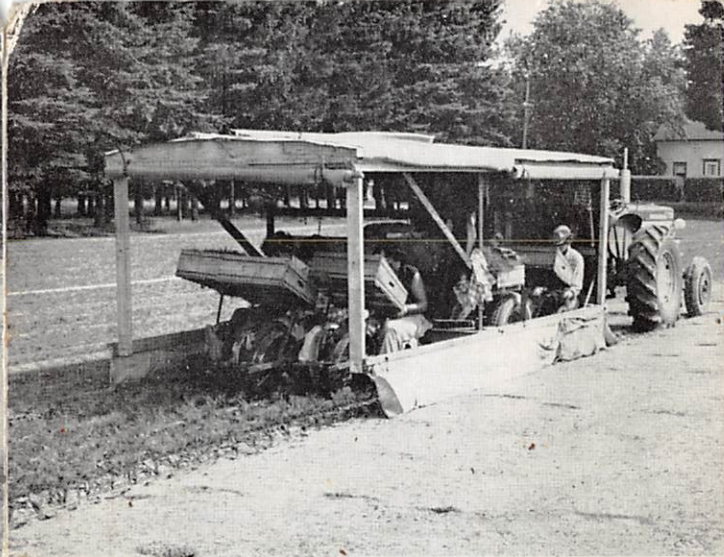
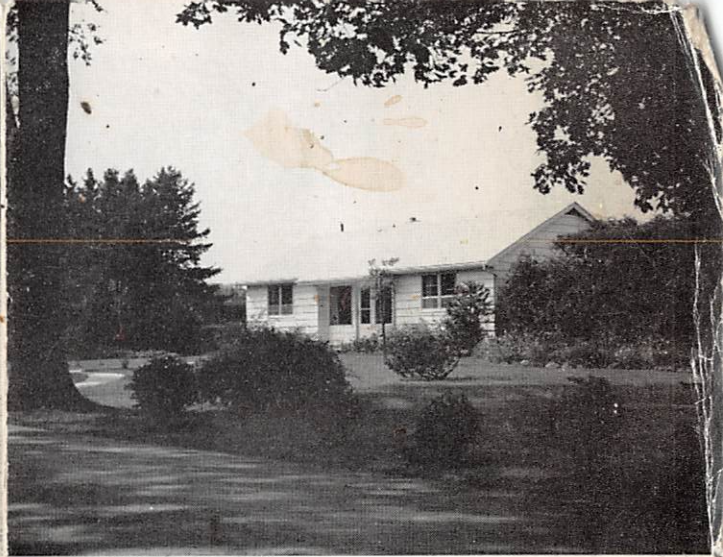


