

International

CANADA AND UNITED STATES AGREE ON NORTHWEST PACIFIC FISHERY REGULATIONS

United States and Canadian conferees on March 1 recommended coordinated regulations in the oceanic salmon and certain other fisheries in the Northwest Pacific Ocean. Nets in offshore salmon fishing will not be permitted. The spring or chinook salmon troll fishing season will open not earlier than April 15 and will close October 31. The June 15 opening date on trolling for silvers or cohos will remain unchanged. Troll-caught chinook salmon will be required to be 26 inches minimum length or an equivalent minimum weight. In the petrale sole fishery, a uniform closed season from December 20 to April 15 will be established, according to a March 1 news release by the Washington State Department of Fisheries.

At present Canada does not have seasons for troll-caught chinook or a minimum length regulation, or a season on petrale sole. British Columbia for 1957 has set an April 15 opening date for troll-caught chinook, and closed the petrale sole fishery from February 1 through April 15. Some net fishing for salmon has been carried out on the high seas exterior to the Strait of Juan de Fuca. In 1955 a gill-net fishery in "outside" waters began to develop.

Washington, Oregon, and California are moving the needed laws through the current Legislatures. Canada can put into effect by administrative action such regulations as are necessary. It is planned that this coordinated system of regulations will take effect in the three states and Canada in time for the coming fishing seasons. Failure of action in any one of the four jurisdictions may jeopardize the entire program.

The meeting represents a long step forward in securing coordination of regulations to conserve Pacific Coast fisheries. Hitherto, the measures of Washington, Oregon, and California have been coordinated through the Pacific Marine Fisheries Commission. The recommendations of the conference when approved by the Legislatures and administrative action taken by Canada will mean that regulations along the entire Pacific Coast will be coordinated.

The meetings, which were held in the Salmon Bay Regional Office of the Washington Department of Fisheries, were attended by officials from the U. S. Fish and Wildlife Service, the Department of State, Canada, members of the Legislatures and officials of the Pacific Coast states, as well as commissioners of the Pacific Marine Fisheries Commission and advisors from industry.

The recent growth of the net salmon fishery threatened existing United States and Canadian salmon conservation programs. Such fishing already is forbidden in waters off the coast of Alaska by order of the Secretary of the Interior.

The conference also took note of a special problem which exists in the area adjacent to the Bonilla Point-Tatoosh Island line at the entrance to the Strait of Juan de Fuca, and agreed that mutual scientific studies would be inaugurated by Canada and the State of Washington in those waters.

Finally, arrangements on procedures for continued international review of coordinated regulations were reached.

FISHERY SCIENTISTS MEET IN LISBON

A joint scientific meeting of fishery scientists was scheduled by the International Commission for the Northwest Atlantic Fisheries, the International Council for the Exploration of the Sea, and the Food and Agriculture Organization (FAO) in Lisbon, May 27-June 3 this year.

It was expected that more than 50 scientific papers dealing with the effects of fishing, fishing effort, and selection in fishing were to be presented. Scientists from at least 15 different countries were to participate in the meeting.

General principles in connection with fish population dynamics were to be deduced from the papers, with particular relevance to the cod, haddock, hake, ocean perch, and halibut fisheries.

There were to be three working parties at the meeting. The discussion on the effects of fishing was to deal with the characteristics of fishing gear and methods, and the use of such gear, especially in connection with the magnitude and composition of catches. It was to be concerned with a diversity of activities, such as hydrographic and meteorological work and even with underwater observation of the behavior of fishing gear.

Papers on fishing effort were to deal with such items as single and mixed fishing methods, technical developments, and data at present available.

The working party dealing with selection was to consider detection and identification of selection processes.

Other items were to include measurement of selection, problems of experimental work, and techniques of analyzing and presenting data. For example, one item in the program was to be concerned with causes of variation. This was to include consideration of behavior patterns, abundance and shape of fish, mesh dimensions, materials used in making fishing gear, speed and length of tow, and so on.

It was hoped that the meeting would indicate what further research is needed in the North Atlantic.

WHALING

ANTARCTIC 1956/57 SEASON: The 1956/57 pelagic whaling in the Antarctic ended at midnight March 16, after the 20 participating expeditions had reached the over-all quota of 14,500 blue-whale units, as fixed by the International Whaling Commission. As the opening gun was fired January 7, the season lasted 69 days. The actual catch exceeded the quota by 234 units. Rough weather during the last two weeks of the season seriously hampered whaling operations. The limit for the 1955/56 season was 15,000 units and 15,500 units for 1954/55.

Norway: Final figures from the nine Norwegian expeditions which participated in this year's Antarctic whaling show a total production of 855,489 barrels of whale oil, or 200,641 barrels more than during the 1955/56 season. Sperm oil production was substantially smaller--97,784 barrels, as against 128,810 barrels during 1955/56. However, the combined whale and sperm oil production adds up to 953,273 barrels, which is 169,615 barrels more than in the preceding season.

Leading Norwegian whaling operators believe the voluntary reduction of catcher vessels has proved its value. An agreement to that effect was signed by the Norwegian, British, Dutch, Japanese, and South African whaling companies, all privately-owned. Only the Soviet Union failed to reduce the number of catcher vessels, points out the Norwegian Information Service in an April 4 news release.

By using fewer catcher vessels, Norwegian experts say, whaling expeditions can operate more economically. Besides requiring less investment, it also means substantial fuel savings.

Netherlands: This season's Antarctic whaling yielded 15,414 long tons of train oil and sperm oil as compared to 16,361 tons for the previous season for the Netherlands fleet. Practically no advance sales were made this year.

