

TECHNOLOGICAL RESEARCH IN SERVICE LABORATORIES

JULY 1946

Seattle, Wash.

The utilization of Pacific rockfish was studied with the purpose of developing suitable recipes and better canning procedures.

The laboratory cooperated with the Association of Official Agricultural Chemists in improving the method of determining the oil content of fish meals.

Tests are being run on the effect of storage on the vitamin A content of gray-fish livers. Preliminary work indicates that the destruction of the vitamin may be fairly slow.



Boston, Mass.

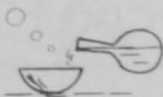
Two experiments were carried out in cooperation with the University of Maine on the use of high-voltage smoke precipitation apparatus for rapid smoking of sardines. These preliminary experiments indicate that it may be possible to smoke sardines sufficiently for use in canning with an exposure time of about 5 seconds. The consequent saving in time and handling may be an important factor in increasing the pack of smoked sardines, if the method can be perfected.

Two types of specially-treated steel rings are being tested for corrosion resistance to determine their suitability for use in lobster pots.

While the mobile laboratory was stationed at New Bedford, the staff conducted a preliminary survey of the sanitation problems of the fishery industry of that city.

A lecture on fishery technological research was presented at the Quartermaster Subsistence School in Chicago to a group of Army officers who are being assigned to post-graduate study at various universities. Assistance was given in drawing up a course of study on fish and fishery products.

The work of the laboratory was discussed in broadcasts over WHDH on July 17 and 18.



College Park, Md.

The monthly examination of frozen packaged oysters showed that they were all of excellent quality after four months' storage. The pH values had decreased only slightly.

On July 22, an experimental shipment of fresh red snapper steaks and frozen shrimp cocktail was flown from St. Petersburg, Florida, to Newark, N. J., in a DC-3 cargo plane of a commercial airline. The red snapper steaks were packed in commercially available corrugated cardboard containers, while the shrimp cocktail was maintained at 3° F. by use of individual frozen food type packages, which were in turn packed with dry ice inside a non-rigid bag of 2-inch thick fiber glass. Both products were landed in excellent condition after an 8-hour flight.

A demonstration of the packaging of frozen foods was presented to a conservation class from the University of Maryland. Forty-nine Army officers were given two days of instruction at the Chicago Quartermaster Subsistence School on the use of fishery products.

Two rat-feeding studies were initiated, one to test the effects of certain kelp products in the diet and the other to determine the thiamine (vitamin B₁) content of canned Maine sardines.

The thiamine assay will be compared with results obtained by chemical methods. Similar thiamine determinations are being run on rockfish, salmon, and tuna.

After four months, the experiments to test the effects of DDT in the diets of laying hens were concluded. At the two highest levels used there was some decrease in egg production, but there were no other outward manifestations that could be attributed to the insecticide. Studies of the data and of histological specimens will be continued.

Classification tests were run on 54 different bacteria isolated from fish. Their generic position has been determined, and work is under way to determine their species. Fifteen cultures of bacteria isolated at the Mayaguez Laboratory from a sample suspected of causing fish poisoning are being identified and classified.

Continuing experiments in the treatment of menhaden oil indicated that the polymerization of refined, bleached oil by blowing with oxygen was catalyzed by metallic driers but not by organic peroxides. The metallic driers generally produce a dark oil in proportion to their effect in speeding up the reaction; however, a light oil was obtained when it was blown with oxygen at a low temperature in the presence of cobalt drier.

Methods are being devised for the preparation of pet foods with a base of Lake Erie burbot. The products were analyzed for various nutritive components.

The mobile laboratory was stationed at Crisfield, Maryland, during the month and the staff undertook bacteriological studies of the adjacent tide waters.

