Forest tree breeders discuss silviculture

The Twelfth Meeting of the Committee on Forest Tree Breeding in Canada — Comité Canadien d'amélioration des arbres forestiers — was held August 18 - 20, 1970, at la Faculté de foresterie et de géodésie, Université Laval, Québec, under the chairmanship of Prof. Louis Parrot. The program consisted of two days of technical and business sessions and two half-day field trips.

The first day of the technical meeting was devoted to a symposium: **Tree Breeding and Silviculture — Needs and Objectives**. Eight speakers from provincial forest services, three from universities, and two from the Canadian Forestry Service discussed plans regarding areas and species to be regenerated, seed requirements, delineation of seed zones, seed production areas and seed orchards, and related silvicultural and economic questions. The great variety of conditions in the various provinces, and the interdependence of workers in different disciplines became apparent. Although silviculture offers a variety of ways to increase production, one of them, the use of adapted populations and genetically improved seed, is one of the most economic procedures simply

because seed cost constitutes only a small fraction of silvicultural expenditures. Usually the cost of superior seed is offset by increases in yield of as little as 2 to 5 percent. The need and opportunity for production of improved seed is recognized in all provinces but little selection and breeding work has been undertaken in most provinces east of British Columbia. Although more genetic information is becoming available from year to year that is required to plan efficient breeding programs, **only limited progress can be made unless the management forester becomes more actively involved** in developing seed production areas, selecting plus trees and starting seed orchards. Forest geneticists alone, usually employed in a research organization, are unable to carry out a substantial tree improvement effort.

In the morning of the second day the participants travelled to la Station Expérimentale de Valcartier, maintained by the Quebec Region, Canadian Forestry Service. In a red spruce provenance experiment, the effect of natural hybridization with black spruce on growth and hardiness could be observed. Black-spruce-like hybrids were hardier and faster grow-

ing than pure red spruce. Nursery experiments with Quebec yellow birch and range-wide origins of black spruce demonstrated approaches to the study of geographic variation in growth, hardiness and survival. Projects in vegetative propagation and testing of poplars for disease resistance were discussed.

A trip to le Parc des Laurentides was scheduled for the afternoon. In the Epaule District, Messrs. Léopold Dion and Claude Tremblay of la Société Forestière Domtar Ltée., explained their intermediate cutting program. In a spruce-fir forest, the yield of usable wood was increased from 21 cu ft per acre per year with clear cutting to 52 cu ft with intermediate cutting. Additional costs per cord ranged from \$1.50 to \$4.00. Growth-and-yield and fertilizer-trial sample plots were inspected. The Laval University Forest, Forêt Montmorency, was visited next with its excellent facilities for research and student training. Dr. Marcel Lortie, Director of the Quebec Region, Canadian Forestry Service, was the speaker at the banquet held there.

The third day was first occupied with the discussion of reports submitted by members actively involved in research and breeding programs. These reports will be published in the Proceedings of the Twelfth Meeting together with the symposium papers. The subsequent business meeting dealt with such matters as international arrangements for seed procurement, seed certification in Canada, and a review of the applied forest genetics program in Canada. A new executive was elected, with Dr. D. P. Fowler as Chairman, Mr. G. K. Kiss as Co-Chairman, and Dr. L. Roche as Executive Secretary. The next meeting will be held in August 1971 at Prince George, British Columbia.

E. K. Morgenstern