Russia: A Russian whaling fleet caught more whales--1,180 of them--than any other of the 20 fleets from 6 nations which took part in the 70-day Antarctic whaling season which ended March 16. Japan's Nishi Maru fleet was second with 987 whales.

* * * * *

ACCORD ON NEUTRAL WHALING OBSERVERS: An agreement concerning a special neutral observation service for pelagic whaling was drafted at a conference held in Oslo March 20-21, 1957, of representatives of 4 of the 5 countries which are engaged in pelagic whaling in the Antarctic. The draft agreement will be presented to the respective governments for consideration and signature.

Norway had called the conference several weeks before and had invited all countries engaged in Antarctic whaling to participate. Japan, the United Kingdom, and The Netherlands accepted. The U. S. S. R. declined.

Except for the important fact that the U. S. S. R. did not participate, the conference is regarded as successful by the Norwegian Foreign Ministry. Its object was to advance the long-sought aim of Norway, and that of many other countries interested in whaling, to have neutral observers on whaling expeditions in the Antarctic, a March 28 dispatch from the United States Embassy at Oslo states.

Signature of the draft agreement cannot be expected for several months at the earliest. Although the preliminary steps to be taken by the governments in the ratification process are not yet clear, some of them will have to present the draft to their legislatures. The Japanese Diet, for example, will not act on the draft until next winter.

Article VII of the Oslo draft agreement provides that the agreement shall cease to have effect as and when an agreement under the International Whaling Convention comes into effect. The draft agreement is open to accession by any country having whaling expeditions, or expeditions under its jurisdiction, operating in the Antarctic.

Paragraph 1 of Article II provides that the observers shall be of a nationality different from that of the governments which are parties to the agreement, unless the committee established by the contracting governments to administer the agreement, and consisting of a representative of each of the participating governments, shall unanimously agree otherwise.

These observers would not have to be technically specialized. They would have no executive functions and would only have to observe whether the expeditions started and ended on dates specified by the International Whaling Commission, whether certain types of whales were caught only in designated periods, and whether the whales caught met requirements for size, within reasonable conditions.

The Norwegian Foreign Office is currently preparing instructions to its missions abroad to inform those governments that are parties to the International Whaling Convention of the results of the Oslo Conference. Copies of the draft agreement will be transmitted to these governments at the the same time.

The desire to have neutral observers on board whale factoryships is a matter of urgency to the Norwegians in order to insure fair play under the rules of the International Whaling Convention. In the past opposition on the part of Soviet Russia has prevented the acceptance of a protocol to the Convention to permit neutral observers on Antarctic whale factoryships. The refusal on the part of Soviet Russia to attend the March 20 conference was not unexpected.

An example of why the Norwegians mistrust the observance of the rules of the International Whaling Commission was provided by a Norwegian captain who returned after a month in the Antarctic. This observer stated that the Russian whaling fleet arrived with 18 catcher boats as compared with 15 last season. The Norwegians, British, and South Africans had agreed among themselves to limit their fleets to 12 catcher boats each.



Angola

PILCHARD-MAASBANKER FISHERY: During a visit of an Angolan-Portuguese Government Mission to the Union of South Africa in October 1956, it was reported by the Mission that a record catch of 400,000 metric tons of fish, mostly pilchards and maasbanker, was made in 1956 by the 2,000 European and 10,000 African fishermen who fish off the 350-mile coast of Angola. About 200 motor fishing vessels and many motorless smaller vessels were engaged in the fisheries and landed at ports between the Cunene River to Lobito Bay. The same Benguela Current that helps to support the lucrative fisheries of the Union of South Africa's west coast and Walvis Bay contributes to Angola's fisheries.

The fishing industry of Angola is controlled by a semi-Government organization known as the "Gremio dos Industriais de Pesca." This organization handles all exports, controls quality, and supervises buying. It is an association of fishing companies organized into "Gremios" of the districts of Luanda, Benguela, and Mossemedes which are federated in the central "Gremio" named above.

A three-man Portuguese mission, which revealed this information, visited the Union of South Africa to study the fishing industries in South Africa and Walvis Bay in order to obtain ideas of how to modernize Angola's processing and catching activities. Although the Angolan fishermen have made excellent catches, their processing and catching methods have not kept pace with the rapid increase in catch. The fishing industry of Angola has developed very much as a family business, with many father and son combinations both catching the fish and salting and drying the catch ashore. As a result, no large fishing centers have developed along the 350-mile coastline of the Portuguese Province.

The output of many family units has grown with the addition of larger Diesel-powered vessels either built in Angola or brought in from Portugal, but ashore the small family units have continued the traditional methods of salting and drying fish for sale to native Angolans and for export to other nearby African countries.

Due to the interest shown by the Mission in the fisheries of the Union of South Africa and also the European fisheries (which were visited previously), it is predicted that the fishing industry of Angola will be substantially modernized in the next five years. Under present conditions the record catch of 400,000 tons of pil-

chards and maasbanker was estimated to yield 40,000 tons of fish meal, small quantities of fish oil, and little or no canned fish (South African Shipping News and Fishing Industry Review, December 1956).



Brazil

TUNA CANNING PROSPECTS EXPLORED BY U. S. FIRM: A representative of a west coast tuna cannery spent most of the month of February in the Recife area exploring the possibilities of organizing a joint Brazilian-United States company to produce and can albacore tuna. Several days were spent on Fernando de Noronha Island where he was cordially received by the Governor, states a March 12 dispatch from the United States Consulate at Recife.



British Honduras

EXPORTS OF FISHERY PRODUCTS, 1956: Exports of all fishery products from British Honduras during 1956 totaled 265,483 pounds (valued at US\$100,528), an increase in quantity of 17.8 percent as compared with 1955 exports.

