

Ontario.—Accumulative improvements in organization and technical advances in forest management and forest protection have been achieved under the long-term policy of the Ontario Department of Lands and Forests. The object within view is a permanent balance between forest growth and forest harvesting—a high, sustained yield of forest products in perpetuity. The immediate benefits of the long-range programs are represented by the improvement in fire control. Although, because of increased forest travel by sportsmen and summer vacationers, there was a large increase in the number of fires in 1957—1,641 as compared with an annual average of 1,389 in the preceding ten years—the area destroyed was limited to 46,500 acres compared with an average during the preceding ten years of 203,500 acres, a reduction from 147 to 28 acres per fire.

Most of the forest fires (85 p.c.) were caused by human carelessness, but the value of timber destroyed on Crown lands in 1957 was estimated at only \$463,000 (\$2,870,000 in 1956), this relatively low amount being apparently the result of continuing improvement in fire detection and suppression. Over 300 lookout towers are supplemented by aerial patrols and hundreds of two-way radios provide efficient communications. Land, water and air transport permit rapid concentration of trained fire fighting crews well supplied with modern equipment, much of it developed within the Department. An important innovation during the past year was the dropping of water from aircraft to check fires.

With improved protection against fires, insects and diseases, greater benefits are expected from the increasing rate of reforestation. During the year ended Mar. 31, 1958, 9,500,000 nursery-produced forest trees were planted on Crown lands, 4,500,000 were planted on areas managed in co-operation with municipalities and conservation authorities, and 12,500,000 were supplied to private land owners. With the expansion of five nurseries and the development of eight new nurseries, production is expected to reach 60,000,000 trees by 1962 or 1963.

An important part of the Ontario program is the stimulus given to natural regeneration of forest trees. New developments include the improvement of the forest seed bed; cutting methods that increase the natural seed supply and promote survival of seedlings; and herbicides which are sprayed from aircraft to free valuable young conifers from the competition of worthless shrubs. After ten years of experimentation, scientists in the Department's Division of Research have developed a white pine that is expected to be highly resistant to the blister rust disease. A fast-growing hybrid of poplar and aspen has also been developed. Many more investigations of tree strains, diseases, pests and soils are being continued.

To place Crown forest lands directly under professional management, 81 Crown Management Units have been formed (as of Mar. 31, 1958). Special mention may be made of the Petawawa Management Unit as the first of a series of projects to rehabilitate the pineries of the Ottawa-Huron area. In various districts, advanced forestry is being practised in pilot units to develop procedures and train personnel for 'stand' improvement all across the province.

In addition, master plans for areas totalling 85,000 sq. miles have been received from industrial licensees whose management operations and cutting practices are subject to governmental approval. Mills are limited to a size proportionate to the raw material readily available; the maximum cut allowed any unit in one year is 85,000,000 feet. Crown timber dues have increased steadily from \$11,396,460 in 1952 to \$14,431,008 in the year ended Mar. 31, 1958.

Under agreements with 107 large operators (over 50 sq. miles) and 316 smaller operators, wasteful practices are defined and prohibited. The integrated operations now required ensure that no part of the tree is wasted—a telephone pole, a railway tie, a mine timber, pulpwood and other products may all come from the same tree.

Looking ahead to the expanded forest regeneration program of the coming years, the majority of licensees have promised their co-operation in following Departmental standards and specifications. The approximately 300 foresters employed by private industry in Ontario will materially assist Departmental foresters (who now number 182) in the continuous improvement of provincial forests.