

## Tree Improvement in New Hampshire

### Session I

The University of New Hampshire and the State are cooperating with the U. S. Forest Service in establishing seed orchards and seed producing areas in New Hampshire. The University of New Hampshire is represented by Dr. Harold Hocker, geneticist with the University; the U. S. Forest Service by Clyde M. Hunt, geneticist with the U. S. Forest Service; and the State by C. I. Arnold, Director of the State Forest Nursery.

At present, New Hampshire has a balsam fir seed orchard of approximately one acre, trees spaced 16' x 16' , and outstanding selections based on Christmas tree criteria. Selections have been made from plantations in West Stewartstown, Coos County (Roland Cooke's blue balsam plantation); Passaconaway, Carroll County; and Orange, Grafton County.

A white pine seed orchard site of about four acres is being cleared on the Merrimack River State Forest. This area is surrounded by red pine plantations, and it is more or less isolated from contaminating pollen. The area is close enough to the Merrimack River so that irrigation is possible. Grafting is being done on white pine in the nursery and is about one-third complete. We are looking for thirty ortets, with twenty-five grafts of each, or seven hundred fifty trees. White pine elite trees are being selected on the basis of lumber production.

A red pine seed producing area has been selected on the Blackwater Flood Control Dam area. Trees were planted in 1956 with blanks replanted in 1958. Trees will be thinned to approximately 16' x 16° , but better trees will be saved at the expense of spacing. No red pine seed orchard is contemplated at this time.

In the future, a white spruce seed orchard and/or seed producing area may be established. Should the demand for Fraser fir and Norway spruce increase, tree improvement work in these species is possible.

C. I. Arnold, Chief  
State Forest Nursery