During 1956 the United States received 125,011 pounds of spiny lobster tails (value US\$81,556) and 240 pounds of whole spiny lobsters (value US\$52). In the same period of 1955, exports to the United States consisted of 22,431 pounds of whole spiny lobster (value US\$5,889) and 79,885 pounds of spiny lobster tails (valued at US\$51,471).

The quantity shipped to the United States during 1956 was 47.2 percent of the total exports of fishery products as compared with 45.4 percent in 1955. In terms of value, the United States share was close to 81 percent in 1956 and 77 percent in 1955.



Canada

INSPECTION REGULATIONS FOR IMPORTED CANNED FISH AND SHELLFISH The Canada Gazette, Part II, Volume 91, dated February 13, 1957, contains an amendment (dated Jan. 24, 1957) to the Meat and Canned Foods Act Canned Fish and Shellfish and Cannery Inspection Regulations. Section 28 is revoked and a new section substituted which provides for inspection upon arrival of any canned fish or shellfish imported into Canada.

Section 40 of the same regulation is revoked and a new section provides that no certificate shall be issued for canned salmon or canned herring which does not meet the requirements of Section 39. Other minor amendments are made to various sections of the regulations, states a February 18 dispatch from the United States Embassy at Ottawa.

The following amendments have been made:

1. Section 28 of the Canned Fish and Shellfish and Cannery Inspection Regulations is revoked and the following substituted therefor:

28. (1) Any canned fish or shellfish imported into Canada shall be subject to such inspection as the Minister may deem necessary and any

canned fish or shellfish which is found by an inspector not to be sound, wholesome and fit for human food may be seized and forfeited to Her Majesty and disposed of as the Minister may direct.

(2) No person shall import or attempt to import any canned fish or shellfish unless all marks on the cans which identify the canner, the date of packing and the coding of the lot, are clearly stamped or stencilled on both ends of the cases or containers in which such cans are shipped.

2. Section 40 of the said Regulations is revoked and the following substituted therefor:

40. No certificate shall be issued for canned salmon or canned herring found by the laboratory to be sound, wholesome and fit for human food but which does not meet the requirements of section 39; such salmon or herring may be reconditioned and presented for re-examination not later than six months from the date it was first inspected.

3. Section 52 of the said Regulations is revoked and the following substituted therefor:

52. A fee at the rate of one-half cent per case of forty-eight one-pound cans, or the equivalent thereof, shall be charged for the inspection of each parcel of canned salmon or canned herring.

4. Sections 54, 55, and 56 of the said Regulations are revoked.

5. Section 57 of the said Regulations is revoked and the following substituted therefor:

57. Imported canned salmon found by the laboratory to be sound, firm, well packed and in good merchantable condition shall be approved.

6. Section 59 of the said Regulations is revoked and the following substituted therefor:

59. Imported canned salmon found by the laboratory not to be sound, wholesome and fit for human food shall not be cleared for importation but may be returned to the shipper.

7. Section 60 of the said Regulations is revoked and the following substituted therefor:

60. (1) If the laboratory decision regarding the quality of a parcel of imported canned salmon is challenged by an importer within six months from the date of the laboratory examination, the Minister may order a reinspection which shall be final; there shall be no appeal unless the Minister is satisfied that the identity of the parcel in question has been preserved.

(2) A fee of fifteen dollars (\$15.00) shall be charged for each reinspection of imported canned salmon under appeal but this fee shall be returned to the importer if the original decision of the laboratory is not confirmed upon reinspection.

8. Section 62 of the said Regulations is revoked and the following substituted therefor:

62. A fee at the rate of one-half cent per case of forty-eight one-pound cans, or the equivalent thereof, shall be charged for the inspection of each parcel of imported canned salmon.

SALMON OFFSHORE NET FISHING IN PACIFIC BANNED: After May 1 British Columbia fishermen will not be permitted to fish for salmon with nets in the offshore waters of the North Pacific, the Canadian Fisheries Department announced on April 12. In order to put into effect the recommendations agreed upon by Canadian and United States fishery representatives at a conference in Seattle in February, the Department has amended the regulations.

Legislation with similar restrictions on United States fishermen has been passed by both Washington and Oregon and is expected to become law in the near future. California is expected to follow with similar legislation. The U. S. Department of the Interior has already issued regulations which prohibit salmon offshore net fishing by Alaska fishermen.



Chile

FISH MEAL AND CANNERY PLANT TO BE ESTABLISHED: An investment of about US\$235,000 (10 million pesetas) in a fish meal plant and cannery to be located in Valparaiso was authorized by the Chilean Government by Decree No. 1096 of October 13, 1956. A firm from Vigo, Spain, will install the equipment in the new plant.

The new venture provides for investment in four 40- to 50-ton fishing vessels, a freezing plant, motor vehicles, fish meal and cannery equipment. The fish meal plant is to have a daily maximum capacity of 75 tons.



Colombia

CANNED SARDINE MARKET: There are two Colombia packing companies at the present time engaged in the production of canned sardines, shrimp, oysters, and clams. These companies operate on the north coast of Colombia and usually pack the two varieties of sardine available called "machuelo" and "lisa." The annual domestic production of sardines, estimated at 6,000 cases of 48 1-lb. oval cans, is considered to be inadequate to meet the demand of the Colombia market. Because of the limited quantity of sardines and the difficulty of obtaining cans from the United States, it is believed that domestic production is not very important and that Colombia will continue to depend to a large extent on imports to meet the requirements, states a December 14 dispatch from the United States Embassy at Bogota.

