



EFFECTS OF THINNING AND PRUNING  
DOUGLAS FIR REPRODUCTION

EXPERIMENT

PLOTS ESTABLISHED

WINTER 1947-1948

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### PURPOSE OF THE EXPERIMENT

The purpose of the experimental plots is to determine the effects of thinning and pruning on Douglas fir reproduction. Both the experimental plot and the check plot will be measured at the end of each growing season, and the growth rates on each will be noted.

### DESCRIPTION OF THE EXPERIMENTAL AREA

The plots are located west of Philomath on the Alsea highway at the point of entrance into the Siuslaw National Forest (north side of the highway)

Both plots are located on a rather steep slope averaging about thirty per cent. The exposure is southerly to southwesterly. Growth rates are good, however.

Stocking is generally poor to medium but varying widely within the plots.

One plot, the experimental plot, has been thinned, and the residual trees have been pruned to heights of 4 to <sup>but not more than  $\frac{1}{2}$  crown removed</sup> 6 feet. Thinning was limited to a spacing of 8 feet. This limit was not exceeded but was not always achieved. The objective was only to release the dominant, thrifty trees.

The check plot was measured, but no thinning or pruning was done. This plot will be used as a check on the experimental plot to determine, by comparison, any accelerated growth rates on the released, pruned trees.

The average age of the reproduction was found to be between 9 and 10 years (at the time of the improvement cuttings). Heights averaged about 17 to 18 feet, and diameters ranged from below six inches to five inches and above.

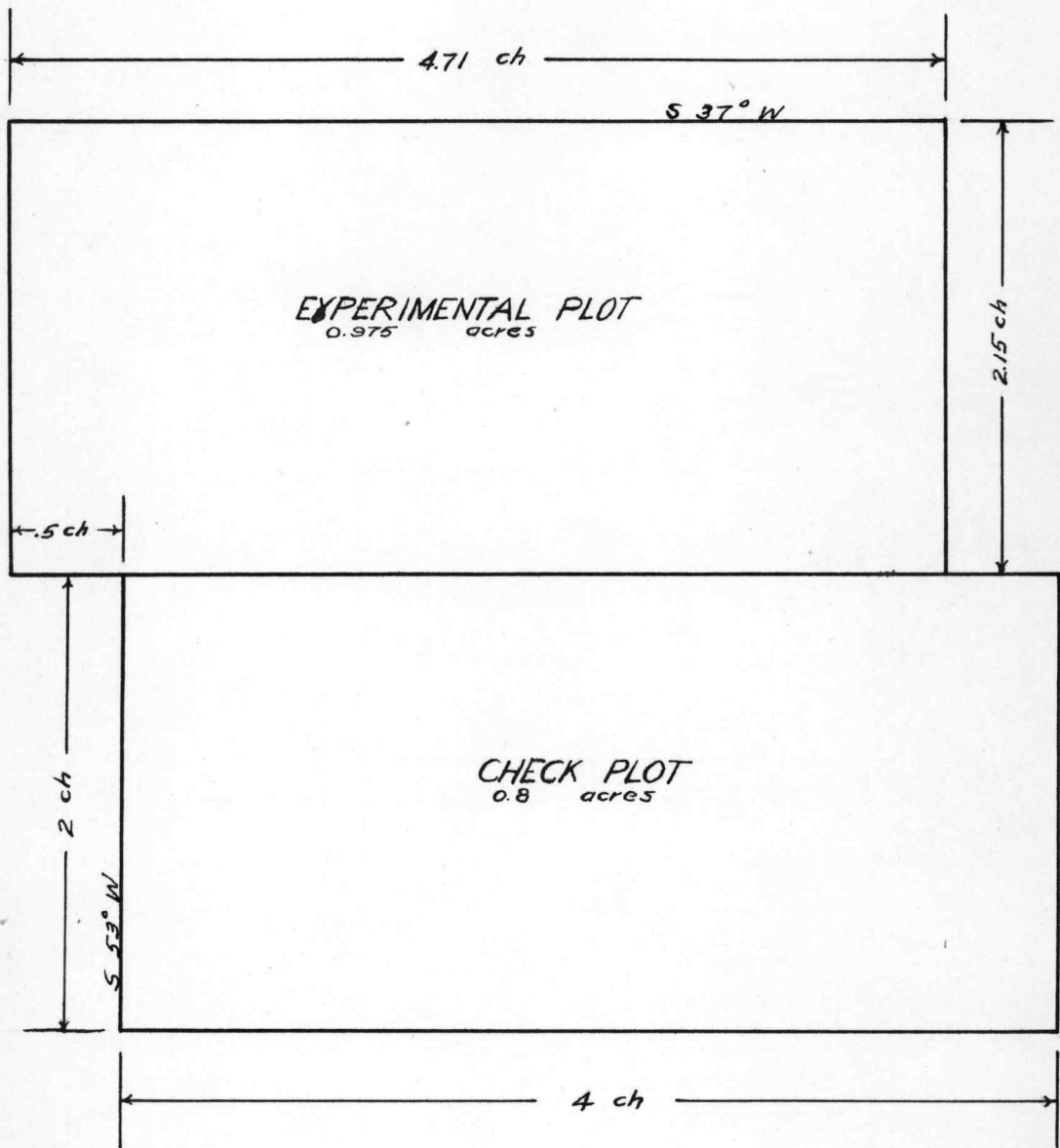


DATA--CHECK PLOT

Area in acres.....	0.8
Total Basal Area.....	9.517
Total Number of Trees.....	457

