



FISH OILS IN SPRAYS FOR CITRUS TREES

Various fish-oil formulations as fungicides in spraying citrus trees are being tested at Florida Southern College, Lakeland, by Drs. Boris Sokoloff and Isador Chamelin working on a U. S. Fish and Wildlife Service contract with funds provided by the Saltonstall-Kennedy Act.

An unexpected development was the effectiveness of their material as a control of a nematode (a round worm) infecting citrus trees in laboratory experiments. Nematodes are a serious menace to citrus growers in Florida. The intense local interest by orchard men to a preliminary statement of the findings at a local scientific meeting led to some unwarranted optimistic newspaper interpretations of this report.

Although convinced that their formulations may prove of considerable value, these investigators wish to re-emphasize that a large amount of field testing will be required to properly evaluate those formulae found effective in the laboratory tests. In the case of nematode control, this may be time-consuming since the nematodes are found widely and deeply distributed in the soil, and conditions of the application and possible toxicity to trees will have to be studied very carefully.



MID-WINTER STATUS OF SOUTHERN OYSTER RESEARCH

The most important new phase of the study on Southern oysters at Florida State University in Tallahassee by Dr. Betty Watts and staff may be the use of the thiobarbituric acid test as a means of objectively judging storage quality of frozen oysters. Intensive studies are also being made of variations in vitamin content due to season and water conditions, irradiation with radioactive Cobalt 60 to preserve oysters with minimum changes in texture and flavor, and changes in oysters during iced storage.

The generally poor quality of Louisiana oysters this fall and early winter has delayed the preparation of new frozen packs by Dr. E. A. Fieger and staff at Louisiana State University. The first lot was processed on January 20, 1956, in New Orleans, and a second lot was to be prepared for storage from Alabama oysters on January 24. The oysters frozen in May 1955 were still in good condition except for one lot which had been overwrapped but not glazed. These showed surface oxidation and discoloration at 6 months.

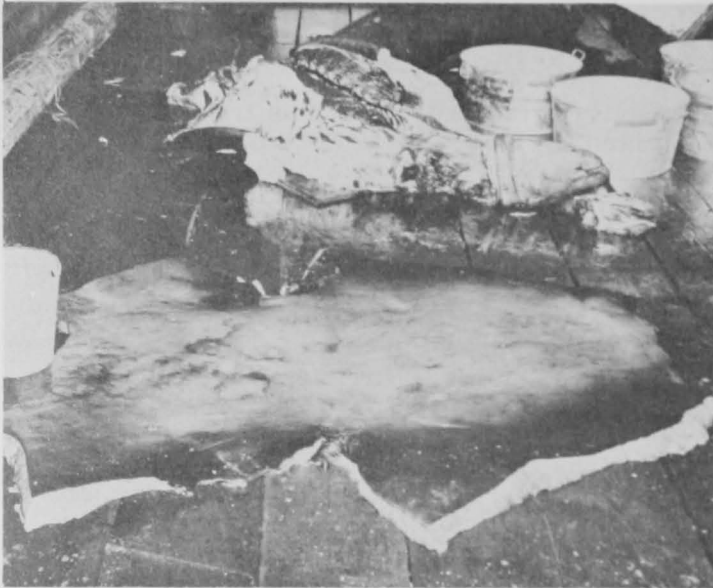
At Tulane University, New Orleans, Dr. Milton Fingerman is continuing his research on the effect of stress factors, such as elevated temperatures (104° to 113° F.), on fluid balance of live oysters. He is also investigating the causes of the brownish discoloration frequently observed in Southern oysters. So far none of the changes in environment have had much effect on color intensity.



UTILIZATION OF SEA LIONS STUDIED

The possibility of commercially utilizing sea lions is being studied at the Fishery Products Laboratory, Ketchikan, Alaska. These large marine mammals are considered as annoying predators by certain segments of the fishing industry in Alaska. The extent of depredation caused by this mammal has not been established.

Rookeries where small herds of sea lions haul out during the breeding season are scattered along the coast of Southeastern Alaska. Larger rookeries are located along the Central Alaska coast and the Aleutian Chain. Under certain conditions existing cold storage and reduction plants might find processing sea lions commercially attractive.



Hide and blubber removed from a 650-pound sea lion.

