Guide to the
BUREAU OF COMMERCIAL FISHERIES
TECHNOLOGICAL LABORATORY
SEATTLE, WASH.

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Cover Photo.--The Bureau of Commercial Fisheries Research Center is on the shore of Portage Bay and is across the Lake Washington Ship Canal from the University of Washington.
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Bureau of Commercial Fisheries
Technological Laboratory
Seattle, Wash.

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Circular 316
Washington, D.C.
May 1969
ABSTRACT

Goals of the technology program, accomplishments, current programs, organization and staff, physical facilities, and answering of inquiries are discussed. Some laboratory publications, by subject, are listed.

The Bureau of Commercial Fisheries Technological Laboratory, along with the Food Science Pioneer Research Laboratory, occupies the fourth floor of the easternmost building of the Bureau's Fisheries Research Center at 2725 Montlake Boulevard East, Seattle. Other units of the Bureau in the center are the Biological Laboratory, the Exploratory Fishing and Gear Research Base, and offices of the Branch of Marketing and the Division of Publications. The oldest building of the center was built in 1931. The large new laboratory building and a library and auditorium linking the old building with the new were constructed in 1964-65 and occupied in January 1965.

PROGRAM OF THE BCF TECHNOLOGICAL LABORATORY AT SEATTLE

The technology program is built around five goals that are important to the Bureau's key objective of increasing the net contribution of aquatic living resources to the nation's economy. In the following are listed these five goals. Included under each listing are what the Laboratory has already done toward accomplishing the given goal and what the Laboratory's current program is toward accomplishing it further.

Goal 1. Increase domestic landings in the Pacific Northwest and expand the Pacific trawl fisheries.
   a. Accomplishments.--Methods for utilization of Pacific hake were developed.
   b. Current program.--New products from Pacific groundfish are being developed.
Figure 2.--A chemist is preparing a standard for analysis of fishery products for pesticide residues.
engineers, and microbiologists, and 8 scientific aids and office personnel. In addition, the Laboratory employs student scientific aids. Limited facilities are available for visiting scientists who wish to conduct research of mutual interest.

PHYSICAL FACILITIES

The Technological Laboratory occupies space jointly with the Food Science Pioneer Research Laboratory on the fourth floor of the new Fisheries Research Center building completed in early 1965. The Laboratory floor plan is based on a module of 204 square feet, with services and utilities available from hall risers. Of the total floor area of 16,400 square feet, 30 percent is service area and 70 percent is utilized for 56 modules divided into research and office facilities. The floor plan is simple, flexible, and unusually efficient in terms of usable space per unit of gross floor area. The Technological Laboratory has 48 percent of the fourth-floor research and office areas; the Food Science Pioneer Research Laboratory, 12 percent; and 40 percent is shared.

The Technological Laboratory also has a separate pilot plant building of 2,600 square feet. This building, constructed in 1937, houses a processing laboratory and pilot plant, freezing and cold storage facilities, fishery inspection service, and an isolation microbiological laboratory for research on pathogenic microorganisms.

Specialized equipment and instrumentation available at the Laboratory include gas chromatographs for lipid research, recording visual and infrared spectrophotometers, refrigerated centrifuges, a preparative ultracentrifuge, electron magnetic resonance equipment, a refrigerated environmental laboratory, freeze-dryer, plate freezer, a large molecular still, and specialized facilities for research involving hazardous solvents. A research cobalt-60 Mark II irradiator supplied by the Atomic Energy Commission is located nearby at the College of Fisheries, University of Washington, and is used jointly for studies on application of irradiation to fishery products. The Laboratory operates no vessels but does conduct specific studies at sea aboard the Bureau exploratory fishing vessel, John N. Cobb, and commercial fishing vessels under cooperative arrangements. Limited facilities for trawl-fish preservation studies at sea are available on the new 215-foot BCF biology-oceanography vessel, Miller Freeman.

INQUIRIES

Inquiries by correspondence, telephone (583-7746, area code 206), or in person concerning any aspect of the Laboratory's program are welcome. Transient scientific personnel may wish to visit the Laboratory to discuss research of mutual interest. The research library facilities at the complex are open from 7:30 a.m. to 4:00 p.m. weekdays for reference purposes only and may be used by anyone interested. Arrangements for scheduled visits can be made on short notice. Inquiries are invited from scientists interested in working at the Laboratory on a temporary basis or as part of a scientific personnel exchange program.
Figure 5. -- Relative tenderness of Dungeness crab meat samples is being determined with a laboratory-built device for shear measurement.

Figure 6. -- Technological investigations are not confined to research within the laboratory. Here a chemist studies the problems of quality variation in north Pacific halibut.
Figure 7.--A chemist and technician help to bring in a small scallop dredge aboard a chartered fishing vessel. Scallops are being obtained from Puget Sound for processing studies.

Figure 8.--Elasticity of halibut flesh is being measured to determine quality change during iced storage.
The work and interests of a laboratory are best typified by its publications. Some publications of the Laboratory in the past few years are listed below. These may be obtained on request to the Laboratory. A complete list of available publications and reprints of the Laboratory is also available on request.

Fish Oils - Product and Process Development


Biochemical Systems and Quality Management


Bacteriological survey of filleting processes in the Pacific Northwest:


Radiation of Fish


Pathogens in Radiation-Pasteurized Fishery Products


TECHNOLOGICAL LABORATORY'S POSITION IN THE BUREAU OF COMMERCIAL FISHERIES

The Technological Laboratory at Seattle is one of seven such laboratories in the Division of Food Science of the Bureau of Commercial Fisheries and is supervised by the Bureau's Regional Office in Seattle.

MS. #1843