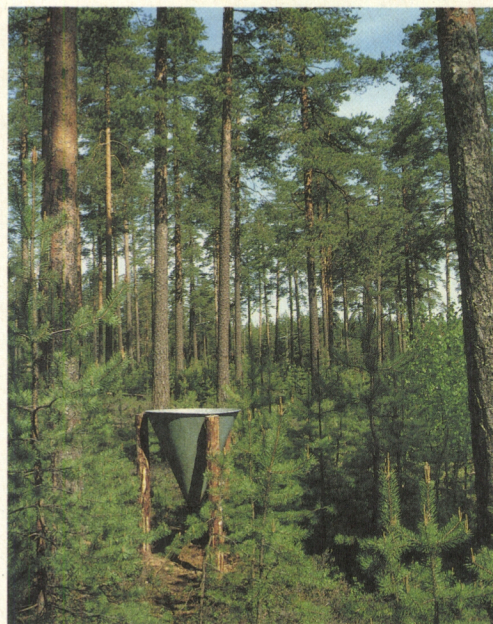


DEPARTMENT OF FOREST PRODUCTION

The Department of Forest Production studies silvicultural and forest regeneration methods, the growth and variation in growth of the forests, timber harvesting problems and the raw-material properties of timber. The Department is responsible for managing the land and water areas under the jurisdiction of the Institute, maintains the field experiment register for the whole Institute, and coordinates field experiment activities.



Long-term experiments as the basis of research

Forest production research is a form of applied research which presupposes extensive field experiments. The Institute is responsible for managing the experimental areas and nature conservation areas where the long-term experiments vital for the

well-being of Finland's forests are carried out. The oldest of these experiments are over 70 years old. Experiments on the institute's land include cultivation experiments with exotic tree species, seed crop, drainage and fertilization experiments, and experiments in which thinning and other treatments are being compared.

Most of this research is carried out at the Institute's research stations.

The Department of Forest Production works in close contact with the practical forestry sector. Concrete examples of this include maintaining up-to-date timber-measuring guidelines for commercial forestry and the forest industries.

Future challenges for silvicultural research

The current under-utilization of forest resources and the threat posed by air pollution and climate warming set new challenges on silvicultural research. For instance, the problem of how best to utilize small-sized timber is directing research towards questions of energy forest production.

However, the under-utilization of forest resources must not be allowed



Use of small-sized timber from first thinnings for energy and pulpwood is an important issue in current research.



to result in poor management of the forests; the forests require continuous care if they are to retain their vitality in the future, too. However, silvicultural measures have to be developed that ensure the survival of threatened species and forest diversity, for instance. This presupposes reliable information about the effects of forest treatment methods on forest ecosystems.

Research forests

The Institute manages experimental areas and nature conservation areas stretching from the Solböle experimental area in Tammisaari in the south to the Malla nature reserve at Kilpisjärvi in the north. Administration of some of the experimental ar-

reas is the responsibility of the local research stations, and some areas are directly under the Department of Forest Production. The land and water areas managed by the Institute are primarily intended for research purposes. Areas without any current experimental activity are primarily managed as commercial forests in order to create a diverse forest milieu. The provision of research data to interested parties is also taken into account when deciding how best to utilize the land. Hiking trails and demonstration areas are being constructed in the research forests.

The aim of the national parks under the jurisdiction of the Institute — Pallas-Ounastunturi, Pyhätunturi and Koli — is the conservation and maintenance of nature in an untouched state for future generations. In addition to recreation, the parks serve the needs of research and teaching.



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