

University of Minnesota, School of Forestry  
and the Blandin Paper Company

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Several experimental plantations have been established by the University of Minnesota in cooperation with the Blandin Paper Co. at the D. M. Gunn Memorial Park near Grand Rapids. They include white spruce, black spruce, red spruce, Norway spruce, Rosendahl spruce, Japanese larch, some miscellaneous conifers, and an arboretum representing primarily species of Populus and Betula. Special attention was devoted to four of these plantings.

Plantation A

In the spring of 1958 twenty-five lots of stock were hand planted 5 feet apart in lattice square arrangement, using 25-tree square plots and three replications of each lot. Fail spots were replanted in May 1961. The stock included 19 Ontario and Quebec sources of white spruce (grown in 1954 and 1955 at the Petawawa Forest Experiment Station Nursery, Chalk River, Ontario and in 1956 and 1957 at the Hugo Sauer Nursery, Rhinelander, Wis.), three additional white spruce sources and one each of black spruce, Norway spruce, and balsam fir (grown at the General Andrews State Nursery and Kimberly-Clark Inc.'s Knife River Nursery, both in Minnesota). White spruce border rows were planted so there are two around each block and one around each plot.

Some distinct differences between sources are becoming apparent.

Plantation B

In the spring of 1962 there were planted 26 lots of 2-2 stock in randomized complete blocks, using 10 replications of 4-tree (row) plots. The trees were hand-planted at an 8 x 8-foot spacing, using two local white spruce border rows around the plantation.

The stock consisted of 25 sources of white spruce from over the species' range (supplied by LSFES as 2-0 stock from the Hugo Sauer Nursery, Rhinelander, Wis. in the spring of 1960 and grown in the NCSES nursery until the spring of 1962), one Itasca County source of white spruce, and one Itasca County source of black spruce, both supplied by the Blandin Paper Co. nursery. Most of these sources were also outplanted near Burgeson's Landing, Cloquet, North Branch, and St. Paul, Minn.

Some source-related differences already seem evident.

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### Plantation C

Five sources of 2-2 Norway spruce were hand-planted at 8 x 8-foot spacing in the spring of 1962. This stock was supplied by the LSFES as 2-0 stock obtained from the Petawawa Forest Experiment Station in the spring of 1960 and was grown for 2 additional years in the NCSES nursery. The study is laid out in randomized complete blocks using 5 replications of 4-tree (rows) plots per source. There is a single border row around most of the plantings; three different lots of stock (some hybrid white x black spruce, some white spruce, and some black spruce) were used in it.

These Norway spruce sources were also outplanted at the North Central School and Experiment Station and at North Branch.

### Plantation E

In May 1962 the following stock was hand-planted at 8 x 8-foot spacing in 12-tree row plots: (1) open-pollinated Cromwell white x black (Rosendahl) spruce hybrid, and (2) Itasca County black spruce. Itasca County white spruce stock was planted as border rows on the north and south sides without replication.