Aids establishment of new reproduction
5th	E	Graze moderately until mid-season		Aids establishment of new reproduction
		Rest second half of season		Permits completion of grazing schedule

Table B.--Schedule of grazing of five pastures during 5-year cycle

<u>Year</u>	<u>Treatment^{1/}</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
1st	A	B	C	D	E
2nd	B	C	D	E	A
3rd	C	D	E	A	B
4th	D	E	A	B	C
5th	E	A	B	C	D

^{1/} See A to E in Table A

The grazing intensity desired in each pasture in a given season is obtained as follows: (refer to first year in Table B). At the beginning of the grazing season, 60 percent of the animal units to be grazed on the entire range are placed in pasture 1 and the remaining 40 percent are placed in pasture 5. In mid-season two-thirds of the animals in pasture 1 and all of those in pasture 5 are moved to pasture 3. In this way pastures 1 and 3 are grazed heavily, pasture 5 moderately, and pastures 2 and 4 are rested completely.

The schedule for the Harvey Valley allotment (using 500 animal units) is shown in Table 2 assuming all pastures are established in 1951:

Table 2.--Grazing schedule for Harvey Valley allotment

Year	Pasture				
	1	2	5	4	3
	(Stocking (animal units))				
1951	A 100 300 ^{1/}	B Rest	C 400 Rest	D Rest	E Rest 200
1952	B Rest	C 400 Rest	D Rest	E Rest 200	A 100 300
1953	C 400 Rest	D Rest	E Rest 200	A 100 300	B Rest
1954	D Rest	E Rest 200	A 100 300	B Rest	C 400 Rest
1955	E Rest 200	A 100 300	B Rest	C 400 Rest	D Rest

^{1/} Top figure or comment indicates stocking during first two months of the season, and bottom figure or comment indicates stocking during last two months of the season.

Pasture 1 was fenced in 1951 and treated as shown in the above schedule. All pastures are expected to be fenced sufficiently to permit operation of the entire plan by 1953. Should the forage in the heavily grazed pastures, those receiving treatments A and C in Table 2, be inadequate for the livestock in any given season because of low forage production, the livestock can be moved to pastures receiving treatments B and E. Only in extreme cases should the pasture receiving treatment D be opened to grazing.