

Felton Place

RANGE RESEARCH SEMINAR

Discussions week of January 5, 1944

Messrs. Show, Kotok, Talbot  
Cronemiller, Douthitt, Hormay, Bentley

Subject: Recommended activities during next two years in preparation for the Forest Service post-war work program.

1. Prepare a simplified handbook for use by the ranger, foreman, or rancher showing use of local materials in control of gully erosion. Co-op with Forest Influences.
2. Make research on reseeding a major activity during this period.
  - a. Observe all field trials that have been made on the Eastside by all agencies and go through all forest files for information. Review all literature applicable to this area. Complete field work by Sept. 1, 1944 to guide research effort during the next year.
  - b. Make collection of bitterbrush seed a recurrent job on all Eastside forests. Have forest personnel spot areas for collection of other reseeding species during the post-war program.
  - c. Confine research on species and methods to key areas - meadows and best spring range - on Eastside and limit work to small exploratory studies that the experiment station can conduct.
  - d. Select areas on which the first reseeding should be done. Do job while on field travels but don't plan as a major job and don't prepare a detailed map.
3. Continue the bitterbrush study program with emphasis on site evaluation and development of cultural practices for artificial reseeding.
4. Limit preparatory work on water spreading, water table raising, and similar practices to a possible review of literature. Job for Waldo Wood.

5. Look over the brush removal problem on the ground with R.O. engineers and get estimates of power requirements, expenses and similar phases of the problem.
  - a. Consider doing pioneer work on burned-over areas. Select the areas.
  - b. Prepare publication on land clearing by fire and goat grazing.  
Cronemiller.
  - c. Attempt some sweetbirch control by mowing, breaking down with tractor, or other means. Visit Ranger Spargo on the Stanislaus for information.
6. Ask for proposals from each forest on location of demonstration allotments to be improved under the post-war work program. Consider the individual proposals on the ground.
7. Discuss location and design of the proposed protected plots on the ground with research and administrative officers. Consider each major type, at least in N. E. California.

#### Program of Long-time Range Research in California

Principal lines of investigations.

- ✓ 1. Resource surveys and problem analyses including economic analyses.

- a) State
- b) Units within the state

The purpose is to determine the overall relationship between different types of ranges and land uses and the specific problems facing stockmen in the management of the range.

2. Evaluation and definition of range sites by forage types.

- a) Soil characteristics
- b) Forage composition, succession
- c) Method of expressing site

✓3. Life history and management of important range plants and noxious weeds.

- a) Description
- b) Growth
- c) Reproduction
- d) Ecological behavior
- e) Grazing value
- f) Reaction to grazing
- g) Rate of recovery

Species like *Purshia tridentata*, *Juniperus occidentalis*, *Ceanothus intergerrimus*, *Cercocarpus betuloides*, *C. ledifolius*, *Festuca idahoensis*, *Sitanion hystrix*, *Carex rossi*, *Medicago hispida*, *Lupinus calcaratus*, and *Hypericum perforatum*, *Elymus caput-medusae* would be studied.

✓4. Standards of utilization of range types by sites.

- a) Utilization of individual species
- b) Utilization of the forage cover

The purpose is to determine the maximum amount of grazing that the range will stand without deterioration and to express this use in a form readily understood by the range manager.

5. Nutritive value of forage species

- a) Trends in chemical composition of species
- b) Trends in palatability and digestibility of species
- c) Nutritive value of range types.

The purpose is to provide a basis for determining the productive capacity of forage type, the season of grazing yielding the greatest production from the type, and the coordination of grazing between types.

6. Cultural practices

a) Artificial revegetation

(1) Forage improvement

(2) Erosion control

b) Adjustment of soil moisture conditions

(1) Water spreading

(2) Irrigation

(3) Dams, etc.

c) Fire - (as a tool) in improving range lands

d) Conversion of brush into better range

(1) Hand tools

(2) machinery

e) Noxious weed control

(1) hand tools

(2) chemicals

7. Grazing practices

a) Systems of grazing

b) Method of distribution of livestock.

The purpose is to determine the combination of systems of grazing seasons, and intensities of grazing, and methods of handling livestock that will produce the most livestock most efficiently.

8. Integration of other land uses with grazing.

a) Watershed

b) Lumber production

c) Recreation

d) Cultivated agriculture

e) Wildlife

Game

Waterfowl

Rodent

Predators

9. See how these land uses can be fitted in best with grazing or vice versa.

Study the effect of weather on forage fluctuations.