Yield data collected during the month of December 1955 indicate that one-third of the sea-lion carcass is dark meat. This meat might find a market as a fur-animal or fish-hatchery feed, competing with horse or whale meat.

Proximate analyses indicate that 22 percent of the sea lion is oil. Studies of oil samples produced at the Ketchikan Laboratory indicate that sea-lion oil and fur-seal oil are very similar. The market price of fur-seal oil follows closely the market price of

fish oils but, because of a specialized market, some years fur-seal oil brings a premium of one or two cents a pound. This premium price might also apply to sea-lion oil and might be an inducement for its preparation. The remainder of the carcass consists of viscera, bone, and hide which conceivably could be converted to commercial byproducts.

Note: Also see Commercial Fisheries Review, January 1956, p. 5



INTERIM FEDERAL SPECIFICATION FOR CANNED CRAB MEAT

The Interim Federal Specification for canned crab meat (PP-C-00651a) was issued January 9, 1956, by the U. S. General Services Administration (GSA). It was developed by the U. S. Fish and Wildlife Service and the Quartermaster Corps Food and Container Institute for the Armed Forces. It is authorized as a valid waiver to Federal Specification PP-C-651 for use by all Federal agencies for the purchase of the product. It will be converted to a Federal specification after further coordination.

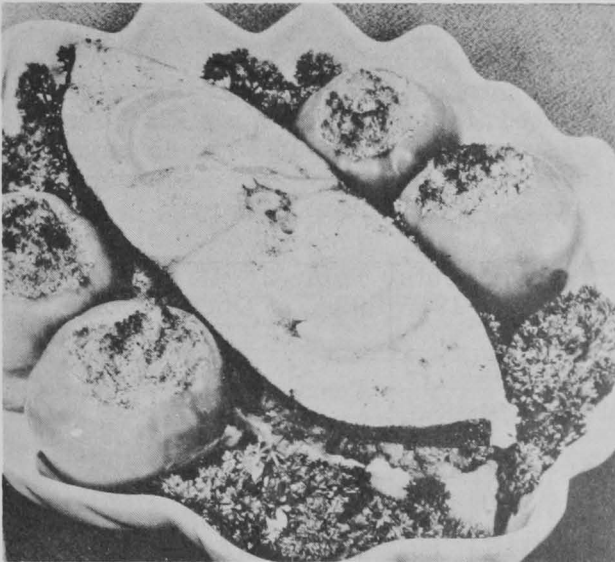
Copies of the Interim specification were sent to the National Fisheries Institute and the National Cannery Association for distribution to industry for comment. Additional copies may be obtained from the Technological Section, Fish and Wildlife Service, U. S. Department of the Interior, Washington 25, D. C., or from the Fishery Technological Laboratory, U. S. Fish and Wildlife Service, 61 Sumner Street, East Boston, Mass.

Industry comments on the specification are solicited. These may be sent to either of the Service offices mentioned in the preceding paragraph. Comments are to be received in these offices by March 15, 1956, to be considered in the final draft of the Federal Specification. Comments received after that date may be considered only in an amendment or revision of the basic specification.



HALIBUT STEAKS

Halibut steaks are plentiful and moderately priced this fall. Halibut is delicious, and the frozen steaks are ready for your broiler or oven--no waste, no preparation, just thawing and seasoning. Baking or broiling are the favorite ways to cook this lean whitefish.



Here is a favorite tested recipe of the U. S. Fish and Wildlife Service home economists.

BROILED HALIBUT STEAKS WITH CHEESE

2 POUNDS HALIBUT STEAKS
1 TEASPOON SALT
DASH PEPPER

$\frac{1}{4}$ CUP BUTTER OR OTHER FAT, MELTED
6 THIN SLICES CHEESE

Cut fish into serving-size portions. Sprinkle both sides with salt and pepper. Place fish on a preheated greased broiler pan about two inches from the heat and brush with butter. Broil 5 to 8 minutes or until slightly brown. Baste with butter and turn carefully. Brush other side with butter and broil 5 to 8 minutes more or until fish flakes easily when tested with a fork. Cover fish with cheese and broil until cheese melts. Garnish and serve immediately. Serves 6.

The halibut is a giant flounder of the northern seas. In Pacific waters, halibut reach weights of 150 to 200 pounds and a length of over four feet. Atlantic Coast halibut commonly grow to be 300 to 450 pounds and have been known to reach 700 pounds.