

# TECHNOLOGICAL RESEARCH IN SERVICE LABORATORIES

## FEBRUARY 1947

### Boston, Mass.

Smoked, cured pollock fillets were tested chemically and by a taste panel. A regular meat cure made the fillets too salty, but batches that had been salted more lightly received favorable comment and have been distributed for further tests.



\* \* \*

At the Eastport, Maine, station an electric oven was built and used for experiments in which raw sardines in uncovered cans were placed between two electric heating plates and dried in a slow stream of air.

This appears to be a satisfactory method for drying sardines during the canning procedure. A report on the sardine canning investigation was given before the Maine Sardine Packers Association meeting at Bangor on February 21.



### College Park, Md.

The pH of the frozen oysters that have been stored for 10 months at 10° F. has dropped to 5.9, and it appears that these oysters will not remain in salable condition much longer. In contrast, oysters stored at 0° F. and -10° F. showed no appreciable change in pH.

\* \* \*

Fillets of sea trout and Spanish mackerel have not changed noticeably after 4 months in frozen storage.

\* \* \*

A fish-cookery demonstration was given for the Nutrition and Food Preparation class at the University of Syracuse.

\* \* \*

Samples of insulated shipping containers have been received from a manufacturer. Their usefulness in the shipment of small lots of frozen fish will be determined.

\* \* \*

Two tests were made of the shipment of fresh fish by air.

\* \* \*

Of the 263 cultures collected in the Parker River area, 190 were purified by passage through special media and subjected to identification tests. Bacteriological examinations were made of the droppings from ducks and gulls taken in the refuge.

The Fish and Wildlife Service, the U. S. Public Health Service, and the State of Massachusetts signed an agreement providing for cooperative work on the Parker River survey.

\* \* \*

Special tests were carried out on the effects of minute concentrations of KCN on the cultural characteristics of coliform bacteria.



## Ketchikan, Alaska

Further assays were run on the content of vitamins A, B<sub>1</sub>, and B<sub>2</sub> in salmon trimmings. A preliminary report on the chemical analyses of salmon cannery trimmings was prepared and mimeographed.

\* \* \*

Data for the survey of freezing facilities were obtained at Ketchikan, Wrangell, Petersburg, and Sitka.

\* \* \*

Reports on the work of the laboratory were submitted to the Alaska House of Representatives.

\* \* \*

Clam samples for the toxin study were collected at Ham Island.



## Seattle, Wash.

Over 750 people attended the laboratory's open house during the evenings of February 27 and 28. Exhibits and short talks were presented by the laboratory staff to illustrate the role of science in fishery technology.

\* \* \*

A talk on the utilization of Alaskan salmon cannery waste was given before the Annual Salmon Cutting Convention of the National Cannery Association.

\* \* \*

The motion pictures "Home Cookery of Fish" and "Fish is Food" were shown to a community club, and a cookery demonstration was given before a group of home economists.

\* \* \*

Dr. Bogdanov, head of fishery investigation in the U.S.S.R., visited the laboratory and spoke on Russian fishery research. (Ed. Note: Dr. Bogdanov's talk

was reproduced in the February 1947 issue of Commercial Fisheries Review. It is also available as Separate No. 168.)

\* \* \*

Tests of seal-carcass oil confirmed previous assays showing that little vitamin A was present. Experiments were started on the extraction of vitamin A oils from pink salmon cannery offal, and apparatus was set up for freeze-drying salmon waste. Samples of pilchard meal were assayed for oil in cooperation with the Association of Official Agricultural Chemists. NDGA, when supplemented by citric or ascorbic acid, was significantly effective in increasing the stability of halibut liver oils. Laboratory findings on the stability of vitamin A in fish livers were presented at a Customs hearing.

\* \* \*

King crab meat that had been vacuum packed and frozen was found to be slightly flat in flavor and dull in color. King crab meat frozen in bars and glazed was flat in flavor and tough after two months in frozen storage.

\* \* \*

An experimental pack of salted sole was prepared.



## RECOMMENDATIONS FOR USING DDT

Wherever more than a small area is involved, consult county agricultural agents, State or Federal entomologists, wildlife and fishery biologists, and United States Public Health Service officials.



Use one-fifth pound or less of DDT per acre in an oil solution to avoid damage to fishes, crabs, or crayfishes; use less than 2 pounds per acre to avoid damage to birds, amphibians, and mammals in forest areas. Because of its greater effectiveness, use smaller quantities of DDT in emulsions.

Use DDT only where it is needed. Wherever it is applied by airplane, provide careful plane-to-ground control to insure even coverage and to prevent local overdosage.

Because of the sensitivity of fishes and crabs to DDT, avoid as far as possible direct applications to streams, lakes, and coastal bays.

Wherever DDT is used, make careful before and after observations of mammals, birds, fishes, and other wildlife.

--Special Scientific Report No. 41