Recent Advances in Forest Tree Improvement by Industry in the Lake States

by B. L. Berklund 1/

This is a report of progress since that presented at the 1955 Conference in Wisconsin Rapids, Wis. For convenience it has been classified into four categories: Seed and nursery practices, field trials, silviculture, and scholarship and related activities.

Seed Collecting and Nursery Practices

The Blandin Paper Company has established a tree nursery and experimental. plantings of various aged stock as a guide in planning future nursery production.

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1 / Forester, Nekoosa-Edwards Paper Cc., representing Lake States Council of Industrial Foresters.

The Rhinelander Paper Company also has established its own nursery.

The Blandin, Kimberly-Clark, Nekoosa-Edwards, Northwest, and Rhinelander Paper Companies report an emphasis on controlled seed collections. Some no longer buy "open market cones" and all eventually hope to have established controlled-supply sources.

Cooperative or Independent Field Trials of Forest Stock

The Diamond Match Company is working closely with Dr. Scott Pauley of the University of Minnesota in field-testing aspen and birch stock. Plots were established in 1952 at Orr, in 1956 at Cook, and in 1957 at both Cook and Cloquet, Minn.

In 1956 the Kimberly-Clark Company established hybrid poplar plantings at Loretto, Mich., from 22 different clone origins, and in 1957 they set out a poplar hybrid planting at Marenisco, Mich.

The Mosinee Paper Mills Company reports second-year survival of 98.5 percent and total. height of 0.98 foot in their cooperative Lake States jack pine study, with a remeasurement due in 1958.

In 1956 the Nekoosa-Edwards Paper Company established 3 replicates of red pine seed source studies at both Nekoosa and Minocqua, Wis., and 3 black spruce replicates in northern Wisconsin. In 1957 they set out 3 white spruce seed source replicates at Minocqua. All replicates are being examined this fall, with the 1951 jack pine replicates (reported as established at the previous Conference) showing considerable insect problems, primarily the jack-pine shoot moth.

Silvicultural Practices

The Cliffs-Dow Company is working closely with the Upper Peninsula Forest Research Center of the Lake States Forest Experiment Station, the Chatham Branch of the Michigan Agricultural Experiment Station, and the Munising Ranger District of the Upper Michigan National Forest in hardwood genetic stand improvement.

In 1957 the Rhinelander Paper Company began a large-scale project, the purpose of which is to promote and favor sprouting from the best aspen trees of the stand. In timber-marking coniferous stands, emphasis of genetic improvement has gone beyond general marking practices.

Scholarships and Other Activities

The Blandin Paper Company provided a Tree Improvement Arboretum and a 5-year grant of $25,000 for use in forest genetics work by the School of Forestry, University of Minnesota.

The Kimberly-Clark, Marathon, and Rhinelander Companies contribute financial support to the aspen polyploidy program of the Institute of Paper Chemistry, Appleton, Wis.

It is gratifying to observe a growing awareness of the need for application of genetic principles in the general forestry program as exemplified by wide participation of industry, particularly the pulp and paper segment. There are, no doubt, other items of progress which, because of their continuing nature, have not been reported by the various industry members at this time.