

November 22, 1935

FORESTATION OF PINE RANGES  
BURGESS SPRINGS EXPERIMENTAL RANGE

Summary for Field Use and Preparation of Reports

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Purpose

Burgess Springs Experimental Range is being used to study a few of the many phases of the range management problem in the Eastside pine region. One phase of the problem is to determine the effect of cattle grazing on the establishment and growth of ponderosa and jeffrey pine reproduction on cut-over land. In order to study this phase quadrats were established by mechanical selection and seeded in an attempt to simulate a good "catch" of pine seedlings. It would be impractical to wait for a good seed year since they occur only at infrequent intervals.

Location

Burgess Springs Experimental Range is located on the Lassen National Forest, T 33 N, R 8 E, portions of sections 24 and 25 and T 33 N, R 9 E, portions of sections 18 and 19, M.D.M. It is approximately 40 miles northwest of Susanville and 20 miles east of the Blacks Mountain Branch Station at Halls Flat. The seeding and establishing of quadrats was all done in the portions of sections 18 and 19, the cut-over portion.

Time

The quadrats were established between September 18 and November 7, 1935. Seeding of the quadrats started on October 28 and was completed by November 10, 1935. Experimental poisoning on approximately 60 acres in section 19 was

*where within section*  
2

done on October 21, 22 and 23, 1935.

Personnel

Surveying and staking out of quadrats was done by M. D. Stowell, L. R. Short, and R. W. Gardner. Seeding was done by L. D. Lloyd, M. D. Stowell, J. R. Bentley, R. W. Gardner, M. Swenson, and K. A. Taber. Poisoning was done by W. E. Fair of the U. S. Biological Survey. CCC labor was used on parts of the surveying and staking out of quadrats.

Description of Area

Area -- Approximately 550 acres in sections 18 and 19.

Drainage -- To southwest into ~~Squaw Valley~~ *Little Harvey Valley*

Elevation -- 5,675 - 6,190 ft.

Slopes -- Gradual, max. <sup>20%</sup> 20%, av. <sup>3%</sup> 3%

Aspect -- ~~SW~~

Soil -- Grey-brown, derived from lava

Weather ?

Site IV

Description of Cover

The timber type is typical Eastside ponderosa-jeffrey pine with a few junipers and ~~cedar~~ <sup>none</sup> mixed in in places.

The forage cover is made up of Festuca idahoensis, Carex sp., Sitanion hystrix, Wyethia mollis, Balsamorhiza sagittata, Ceanothus prostratus, Lupinus sp., Artemesia tridentata, A. arbuscula, Pursia tridentata, Chrysothamnus bloomeri, etc.

E { History of Stand

Fruit Growers Supply Co. logged the area in the summer and fall of 1934 with tractor and arches.

Methods of Study

Control consisted of a base line run from east to west between sections 18 and 19. This line was run with transit and chain, and elevations were carried with the transit. Stakes were set every 2 1/2 chains and right angles were turned on both sides of the base line from these. These lines were numbered from 0 to 26 starting from the range line between R 8 E and R 9 E.

Lines were then run north and south from the stakes on the base line with compass and chain, extending the right angles turned off. On these lines quadrats were set 1 1/4 chains from the base line, and every 2 1/2 chains thereafter until the fence around the area was reached. Stakes were set at 2 1/2 chains from the base line and every 2 1/2 chains thereafter. This made the quadrats and stakes alternate. On even numbered lines, posts were set 4 feet north of the base line stakes and of every 5 chain stake thereafter, making a 5 chain square grid over the area. Elevations were carried with double abney.

The quadrats are 1/4 milacre in size, 3.3 feet square, and are on the northeast side of each quadrat stake. A redwood stake was set on the outside of each of the four corners of the quadrats. Quadrat designations and elevations were all put on the southwest stake unless otherwise noted. These designations were line number and distance north or south of the base line, i.e. a quadrat 6 1/4 chains north of the base line on line 3 would be designated "3-6 1/4 N".

## Seeding

Ponderosa pine seed lot Kennett #2064 and jeffrey pine seed lot #2030 were first treated with a poisoned coating and then planted. Seeding was done with the aid of a revamped corn planter. The planting lips of a corn planter were cut wedged shaped and the seed desiminator was set to plant from 1 to 3 seeds in a spot.

The spots were spaced approximately 6 inches apart and an equal number of each kind of seed was planted both inside and outside the quadrats. Jeffrey pine was planted in the north half of the quadrats and ponderosa pine in the south half. The 36 spets were numbered the same as sections are numbered in a township both inside and outside the quadrats and records were taken on spots not planted on each quadrat.

A total of <sup>854</sup>~~836~~ quadrats were laid out and 836 of these were seeded.