

CURRENT FOREST TREE IMPROVEMENT RESEARCH
IN THE LAKE STATES

by Paul O. Rudolf^{1/}

Some 70 research workers in 11 research agencies presently are conducting 113 formal forest tree improvement studies in the Lake States, according to a survey made by the Lake States Forest Tree Improvement Committee in 1959. In addition, most of these agencies are also carrying on a number of less intensive informal studies. Many of these research agencies are cooperating with each other in this work, but 56 other, mostly non-research, agencies have also aided the projects through providing land, field help, financial assistance, nursery facilities, seed, and other items.

Current tree improvement studies in the Lake States concern more than 15 genera, but almost three-quarters of them involve the pines, spruces, and poplars. Red pine is receiving greatest attention in its genus and is followed in order by jack pine, eastern white pine, and several exotic species. In *Picea*, white spruce is most prominent, followed by black spruce, Norway spruce, and several exotic spruces. The native quaking and bigtooth aspens are the major Populus species being studied in this region, but a number of other species and hybrids also are involved.

Current projects have been classified into 33 subject-matter categories. About half of the studies concerned variation, both natural and induced. Racial variation was the most common category; it included more than one-fourth of all studies. Most of the other studies are in the fields of supporting sciences, mostly in botany (especially plant physiology) and special techniques (notably vegetative propagation). Fundamental genetics research accounts for about 5 percent of all current studies.

Brief reports on current research were presented at the conference by representatives of the research agencies, as follows:

1/ Chairman, Research Evaluation, Coordination, and Planning Subcommittee of the Lake States Forest Tree Improvement Committee, and Research Forester, Lake States Forest Experiment Station.

Forest industries - J. W. Macon
Institute of Paper Chemistry - D. W. Einspahr
Quetico-Superior Wilderness Research - C. E. Ahlgren
Forest Products Laboratory - M. Y. Pillow
University of Michigan - S. H. Spurr
Michigan State University - J. W. Wright
University of Minnesota - Paul O. Rudolf (for Scott S. Pauley)
University of Wisconsin - R. R. Hartig and R. F. Patton
Lake States Forest Experiment Station - Paul O. Rudolf

With one exception these reports are not included in the proceedings because they are covered in a separate publication.^{2/} The report for forest industries is appended because it includes considerable information not available elsewhere.

These surveys give a reasonably good account of present forest tree improvement research in the Lake States. Of course, any quantitative listing of projects overlooks differences in size, cost, value, and quality, but this one does help to show where current interests and activities are greatest. It also helps point out areas where more emphasis may be needed. So not only do we know better where we are, but also we have a clearer view of the way we should go.

2/ "Forest Tree Improvement Research in the Lake States: A Survey by the Lake States Forest Tree Improvement Committee," Lake States Forest Experiment Station, Station Paper 74, September 1959. Copies of this report can be obtained by writing to the Station at St. Paul 1, Minn.