

dant, wild fish resources have diminished, and in the past quarter-century the intensive multi-nation exploitation of ocean resources has brought about the establishment of international commissions to regulate the utilization of fish stocks. These efforts did not succeed in curtailing overfishing, and the depletion of stocks led to Canada's extending its fisheries management jurisdiction to 200 miles in 1977.

Planned management of fisheries, through control of fishing intensity, water quality and manpower resources, is important to Canada's effort to assure optimum future fish harvests. Production, protection and utilization of fish and aquatic animals and plants also receive high priority. The target for Canada's fisheries is to show noticeable improvements within five years and be restored to at least 85 per cent of their peak level within ten to fifteen years.

Increased attention has been given to developing alternative fish production and to expanding natural resources. For example, in 1975 the Department of Fisheries and Marine Service, in cooperation with British Columbia, began a major program to restore Canada's Pacific salmon to their historic abundance, double their current level. Proven enhancement techniques, such as artificial spawning channels, hatcheries and fishways, are aimed toward reaching that goal by 1990.

Another program is designed to increase fish production in small Prairie ponds, which can be stocked with trout. A six-month season is sufficient for fish to grow from fry to at least 200 grams with an estimated 86 per cent recovery.

Other programs to determine the scientific principles of fish culturing, particularly in relation to lobsters, salmon and trout, have been developed at the Biological Station, Fisheries and Marine Service, St. Andrews, New Brunswick. In one pilot project scientists use a special cantilevered

stacked tank to introduce an automatic feeding system into the larva-rearing phase of lobsters. They hope to eventually produce 1,000 pounds of marketable lobster annually.

Marine plants may one day become an important source of nutrition. At present, algae found in the Maritimes are being studied at the National Research Council's Atlantic Regional Laboratory in Halifax, Nova Scotia. Techniques for the culture of Irish moss have been developed, following successful studies of the chemical nature of carrageenans and their relationship to the plant's life cycle. Carrageenan, a polysaccharide obtained from Irish moss, is used as an emulsifier and sizing ingredient in cosmetics, paint and drugs, as well as in certain foodstuffs. The possibility of growing Irish moss vegetatively on a large scale is currently being tested by two companies at pilot plants.

FOOD PRODUCTION AND INTERNATIONAL TRADE

Canada is the second largest country in the world, with a total land expanse of 998 million hectares, or nearly 2.5 billion acres. Although only 13 per cent of the land is suited to agricultural production, a high level of agricultural productivity and a relatively small population have made Canada one of the few net exporters of food in the world. Canada's agricultural products are shipped to almost every nation in the world. Its primary food exports are grain and oilseed. The value of Canadian agricultural exports increased 140 per cent between 1965 and 1974; exports to developed countries increased 85 per cent, and those to developing nations soared by 370 per cent. Today, between 30 and 35 per cent of Canada's total agricultural output, including 75 per cent of its wheat crop, is sent abroad. It imports fresh fruits

Unloading wheat at Quebec City.



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