Seeding and Rolling Seedbeds

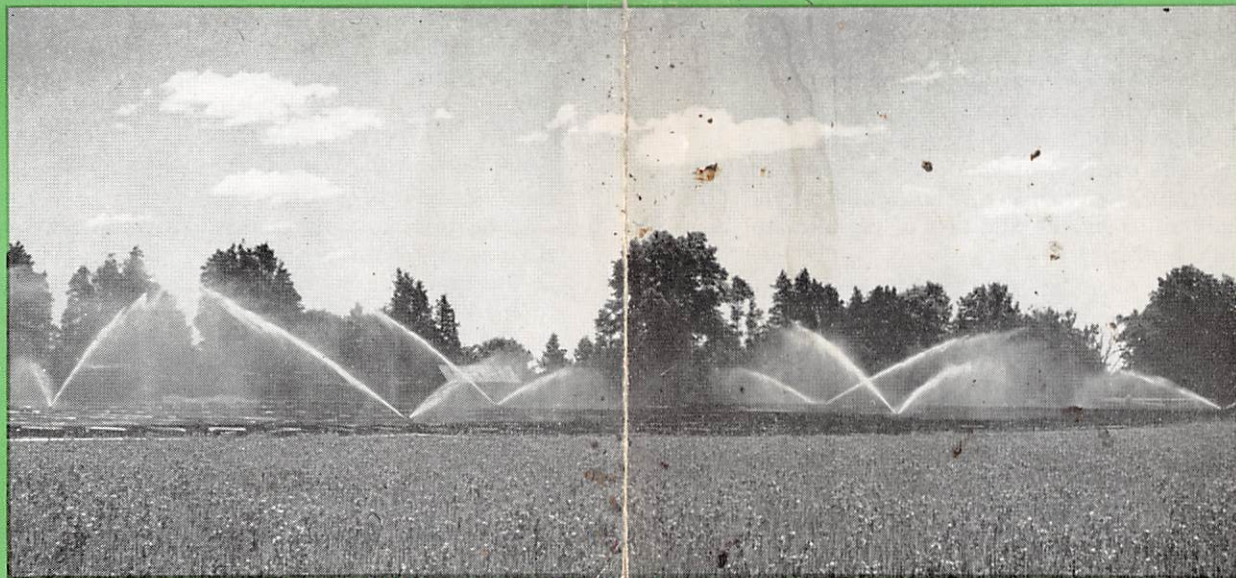


Six-row Transplant Machine in Operation



The Nursery Office

Spraying the Seedbeds



# ORONO FOREST STATION



ONTARIO

**Department of Lands & Forests**

HON. J. W. SPOONER  
Minister

F. A. MacDOUGALL  
Deputy Minister



# The Provincial Forest Station at Orono

The Station lies on the western outskirts of Orono Village, just off Provincial Highways No. 35 and No. 115 and four miles north of their junction with No. 401.

A glance at a topographical map of the area shows a broad ridge running eastward from York County to Prince Edward County, and this offers a clue as to why the nursery was located at Orono. Of glacial origin, much of the soil on the ridge originally grew fine pine forests. After clearing, the lighter soils proved unsuitable for farming, and many farms were abandoned. The founders of Ontario's reforestation program wisely chose this site because it was near the centre of the area, enjoyed good rail and road connections, and was favoured with an adequate water supply.

Many of the trees grown at Orono in the past quarter-century now stand in thriving plantations in the County Forests of York, Ontario, Durham and Northumberland. They form windbreaks around thousands of farm homes and have helped to anchor drifting sand ridges. They represent a paying crop of timber for the future and, even now, are yielding saleable products from thinnings.

Development of the Orono nursery began in 1922 on the 350-acre tract which was the original purchase. The first seedbeds were prepared and sown that year and 200,000 two-year-old seedlings were transplanted. Gradually, the annual production was increased to 4,000,000 trees and maintained at this level.

After World War II, an additional thousand acres were purchased to meet the increasing demand for nursery stock. Of the total 1,350 acres, 400 acres are suited to nursery stock production; 650 acres are rough, rolling land, suitable for plantations; and 300 acres are low-lying creek bottom land.

The current output is eight million trees per year. Almost the entire production is of cone-bearing species such as pine and spruce, with only two per cent in hardwoods. Approximately 70 per cent of the trees are shipped for planting on Crown lands and in County and Conservation Authority. Forests; the remainder go to private landowners.

*Just as a farmer must make careful preparations for his crops in season, so must the nursery forester make careful plans to ensure a good crop of trees.*

Windbreaks of evergreens, mostly white cedar, have been planted around each compartment to protect the small trees from drying winds and to prevent soil from drifting. The fertility of the soil is maintained by the addition of organic and inorganic fertilizers.

Seed is sown late in the fall, usually during the last two weeks of November, in prepared beds running the full length of the compartment. The seed is covered with a thin layer of sand after sowing and the completed beds mulched with rye straw for winter protection.

When the seed germinates in the spring, the mulch is carefully removed and the beds shaded with lath shades as required. The young seedlings

are cared for during the growing season by supplying necessary moisture by irrigation. The beds are kept free of weeds and fertilized as needed to produce healthy vigorous seedlings.

When the seedlings are two years old, they are lifted from the seedbeds. Some of them [for example, jack pine and Scots pine] are ready for shipping. Others are transplanted at a wider spacing to permit further development.

Transplanting is done with a six-row transplanter drawn by a tractor. With this machine, six workers can transplant about 100,000 seedlings per day.

Seedlings are grown for one or two years in the transplant beds. During this period, weeding, watering and fertilizing are continued as required. Weed control is achieved mainly by the use of selective weed sprays which are applied with a boom-type pressure sprayer at a rate of 30 to 40 gallons per acre. This is supplemented by hand weeding.

The trees produced are usually shipped from the nursery in the spring. They are first loosened in the ground by a mechanical lifter blade, then pulled by hand, culled and tied in bundles of 25. In the packing shed, they are packed in crates, cartons or bales with moist moss around the roots, ready to be picked up by applicants or shipped out by transport or railway express.

*The nursery staff welcome visitors to the nursery and are pleased to answer questions about their work and the trees they grow. When further information is desired, please apply to the nursery superintendent.*