DATA--EXPERIMENTAL PLOT

Area in acres.....	0.975
Total Basal Area.....	20.972
Total Number of Trees.....	1093
Basal Area Removed by Thinning.....	7.296
Residual Basal Area.....	13.676
Number of Trees Thinned.....	588
Residual Trees.....	505



EXPERIMENT LAYOUT



*Experimental Plot from Highway*





*Experimental Plot - showing  
thinning and pruning.*



*Check Plot*



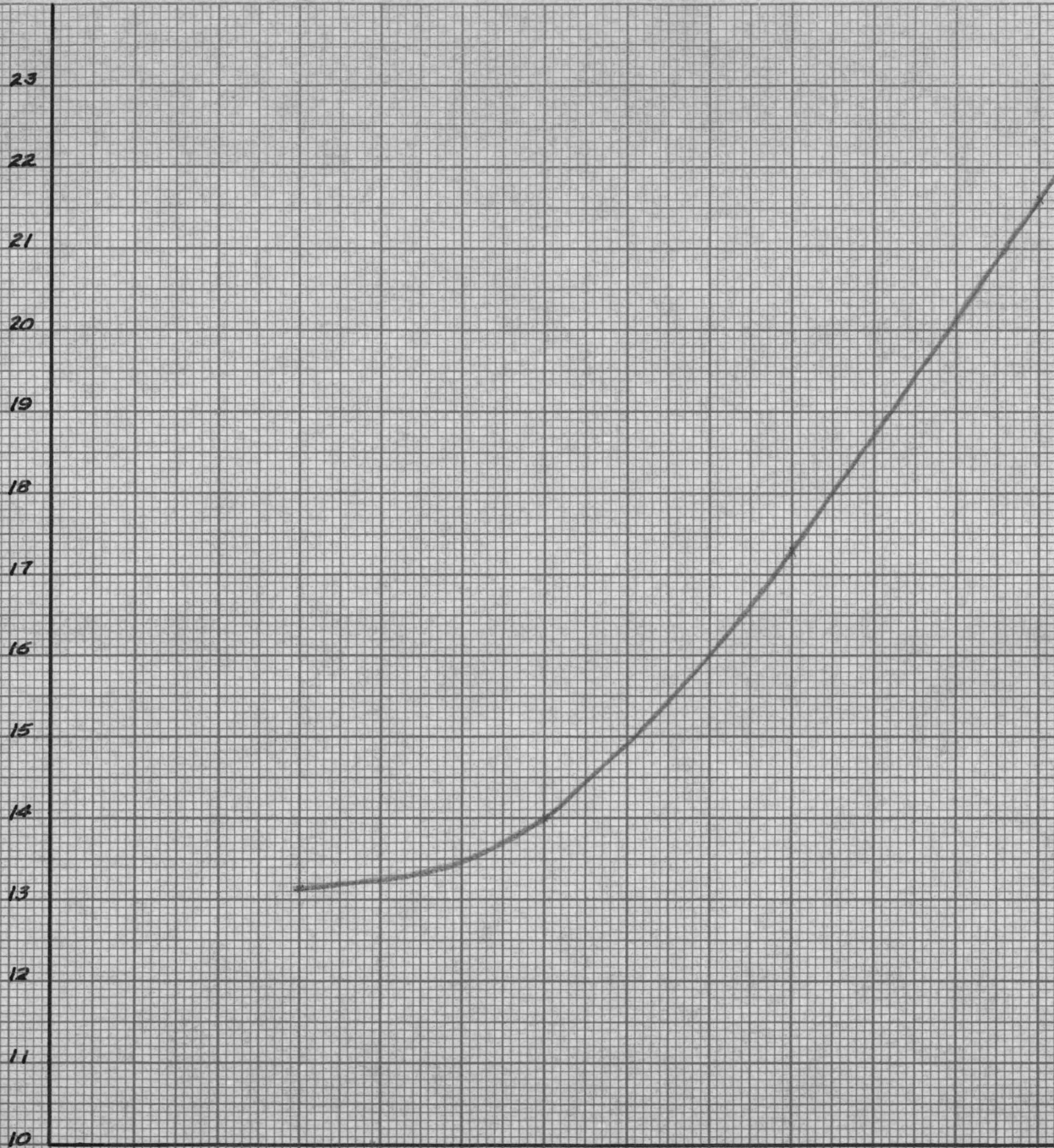
HEIGHT IN FEET

23  
22  
21  
20  
19  
18  
17  
16  
15  
14  
13  
12  
11  
10

DBH IN INCHES

0 1 2 3 4

HEIGHT CURVE  
CHECK PLOT





HEIGHT IN FEET

23  
22  
21  
20  
19  
18  
17  
16  
15  
14  
13  
12  
11  
10

0

1

2

3

4

DBH IN INCHES

HEIGHT CURVE  
EXPERIMENTAL PLOT

