

724
R-CAL
SUPERVISION
Meetings
American Society of Range Management
California Section

Range Seminar

Monday, November 9, 1953 at 7:30 P.M.
Room 159, Forestry Bldg., U.C.

PROBLEMS OF IMPROVING WINTER RANGE USED BY DEER AND LIVESTOCK

A. L. Hormay

Desirable forage species have been greatly reduced on many California deer winter ranges by a combination of factors like deer and livestock grazing, fires and insects. There are two principal means by which these species (or similar ones) can be restored on the range: (1) By cultural measures like artificial reseeding and planting of seedlings, and (2) by management of grazing to encourage natural reproduction. It should be appreciated that maintenance of seedlings established by cultural measures is dependent on control of grazing. So in the end, whether the stands are started artificially or naturally, management of grazing is essential. In addition, adequate control of fires and insects is necessary. In some portions of the Eastside Region of California, for example, fires and insects have killed out more bitterbrush -- the key browse on deer winter ranges -- than deer and livestock grazing combined.

Management of Grazing

Under prevailing methods of deer and livestock management, the range is grazed in about the same way season after season and the desirable forage species are gradually being killed out. There is a possibility that this deterioration can be stopped and the range restored to productivity through the application of the principals of deferred and rotation grazing. This type of management provides for periodic resting of the range from grazing

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permitting recovery of plant vigor, seed production and seedling establishment. It requires close control of the distribution and time of grazing as well as the number of animals grazed. In the case of livestock, such control is possible at the present time at a cost. However, this is not true in the case of deer. There is great need to find some way of getting deer to graze on some areas in one year and on other areas in another so as to provide the range much needed relief from grazing at certain times.

Artificial Reseeding

On heavily deteriorated ranges the only way to get browse back in a reasonable time is through artificial reseeding or planting. Cheap, practical, broadscale methods applicable to rough non-tillable rangelands are needed. Research is just now getting under way on this problem.

Successful reseeding is dependent on use of species that are adapted to the site. Native species offer the best possibilities. Several native species of Ceanothus, Cercocarpus, Purshia, Garrya and Quercus are available for this purpose at present.

One of the most formidable problems in reseeding is preparation of the site for planting -- removing the present plant cover to make room for the planted species and preparing a suitable seedbed. Time, depth and rate of planting also are important.

Sprouting species are needed in most places because of the ever present threat of fire. Work is now under way with sprouting forms of bitterbrush. Adaptable species from any part of the world will be considered, however.

The possibility of controlling harmful insects by virus is being studied by a research student at the University of California at the present time.

(3)

In summary, then, restoration of desirable forage species, principally browse on deer winter ranges, is a formidable but not insurmountable task. Ultimate success is dependent on proper consideration and integrated application of artificial reseeding, fire and insect control, and proper management of grazing. This problem requires the cooperative effort of many agencies, groups, and individuals.

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Subject: Improving Winter Ranges Used by
Deer and Livestock

1. Introduction

Problem - defined - something we know little if anything about.

2. Two possible ways of restricting lost grazing values

Management of grazing - encouraging natural regeneration
Artificial measures - reseeding, planting

3. Success dependence

Artificial reseeding - on management
Management - on understanding the problem and factors involved

4. Maintenance of stand. How did the range get in its present condition

Fire)
Insect)
Deer grazing) Gaged by present evidence of
Livestock grazing) effects

5. Management of grazing

Progress in this direction slowed down by lack of information on relative effects of deer and livestock grazing on species concerned.

(a) Deferred and rotation grazing main basis for encouraging natural regeneration and maintenance of forage stands.

(b) Possible in the case of livestock grazing - some way must be found to control the movement as well as numbers of deer.

6. Artificial restoration

In the main, broadscale methods needed for covering large areas.

Therefore, regeneration from seeds rather than plantation.

Suitable species

Natives - adapted

Life history/^{information}needed on these species - seed germination

One of the biggest problems

Site and seedbed preparation

Make room for planted species

Provide adequate moisture

Develop planting techniques

Time, depth, rate, protect seeds and seedlings from rodents

Equipment

The physical problem of

Restoration of grazing values on deer winter ranges hinges on more than an artificial reseeding or of reseeding and game and livestock grazing management combined. This problem can be solved only with a clear understanding of the many factors involved and a background of basic factual information on their influence and effects.