Approximately 40 percent of the total consumption of sardines is satisfied by domestic production. In view of the limited domestic production of canned sardines and of the current unavailability and high cost of imported sardines (due to customs duties and other restrictions), consumption is believed to be declining at the present time.

Fifty percent of the consumers prefer the 1-lb. oval cans, while 35 percent use the 3½ to 5 oz. flat can, and 15 percent the 8-oz. tall can. About 90 percent of the sardines consumed are packed in tomato sauce. The percentage of sardines consumed by the high, middle, and low income groups is estimated at 60, 35, and 5 percent, respectively. Retail market prices for the domestic 1-lb. ovals packed in tomato sauce range from Ps. 2.20-2.50 (31-36 U.S. cents) a can. The retail prices for the imported 1-lb. ovals range from Ps. 2.65-2.95 (38-42 cents); the 3¼ to 5-oz., Ps. 1.55-2.00 (22-29 cents); and the 8-oz. tall, Ps. 1.20-1.50 (17-21 cents).

By Decree No. 2643 of November 2, 1956, the Colombian Government placed canned sardines on the Prohibited List of Imports. Therefore, the exportation of this commodity to Colombia is not feasible at the present time, since no import licenses are issued for items on the Prohibited List.

Canned sardines, both domestic and imported, are usually distributed by importers (by direct importation and through sales agents) and retailers handling provisions of all kinds.

Note: Values converted at the rate of 7.00 pesos = US\$1.



Cuba

CLOSED SEASONS FOR SPINY LOBSTER AND SPONGES: The Institute Nacional de Pesca, in accordance with its authority under Decree 2724 of October 5, 1956, has provided for the following closed seasons on certain marine species:

1. Starts the closed season on spiny lobster (*Langosta*) on March 10, 1957, to continue until otherwise ordered by another Resolution.

2. That the closed season on sponges start on March 10, 1957, to include breeding places and fisheries in the Eastern region as defined by Article 74 of the Regulations of the Fisheries Law, and to be effective this year also along the South Coast to the west of an imaginary line mentioned in said Article 74 from Batabano, in a westerly direction to Cape San Antonio.

The above actions were published as resolutions in the Official Gazette, No.42 of March 1, 1957 (U. S. Embassy in Habana dispatch, March 14, 1957).

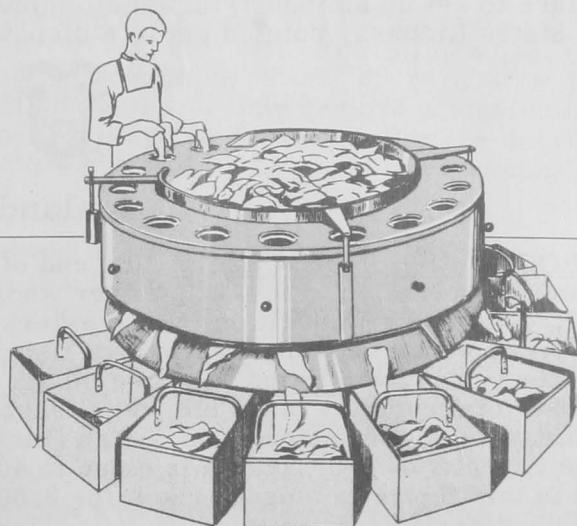


Denmark

FILLET GRADING MACHINE DEVELOPED: New Danish automatic grading machines for fillets have been installed by British filleting firms at Hull, Fleetwood, and Grimsby. The model installed at Grimsby can grade 5,000-6,000 fillets an hour in 12 size grades.

Fillets are simply fed by one worker into the revolving turntable by hand, and each fillet is automatically graded and falls out into its appropriate container (The Fishing News, January 4, 1957).

The machine consists of 18 balanced sections, radially mounted on a powerful turning machine. A $\frac{3}{4}$ hp. electric motor of 1,400 r.p.m. operates the turning machine, and all moving parts are specially made for operation in damp atmospheres and protection against rusting.



Danish fillet grading machine. Diameter--6.2 feet; height--3.6 feet.

Balance sections consist of parallelogram balances mounted on oil-bath steering boxes. The frictionless bearings are of fine steel designed to "swim" for per-

fect adjustment. On one side of the balance is a tubular bowl which can be opened at the bottom. Ten weights are mounted on a plate on the other side and these decide the different weight intervals. They are released from the plate by means of organs, mounted on a shaft through the steering box. In the end of the shaft, under the bowl, a pawl wheel is mounted, and in the other end the above mentioned gear wheel.

The machine is used as follows: As the bowls are turned by the machine and pass underneath the machine, the shaft in the steering box will also turn round, and every time a bowl passes a pail, a weight will be released from the plate, and as soon as so many weights have been released from the plate (the bowl and its unit are only $\frac{1}{2}$ gram heavier), the bowl will bob down. As soon as the bowl has moved 1 mm., the pawl wheel will open the bottom of the bowl, and the fillet will slide down into the pail corresponding to its weight.



Ecuador

FOREIGN SHRIMP VESSELS EXCLUDED: An executive decree has been issued which prohibits shrimp fishing in Ecuadoran waters by foreign fishing vessels and vessels not built in Ecuador. National companies which now hire foreign flag shrimp vessels under Government permits may continue to use them provided the boats are nationalized when the permits expire.

Foreign shrimp vessels were already excluded from Ecuadoran continental waters unless contracted by national companies, and even in such case, the law already contemplated their ultimate nationalization. For some time shrimp vessels of good quality have been built in Ecuador. At least one United States-owned national company contracts exclusively for locally-built vessels.

A national fishing company owned by United States interests will be allowed to operate again provided it installs a freezing plant within 180 days and other installations within one year, according to a decree issued December 31, 1956.

