

Provincial Hatcheries.—Ontario operates 28 hatcheries and rearing stations. Excellent results have been produced in the culture and distribution of the various species of both commercial and game fish. Hundreds of millions of fry and fingerlings, comprising whitefish, herring, pickerel, trout (lake, speckled, brown and Kamloops), maskinonge, bass and ouananiche are distributed annually. Two of the finest trout-rearing stations on this continent are located in Ontario at Dorion near Port Arthur and at Hill Lake near Englehart.

Fisheries Research.—Research in Ontario is carried on in the Great Lakes where commercial fisheries problems are being investigated, and in inland waters where game-fish populations are being studied. The Manitoulin Island station conducts studies relating to the removal and utilization of the less valuable species and the effects of this removal on stocks of the more valuable commercial and game species. In Algonquin Park, a careful record of angling quality is kept in a number of test lakes to allow evaluation of management techniques. Certain of the more barren lakes are being treated with inorganic fertilizer and its effect on the microscopic organisms and fish is recorded.

The habits of lake trout and eastern brook or speckled trout are being studied in order to provide additional information on the proper management of these species. The increase in the sea lamprey and the drastic drop in production of lake trout in recent years in Lake Huron (including Georgian Bay and North Channel) are believed by many authorities to be directly related and have led to considerable joint research by the Ontario Government and by Federal and State Governments in the United States. Co-operation is maintained in the exchange of biological findings and, where practicable and feasible, the results are applied in an attempt to control this menace.

Established fish-management principles are applied by biologists in the various forestry districts. Their program includes such projects as biological surveys and investigations, bass harvesting, coarse fish removal, sea lamprey control, creel census studies, fish tagging and other related subjects.

Manitoba.—The fisheries of Manitoba are administered by the Provincial Department of Mines and Natural Resources. Supervision of the various commercial operations are carried out by officers using patrol boats in summer and bombardier snowmobiles in winter; in addition trucks and cars are used for routine patrols throughout the year. Departmental officers, working in co-operation with federal authorities, give special attention to the quality of the fish, a program that has been found to be beneficial to the industry as a whole.

During 1953, production from commercial fishing amounted to 16,036,300 lb. from summer operations and 15,301,800 lb. from winter operations, a total of 31,338,100 lb. Estimated value as marketed was \$5,960,000. Pickerel, whitefish and saugers were the most important species caught.

The filleting trade each year assumes more importance and plants are being expanded and improved. High-quality fillets in attractive packages are becoming "best sellers" in the retail trade. Winnipeg is the principal domestic market but approximately 90 p.c. of the catch is exported to the United States.

The fish cultural program in Manitoba for 1952-53 included the operation of five fish hatcheries, two egg collecting camps, a temporary trout hatchery and a trout rearing station. Four of the five hatcheries are situated on the commercially fished lakes, and one, a sport fish hatchery, in the Whiteshell Forest Reserve.