

REGION 5 PROJECT

by

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INTRODUCTION

Some of you may be wondering why "Tree Improvement" is on a Nurseryman's Meeting agenda. In this Region we plan that the nurseryman will be one of the most important men in the program. Orchard management will be one of his duties. I am sure that elsewhere other tree improvement programs will also develop in this direction.

Region Five Tree Improvement Project began in 1957. Until last year it was mostly a developmental program. We were developing research findings into a program to fit the Region's needs. Much time was spent in developing techniques.

Carl Fowler headed up the program until his retirement this year and was assisted at first by Sid Mainwaring and later by Leroy Johnson. The program is now headed by Gaylord Parks and assisted by Boyd Elliott.

The project is headquartered at Placerville so as to take advantage of assistance from personnel based at the Institute of Forest Genetics and facilities at the Placerville Nursery.

PROGRESS TO DATE

Seed Production Areas have been established at 14 locations on eight National Forests There are 234 acres included in the Seed Production Areas. They are managed by the Forest and Ranger District personnel_ For the Rust Resistant Sugar Pine Project we have 119 candidate trees selected, and from these candidates there are 7,200 progeny under test for rust resistance, 1,225 grafts from these candidates are outplanted at two locations° (Badger Hill and Happy Camp, as of February 1966).

Two hybrids have been made on a mass production basis to help solve special reforestation problems:

Knobcone X Monterey is a rapid growing drought resistant tree, 306,000 seed have been produced.

Jeffrey X (Jeffrey X Coulter) is resistant to attack by pine reproduction weevil- 352,000 seed of this cross have been produced.

Breeding orchards for hybrid production are located at Badger Hill where we now have 27 geographic sources of Knobcone and 30 grafted Jeffrey pine hybrid producers.

The seed orchard program is underway with 206 superior tree selections made in Douglas-fir and ponderosa pine. Two grafted seed orchards have been started at Badger Hill. It is estimated that 850 superior trees of ponderosa pine, Douglas-fir and sugar pine will be needed. Most of these selections will be made In the next two to three years.

The ultimate plan for the foreseeable future of Region Five's seed orchard program is 18 seed orchards for a total of 125 acres. Sites for these orchards have been selected in or adjacent to the three Region Five Nurseries. They will be managed by the nurseryman,

SEED ORCHARD ESTABLISHMENT AND MANAGEMENT

In many respects a coniferous seed orchard parallels a fruit orchard. Actually there is little difference. They should be established on good agricultural land. They will require cultivation, pruning, irrigation, fertilizing, spraying and harvesting. In order to establish an orchard some of the processes are cultivating, sowing, weeding, irrigating, grafting, potting, and planting. Nurserymen are highly skilled in most of these operations. Of all the skilled people among foresters none are better qualified for seed orchard management than the experienced nurseryman. The nurseryman already has at his command machinery and people to do the required work.

From an organization standpoint there is much to be gained by having orchard management assigned to the nurseryman. The work is somewhat foreign to the usual work done on Ranger Districts. Peak work loads on timber sales, fire control and recreation work come at the same time much of the orchard work would have to be done. The peak work loads at the nurseries do not generally coincide with the work schedules needed for orchard management. In California and probably elsewhere the seed harvest time comes during the peak of the fire season. This has many times interfered with this important phase of the reforestation program.

It would appear that by adding seed orchard management to the nursery job the nursery could become a complete service unit to planting forests. Salary grade levels of nurserymen could be influenced by these added responsibilities.

We will now go to the field and see some of the work at Badger Hill.