The company's permit was withdrawn several months ago and a fine imposed for failure to set up an industrial establishment as provided in its contract, the United States Embassy pointed out in a dispatch (February 15).



Iceland

FROZEN FISH INDUSTRY: At the end of 1955 there were some 79 quick-freezing plants in operation in Iceland, either wholly or in part engaged in the preparation of frozen fish. In addition, two trawlers are fitted with small quick-freezing plants, each with a capacity of 2 tons of fish fillets in 24 hours. (Note: Another report recently received listed 81 shore plants and 4 freezer-equipped trawlers.) The maximum total capacity of all Icelandic freezing plants under ideal conditions is reckoned to be 1,100 metric tons of fish fillets in a working day of 16 hours. The storage capacity of these plants is close to 40,000 tons. It should be noted that included in this figure is storage room for 8,000 tons of frozen herring used as bait.

The total annual production of frozen fish fillets during the last two years has exceeded 50,000 tons. Until 1950 the largest part of the production consisted of cod fillets. In the same year the plants began to prepare and freeze ocean perch fillets and since then this aspect of the operation has been steadily increasing.

In 1955 cod fillets made up 52 percent, ocean perch fillets 38 percent, and other types of fish 10 percent of total production.

The first freezing plants to be constructed in Iceland were in many respects primitive, and the same might be said of plants built during World War II, since at that time many essential materials were unobtainable. As a result it has proved necessary to rebuild many of the plants during the last few years; this extensive rebuilding program may be considered to be near completion. At the same time as the plant facilities were being renewed, the organization of production methods has been changed drastically and the mechanization of the operation has increased to a high degree. Machines for scaling and washing the fish are now to be found in almost every quick-freezing plant, and the same is true of conveyor belts for moving fish, fillets, and offal. In some cases the offal is moved by running water, but this is not a common arrangement. The work of filleting is still done by hand. Filleting machines manufactured abroad have been tried, but as of the end of 1955 no machines yet tested had given sufficiently good results. During the first part of 1956, a Danish and a German filleting machine were tested, but the results of these tests are not yet available. It looks, however, as if one of these machines will give satisfactory results. (Note: Large orders are now being filled in Germany for filleting machines.) Due to rising wages and shortages of qualified manpower, it has long been necessary to find means of mechanizing the filleting operation. At the same time it is obvious that the requirements for performance of filleting machines are much higher in this country than in most others due to the great variety of the raw material and the relatively fast tempo of the filleting and packing operation.

For some time skinning machines have been in operation in all of the larger freezing plants. Packing and weighing, on the other hand, is still an operation performed largely by hand.

In the quick-freezing of fish fillets, the most common practice now is to use ammonia piped directly into the freezing plates. Most of the frozen herring is frozen in plate freezers, both in the case of herring used for bait and frozen herring for export. A certain quantity of herring is put into trays and frozen in special chambers. The freezing of herring for bait by saturation or wet-freezing is unknown in this country, since experience has shown that bait herring treated in this fashion is not as good as dry-frozen herring.

In the older quick-freezing plants the storage rooms and their insulation were built to provide a storage temperature of -20°C . (-4°F). Now all new storage rooms are constructed to provide storage temperature of -28°C . (-18.4°F). Regulations of the Icelandic Fisheries Inspection still only require a maximum storage temperature of -20°C . (4°F), and there are no provisions for the degree of temperature based upon the length of time for storage, which as a rule cannot be determined beforehand.

Until recently most of the fish received by the quick-freezing plants was caught by drifters going out for a day and night at a time, consequently the fish was usually handled by the plant a few hours after capture. As a result of the ban against the landing of Icelandic fish in Great Britain, the trawlers began in 1952 to bring their iced fish ashore in Iceland to an ever-increasing degree, for further handling ashore. The cod is cured as stockfish, while the ocean perch, which makes up the largest part of the catch in the summer and fall, is brought to the freezing plants, where it is filleted and frozen.

Since the freezing plants began to receive iced ocean perch in large quantities, the difficulties involved in preserving the quality of the raw material have increased. The attempt is made to overcome these added difficulties by strengthening the inspection and control of the quick-freezing process, both on the part of the official Fisheries Inspection and on the part of inspectors employed by the Freezing Plants Association.

As a part of the technical development which in the last number of years has been taking place within the quick-freezing industry, many of the freezing plants have installed self-regulating machines for the manufacture of ice. In most instances these machines have a capacity of 5 to 15 tons in 24 hours. Most common are machines manufacturing flake ice while machines turning out ice cubes are also known. Machinery for producing ice blocks has now been in operation for a number of years, and it seems that self-regulating machines will soon be exclusively in use. Recently the manufacture of machines for making flake ice was begun in this country.

In close connection with the manufacture of ice, experiments have been made with the use of a number of chemical preservative agents, which are mixed with the water before it is frozen, for the purpose of preserving the fish longer. Among the chemical agents which have been tried here is a German product named "Foromycin" and another American product. "Foromycin" is an aldehyde solution, while the American product is a trade name for "Chlorteracycline," which is a chemical agent used for preservation of foodstuffs. The final results of these experiments are not yet available. It can still be safely said that the use of these chemical agents is likely to increase the time that iced fish can be kept in good condition, even though the preservative qualities of these chemicals under normal Icelandic conditions have not proved to be as great as one might expect from experiments in other countries. (Excerpt from a report by Thordur Thorbjarnarson, Director of the Experimental Laboratories of the Icelandic Fisheries Association, to a technical convention in Denmark and transmitted to the United States by the United States Embassy in Reykjavik, October 30, 1956).



