

crops from the sea

in the station, where marine algae are being grown for studies on the factors affecting their growth and composition, investigation of their life cycles, studies on their genetics and to collect other information needed for a program of breeding and selection. The station can be expanded gradually to accommodate a breeding program. Once better seaweed varieties are available, attempts will be made to cultivate them in the sea.

Dr. A. C. Neish, Director of NRC's Atlantic Regional Laboratory, says the objective of the research is to use selection and breeding techniques to cultivate varieties of seaweeds with enhanced commercial value.

"From what has happened in agriculture — and the oceans are more productive than the land masses, particularly in the cold temperate regions — it would be expected that a marked improvement in quality and yield could be obtained from improved varieties," he says.

"Some marine algae, such as giant kelps, grow up to 100 feet in one year. Certain important commercial species, such as Irish moss, require two or three years to produce harvestable amounts. If more rapidly growing varieties of Irish moss could supplant wild varieties in areas that are easy to harvest, it obviously would boost the

industry. If the new varieties also were improved in quality, it would help all the more," Dr. Neish says.

Why do kelp and Irish moss grow best in exposed areas where the water sweeps over them constantly? Dr. Neish believes the answer to this question must be found if seaweeds are to be grown in bays and other sheltered areas where calm water would make cultivation easier.

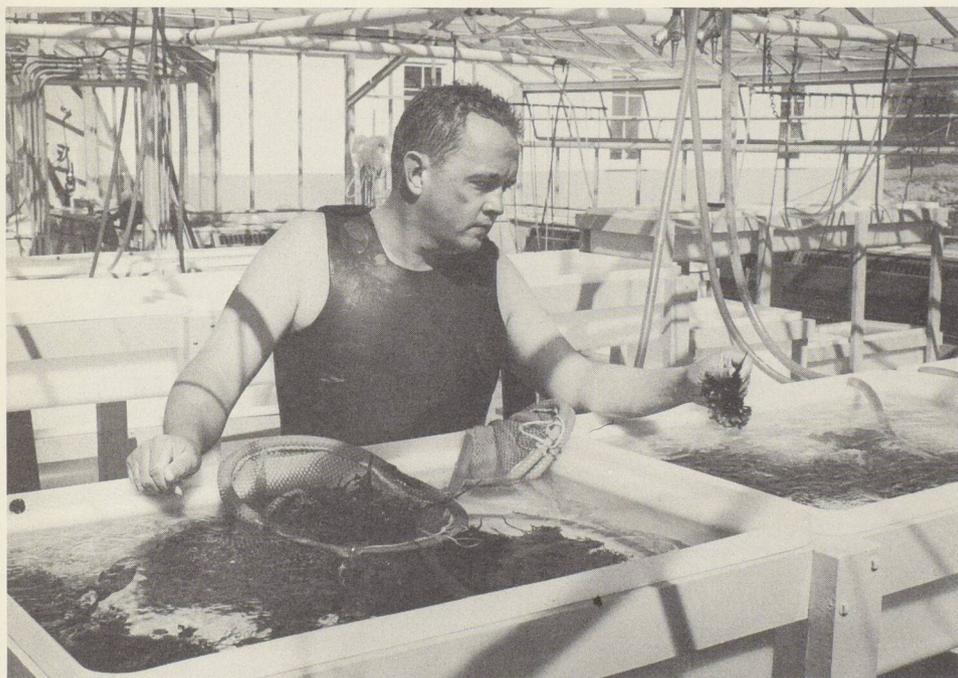
Research at NRC's new station will centre mainly on Irish moss. Attempts will be made to grow this plant and other seaweeds such as kelp, on rocks, rubber tires, concrete slabs and ropes, the aim being to find materials on which seaweeds will grow and which could be removed from the water for harvesting. Artificial supports also would allow seaweeds to be grown in sandy areas where there are no natural supports.

Dr. Neish says that in future, in-shore Atlantic coast fishermen are likely to earn extra income by cultivating seaweed. Small boats owned by these fishermen could be used to tend the artificial beds of moss. Their experience with the sea and the harvesting of wild Irish moss makes them the people most likely to harvest seaweeds.

Fertilizers are being tested at the station to determine whether they improve the growth of seaweeds and

might be used in sheltered areas to compensate for the lack of water movement over the plants. Attempts will be made to develop bigger varieties with a higher content of the valuable extracts.

"Garden plants are tremendous improvements over their wild ancestors, so it is reasonable to expect similar improvements on Irish moss and other seaweeds," Dr. Neish says. "However, this is a long-term project. Batches will have to be grown, the best plants selected and studied, and the whole procedure repeated through many life cycles of the seaweeds. It would take at least 10 years to develop better varieties." □



Dr. Cecil Fox of the Atlantic Regional Laboratory placing seaweed in one of the tanks being used in the cultivation studies.

Le Dr Cecil Fox, du Laboratoire régional de l'Atlantique, place des algues dans les cuves servant à l'étude des cultures.