The Blandin Nursery and Tree Improvement Work

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The Blandin Companies are situated in Grand Rapids, Minnesota, a town of approximately 8,000 people. Grand Rapids is located about 80 miles west of Duluth and close to 170 miles north of Minneapolis. Up until a few years ago, the Blandin Companies were an independent firm with no ties to any other major industry. However, in 1977 Blandin was acquired by British Columbia Forest Products Ltd., Vancouver, British Columbia, Canada, a major forest industry specializing in lumber and pulp. Today, the Blandin Companies consist of an eight hundred ton per day coated publication paper mill and a waferboard mill.

The Blandin Companies wood requirements presently include an 80/20 mix of aspen and spruce – balsam pulp. As a result it is the company's current reforestation objective to convert off-site aspen stands, site index 60 and below to spruce and their northern mixed hardwood sites to hybrid aspen.

Although the paper mill dates back to the teens, Blandin's reforestation efforts did not get underway until the mid 1950's. During that time, the company established a tree nursery with the sole objective of growing quality spruce seedlings for reforestation on company lands. Since those early beginnings, the nursery has raised and shipped out close to 121/2 million spruce and pine seedlings. Today Blandin's nursery raises approximately 1.5 million seedlings of various age classes. Over 95 percent of the stock is white and black spruce with the remaining trees being primarily red pine. Historically, both of the spruces have been grown as 2-2 stock; however, due to their extremely large size considerable black spruce has been outplanted as 2-1 seedlings. The red pine has, for the most part, been shipped as 2-1 stock.

Blandin grows all of its own bareroot conifers, and, in fact, annually exceeds its needs. As a result, the company maintains excellent relations with the public by supplying local tree farmers and other private land owners with this surplus stock. Over the years, an estimated 4 million trees have been distributed to these people for planting for reforestation purposes.

During this same period of time, we have planted on company lands close to 9 million seedlings, again all raised in the company's nursery facility. Although in the past there have been years when we have raised and planted close to 3/4 million trees, our current annual production is approximately 350 thousand bareroot seedlings. Each year about 250 thousand of these are planted on the company's industrial forest.

To supplement our bareroot program, Blandin contracts the growing of containerized spruce seedlings. Approximately 110 thousand white and black spruce trees are grown each winter by a Minnesota commercial grower. We have been planting container seedlings since 1979 and all of our experience has been with the styroblock 2A container.

Blandin's annual planting program consists of approximately 525 acres. 350 acres are planted to Blandin grown bareroot stock; and another 150 acres are planted to container seedlings. The remaining 25 acres are being planted to hybrid aspen.

To date, over 9 thousand acres of successful spruce plantations exist on company lands. The oldest stands are 25 years old, or about one-half the way to expected rotation age.

Since 1980, we have made attempts at raising bareroot hybrid aspen seedlings. Due to non-conducive nursery and climatic conditions, our success has been marginal and we've only been able to raise a few thousand trees each year. The seedlings have been planted as 2-0 stock on northern mixed hardwood sites and, to date, approximately 40 acres of plantation have been established. Future growing techniques will involve the use of containers under greenhouse conditions prior to transplanting into the nursery beds.

The Blandin Companies are deeply interested and involved in current efforts to improve forest tree growth through genetic research. The company's tree improvement work first got underway in 1955 when a five-year $25,000 grant was made to the University of Minnesota. These monies were to be used in furthering the establishment of a forest tree improvement field study center at Grand Rapids. The project leader for this cooperative work was the late Dr. Scott Pauley, forest geneticist at the University of Minnesota Forestry School.

Up until his death, Dr. Pauley was instrumental in establishing on Blandin lands various spruce, larch, and pine seed source studies. Also in 1967, Dr. Pauley spearheaded the planting of the first white spruce seedling seed orchard in Minnesota. Established on Blandin land, this 4.5 acre orchard contains 239 open pollinated progenies. Subsequently, the stand has been measured and thinned with the objective of eventually ending up with approximately 450 individual trees in the seed orchard. To date, seed has been collected once with the resulting progenies planted to test their superiority.

In recent years, Blandin's tree improvement work has been guided by Dr. Carl Mohn, forest geneticist at the University of Minnesota College of Forestry; and most recently by Robert Stine, tree improvement specialist with the Minnesota Tree Improvement Cooperative. Blandin's work through the Cooperative will concentrate on white and black spruce genetic improvement.

As pointed out earlier, the Blandin Companies are very dependent on aspen as a raw material resource. As a result of our increasing need for aspen pulp, we have involved ourselves in managing this resource; and we have developed an interest in aspen tree improvement work. Our work with aspen has been guided by the Forest Genetics Group of the Institute of Paper Chemistry, Appleton, Wisconsin. Since the mid-50's this group has been involved in working on ways of improving growth and quality of aspen. Their work has led to the discovery of outstanding diploid and triploid aspen hybrids which are what Blandin is presently raising and outplanting. A 15 year old test planting on company land of the triploid aspen material showed growth averaging nearly 250 ft. per acre per year or 5 to 6 times better than native aspen.

The Blandin Companies have been involved in forest tree improvement work and intense reforestation activities for almost 30 years. This history illustrates the importance the company places in their forestry programs; and they have dedicated themselves to continuing to carry out major efforts in developing improved and expanded timber growth.