Israel

RED SEA FISHERY PROSPECTS EXPLORED: Future prospects for the exploitation by Israel of the Red Sea fisheries are in the balance now that the United Nations are in control of the Gaza Strip. Plans for a fishery and a trade route in the warm Gulf of Aqaba and on into the Red Sea are important to the future economy of Israel.

The plan is to develop a tuna fishery based at Eilat, an Israeli port at the north end of the Gulf off Aqaba directly connected with the Red Sea. An Italian fisheries report has been engaged and negotiations are in progress for a Japanese tuna-fishing experimental trip in the area.

In 1943 the British biologist Bertram made an extensive collection in the Gulf of Aqaba and in 1946 Haas, now professor of zoology at Jerusalem, made economic studies for Spinneys, the Palestine food distributors, who held a British Mandate concession to exploit the fishery.

Since then, the Israeli fishery scientists have made considerable study of the fish from Eilat. H. Stemitz, of Jerusalem University, and A. Ben-Tuya, of the Haifa Sea Fisheries' Research Station, have listed 183 species of fish from records made by various workers in the Gulf.

The Gulf of Aqaba list includes barracuda, garfish, sea eels, halfbeaks, one grey, and two red mullets, snappers, grunts, four scaly-finned butterfly fish, ten kinds of wrasse, four blennies, a parrotfish, a sand eel, a suckerfish, puffers, and globefish. Shoals of bonito (Katsuwonus pelamis) and lesser bonito, and some albacore (Neothunnus albacora) are potential food.

Like the rest of the Red Sea, the Gulf of Aqaba has hammerhead sharks and sting rays, but not electric and eagle rays. It has moonfish but no sunfish; the large wolf herring but no true herrings, sardinellas, or anchovies.

It differs further from the rest of the Red Sea in the absence of flounders, soles, tarpon, gurnards, filefish, whiting, perch (*Sillagos*), croakers, and dolphin, so far as is at present known. Several of the fish are local varieties of typical Indian and Pacific ocean species.

The work of Steinitz and Bentuva was handicapped because they could not get access through Arab "No Man's Land" to the Bertram collection in the old Hebrew University site on Mount Scopus.

In 1954, they listed an Indian Ocean sea perch (*Anyperodon leucogrammicus*) for the first time and a rare frogfish (*Barchatus cirrhosus*), only once previously known in the Gulf. Sometimes, as in 1954, shoals of Indo-Pacific milkfish (*Chanos*) visit the Gulf and in February shoals of flyingfish appear there (*Fishing News*, March 22, 1957).



Italy

CANNED MACKEREL AND JACK MACKEREL MARKET: Official Italian figures on imports, production, and consumption of canned mackerel (Italian name "sgombro") and jack mackerel ("sordello") are not available. However, a recent dispatch (March 6, 1957) from the United States Embassy at Rome reports that Italy's main supplier of jack mackerel is South Africa, while the leading suppliers of mackerel are Holland and Germany. The price of mackerel (48 1-lb. cans a case, c. i. f.) from Holland (3,460 lire or US\$5.54) and from Germany (3,600 lire or US\$5.76) is higher than jack mackerel from South Africa (3,190 lire or US\$5.10), which is considered inferior in consumer appeal.

No import figures are available except that 1956 imports from South Africa are estimated at 1,200-1,300 metric tons valued at 160 million lire (US\$256,000), against 300 metric tons valued at 47 million lire (US\$75,200) in 1955.

The canned fish available in the local trade are almost all preserved natural, except for fillets originating in Morocco and Portugal which are preserved in olive oil and from Peru in fish oil.

Imports of canned fish from the United States are subject to ministerial license. The possibility of importing mackerel and jack mackerel from the United States was studied recently by Italian importers, but both prices and import restrictions discouraged Italian companies. Mackerel and jack mackerel are included in the item "others" (canned fish not included elsewhere) of the Italian tariff No. 159a (statistic No. 409). The Italian customs duty on canned mackerel and jack mackerel is 27 percent ad valorem, but the duty on mackerel is reduced to 22 percent for General Agreement on Tariff and Trade countries.

Note: Values converted at the rate of 625 lire equal US\$1.



Japan

ALBACORE BUYING FOR EXPORT SLOW DUE TO HIGH EX-VESSEL PRICES:

The tuna freezers have set their frozen albacore export quotas for the second half of 1957 at 12,000 short tons, but with the ex-vessel price at 340-350 yen a kan

(US\$228-235 a ton) and the Joint Sales Company's export price at US\$270 a ton, the freezers are refraining from buying, so it looks as if the quota may be left unfilled.

Calculating back from the Joint Sales Company's price of US\$270 would give an ex-vessel price of about 310 yen a kan (US\$208 a ton). Therefore, it is said that the highest price that can profitably be paid for first-class fish for export would be about 315 yen a kan (US\$212 a ton). With the ex-vessel prices running 340-369 yen a kan (US\$228-242 a ton) in the Shimizu-Yaizu area and 320-330 yen a kan (US\$2.15-\$2.22 a ton) at Tokyo and Misaki, the freezers are not actively buying.

The present high prices are thought to be caused by aggressive buying by Japanese canners. This factor has a particularly strong effect on ex-vessel prices in the Shimizu-Yaizu area. Since it appears that the canners intend to continue buying around May, it is thought that there is little chance of the price coming down to where the freezers can buy unless there is a very large catch, points out the Nippon Suisan Shimbun (February 25, 1957).

Note: Values converted at the rate of 360 yen = US\$1. 1 kan = 8,267 pounds.

