

EXOTIC AND NATIVE TREE PLANTATIONS AT THE FOX RESEARCH FOREST AND VINCENT STATE FOREST, NEW HAMPSHIRE

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Many exotic and native tree plantations have been established at Fox Research Forest and elsewhere on New Hampshire State lands since the early 1930s (Baldwin 1965). These plantations consist chiefly of Norway spruce (*Picea abies*), European larch (*Larix decidua*), and Scots pine (*Pinus sylvestris*). Other species planted to a lesser extent include Douglas fir (*Pseudotsuga menziesii*), hybrid poplars (*Populus spp.*), hybrid chestnuts (*Castanea spp.*), concolor fir (*Abies concolor*), red spruce (*Picea rubens*) and Austrian pine (*Pinus nigra*).

The two species that received the greatest attention from the Fox Forest research program are Norway spruce and European larch. Fox Research Forest is the site of an International Union of Forest Research Organizations (IUFRO) provenance test for European larch. Seed collection continued from 1942 to 1944, seeds were planted at the Fox Forest nursery in 1946 and outplanted in 1948. This plantation contains replicates of 14 sources of seed from as far north as N58° 02' and as far south as N49° 16'. Countries represented in the seed sources include Germany, the Czech Republic, Scotland, Poland, Finland and Sweden. There also are several non-IUFRO plantations of larch at both locations including two hybrid larch plantations (Dunkeld).

Vincent State Forest is the location of an IUFRO provenance test for Norway spruce. The seeds were planted in our nursery in 1938 and transplanted in 1940 and outplanted in 1942. This plantation contains replicates of 25 seed sources ranging from as far north as N65° 58' to as far south as N43° 50'. Countries represented in the seed sources include the Czech Republic, Finland, Italy, Yugoslavia, Latvia, Norway, Poland, Romania, Sweden and Switzerland. Norway spruce was planted in a few other Non-IUFRO plantations at both locations.

An IUFRO plantation of Scots pine was started as sown seed in 1938, transplanted in 1940 and outplanted in 1942 at Vincent State Forest. Fifty-five replicates totaling about 25,000 seedlings represented 13 countries. Seed sources ranged from as far north as N68° 55' to as far south as N48° 42' and the countries represented included Belgium, the Czech Republic, Finland, Germany, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Romania, Scotland and Sweden. This plantation did not develop well and consequently was harvested.

Other plantations of interest are the 1943 trial of Eastern white pine at Vincent State Forest, the 1952 plantation of Douglas fir at Fox Forest and the 1935 plantation of hybrid poplars at Fox Forest.

Literature Cited

Baldwin, Henry I. 1965. **Inventory of seed sources – A key to New Hampshire plantations established to test provenances of forest trees.** Fox Research Forest, Bulletin #15. NH Division of Forests and Lands.