* * * * *

FIRST LANDINGS OF 1957 SUMMER ALBACORE REPORTED: Recently with regard to albacore for export to the United States, there has been a strong preference for the larger fish, and Japanese canners and freezers have been waiting impatiently for the changeover from the small winter albacore, which have a great deal of "green" meat, to the large summer fish. On March 20 the first landings of summer albacore were made at Shimizu, when the No. 8 Benten Maru brought in about 8 tons of pole-and-line caught fish, weighing 31-33 pounds each from the waters around Nishinoshima in the Bonin group. The fish were snapped up by canner at the excellent price of 385-400 yen per kan (US\$262-272 a metric ton). About 200 vessels from Shizuoka ports are fishing in the area, and canners are busy with preparations to switch from oranges to tuna, the Nippon Suisan Shimbun of March 27 reports.

* * * * *

EXPORTS OF FISHERY AND ALLIED PRODUCTS, 1954-56: Japan's exports of fish and fish preparations (mostly canned and frozen fish and shellfish, but excluding agar-agar, fish and marine-animal oils, pearls, etc.) to all countries reached a record high of 196,489 metric tons, valued at US\$120.6 million, in 1956. This was an increase in value of 59.5 percent as compared with 1955 (see table). Of the exports, 46.8 percent were shipped to the United States.

Japanese Fish and Fish Preparations ^{1/} Exports, 1954-56						
Destination and Type of Product	Quantity			Value		
	1956	1955	1954	1956	1955	1954
Exports to United States:	. . . (Metric Tons) (US\$1,000) . . .		
Tuna, frozen	44,217	258,457	48,870	13,603	18,377	19,367
Tuna, canned	12,929	9,449	6,738	11,648	8,880	7,677
Crab meat, canned	2,374	2,137	1,120	5,233	4,560	2,448
Other fishery products, canned	16,343	10,098	9,635	14,552	8,008	7,444
All other fishery products . .	15,996	4,120	4,984	8,867	3,325	2,899
Total to United States . .	91,859	84,261	69,347	53,903	43,150	39,877
Exports to all Countries . .	196,489	155,106	140,747	120,630	75,628	74,244
Percentage Exported to U. S. (Percent)					
	46.8	54.3	49.3	44.7	57.1	53.7

^{1/} Exclusive of fish and marine animal oils, pearls, and agar-agar.

In addition to fish and fish preparations exports, Japan shipped to the United States 12,233 metric tons (valued at US\$4.6 million) of fish and marine-animal oils.

in 1956 as compared with 11,409 tons (valued at US\$5.2 million) in 1955 and 4,584 tons (valued at US\$3.2 million) in 1954. The value of worked natural and cultured pearls exported to the United States rose from US\$3.6 million in 1954 to US\$5.6 million in 1955 to US\$6.8 million in 1956.

Japanese agar-agar exports to all countries dropped from 815 metric tons (valued at US\$3.0 million) in 1955 to 698 tons (valued at US\$2.1 million) in 1956. Exports of this product in 1954 amounted to 684 tons (valued at US\$2.7 million).

The value of Japanese 1956 exports of only fish and fish preparations made up 4.8 percent of the total value of all Japanese exports.

* * * * *

FISH NET INDUSTRY PREDICTS DISAPPOINTING YEAR: Fish net manufacturers and exporters in Mie Prefecture of Japan are deeply disturbed over the slackened demand for fish netting and twine domestically and their inability to meet foreign demand due to the Ministry of International Trade and Industry (MITI) quota list. In previous years the busiest months for the industry have been January and February when orders from domestic and United States fishing companies reach their peak. This year, however, the combination of controls on exports to the United States and uncertainty over the Soviet position on Japanese fishing in the northern part of the Japan Sea threatens seriously to affect the industry in the coming year, a March 11 United States dispatch from Nagoya points out.

The Japan Textile Goods Exporters Association has announced that in 1956 Japan exported \$5.4 million of fish netting (\$3 million of cotton netting and \$2.4 million of synthetic fiber netting) of which one half was manufactured in Mie Prefecture. According to a Mie Prefectural Government survey, Mie Prefecture produced 4,584,000 pounds of fish netting in 1956 valued at \$8,481,111. This represents a 30 percent increase over 1955 and amounts to 30 percent of the national total.

The major domestic buyers of fish nets are the companies engaged in salmon and trout fishing in the northern Japan Sea. These companies normally purchase approximately \$6.3 million of fish netting annually, but the manufacturers fear that if a satisfactory fisheries agreement with the Soviet Union is not reached in the near future, sales to those Japanese companies concerned could drop to one half of the 1956 total.

A further source of concern is that orders from the United States for sardine nets manufactured in the MITI Nagoya District (Aichi, Mie, Gifu, Nagoya, Shizuoka prefectures) far exceed the export quota for the area. The quota on exports to the United States for the period January through April 1957 was originally divided into three subquotas: 10,000 pounds for the MITI Tokyo District, 20,000 pounds for the MITI Osaka District, and 120,000 pounds for the MITI Nagoya District. Later 65,000 pounds was transferred from the Nagoya quota to the Osaka quota to alleviate the hardship that other cotton quotas were working on that area. As of February 10, 1957, orders had already amounted to approximately 35,000 pounds of the new 55,000-pound quota for the Nagoya area. Fish net manufacturers and exporters are now predicting that unless this district's quota is increased by 35,000 pounds they will be unable to meet their orders.

* * * * *

PEARL WASTE EXPORT TO RED CHINA: The Mie Branch of the Japan-China Friendship Society has received a letter from the Shanghai Office of the Red China Export Corporation expressing interest in importing "natural pearls" from Mie Prefecture on a barter basis in exchange for camphor oil.

The Mie "natural pearl" is a small irregular pearl formed by sand absorbed by pearl oysters before the nucleus is inserted. Except for a small quantity which is used in cosmetics, these pearls are regarded as unusable waste.

A Mie prefectural assemblyman took samples of the pearls to the Red China Sample Fair held in Shanghai in December 1956. The Red China Export Corporation referred to these samples in its letter and offered to make an initial purchase of ¥100 million (\$277,778). Such pearls are used in China as raw material for an "antifebrile" (presumably a drug to reduce fever), states a March 11 United States consular dispatch from Nagoya.

The Mie Prefectural Government is gathering information on the market for camphor oil in Japan and preparing a report on the natural pearl production capacity of Mie pearl farms.



Malaya

CANNED MACKEREL MARKET: There is no domestic production of canned mackerel in Malaya, and there is always a steady market for all varieties of canned fish in this territory, especially pilchards, sardines, and herring.

Statistics for canned mackerel are not available. However, it has been ascertained that imports have been negligible. The more popular sizes of cans used in Singapore are the 15-oz. tall (20 percent) and 15-oz. oval (80 percent); and in the Federation of Malaya, 15-oz. tall (80 percent) and 15-oz. oval (20 percent). All of the pack is in tomato sauce. Retail prices for canned sardines, pilchards, and herring range from 18-24 U. S. cents a can.

Canned fish of all varieties can be imported into Malaya. Although imports into Singapore are free of duty there is a duty of 25 percent ad valorem and a preferential duty of 10 percent ad valorem on imports into the Federation of Malaya.

South Africa has virtually the monopoly in this market as far as pilchards and sardines are concerned owing to: (1) preferential duty, (2) even flow of supplies throughout the year, (3) good representation, (4) good demand, and (5) competitive prices.

By conforming to the requirements of this market as regards size of can, packing, as well as very competitive price and attractive presentation, plus active promotion on the part of local distributors--not forgetting regular supplies--United States exports to this territory can be increased appreciably, states a February 15, 1957, dispatch from the United States Embassy at Singapore.



Mexico

SPINY LOBSTER EXPORT DUTY INCREASED: The export duty on fresh or refrigerated cooked Mexican spiny lobster, effective February 16, 1957 (Diario Oficial February 15, 1957), was increased 10.5 percent. The new rate is slightly over 3.28 U. S. cents per gross pound. The increase was effected by raising the official valuation from 11.00 to 12.00 pesos per gross kilogram.

The export of live spiny lobsters from Mexico has been prohibited for some time, points out a United States Embassy dispatch (February 15) from Mexico.

SHRIMP EXPORT DUTY INCREASED: Mexican export duties were increased about 10 percent for fresh, iced and frozen shrimp from the Gulf of Mexico and about 15 percent for shrimp from the West Coast, effective February 9, 1957 (Diario Oficial, February 8, 1957). Export duties are now about 16.35 U. S. cents a pound for fresh iced shrimp from the Gulf of Mexico and about 17.35 cents a pound for West Coast fresh iced shrimp. Frozen shrimp from the Gulf of Mexico, Salina

Table 1 - Mexico's Official Prices and Export Duties for Frozen Shrimp

	Gulf of Mexico and Salina Cruz, Oaxaca, Santa Rosalia, Baja California		All Other Shipping Points	
	Peso	US\$	Peso	US\$
	(Per Metric Ton, Net)		(Per Metric Ton, Net)	
Official price	12,600.00	1,000.81	13,370.00	1,070.46
Specific duty	3.00	0.24	3.00	0.24
5 percent ad valorem	630.00	50.44	668.50	53.52
Subtotal	633.00	50.68	671.50	53.76
2 percent municipal	12.66	1.01	13.43	1.08
Total duty and tax	645.66	51.69	684.93	54.84

Cruz, Oaxaca, and Santa Rosalia, Baja California, now are dutiable at about 2.34 cents a pound and those from the West Coast (other than Salina Cruz, Oaxaca, and Santa Rosalia) about 2.49 cents a pound. The increase was effected by raising the official prices, states a dispatch from the U. S. Regional Fishery Attache in Mexico.

Table 2 - Mexico's Official Prices and Export Duties for Fresh Shrimp

	Gulf of Mexico		Pacific Coast	
	Peso	US\$	Peso	US\$
	(Per Metric Ton, Net)		(Per Metric Ton, Net)	
Official price	12,600.00	1,000.81	13,370.00	1,070.46
Specific duty	3.00	0.24	3.00	0.24
10 percent ad valorem	1,260.00	100.88	1,337.00	107.04
25 percent ad valorem	3,150.00	252.20	3,342.50	267.61
Subtotal	4,413.00	353.32	4,682.50	374.90
2 percent municipal tax	88.26	7.07	93.65	7.50
Total duty and tax	4,501.26	360.39	4,776.15	382.40

Note: Values converted at the rate of 12.49 pesos equal US\$1.



Norway

COD FISHERIES TRENDS TO MID-FEBRUARY 1957: Norway's spawning cod fisheries improved as of February 9, according to Fiskets Gang (February 14, 1957), a Norwegian fishery trade periodical. Through the date indicated, 10,091 metric tons of cod were landed as against 21,665 tons for a similar period in 1956. Of this season's catch, 2,281 tons were sold for drying (unsalted), 4,732 tons for curing, and 3,077 tons for the fresh trade. In addition 340 tons of steam-refined cod-liver oil were extracted, 134 tons of cod roe were cured, and 215 tons of cod roe were canned and iced. During the week ending February 9 fishing improved in all districts, but at the Lofoten Islands the schools were thin and scattered.

EARNINGS FROM FISHERY PRODUCTS EXPORTS SET RECORD IN 1956: Norwegian earnings from fishery products exports reached a record of US\$140 million in 1956, according to preliminary estimates (The Fishing News, January 4). These exports were also the largest on record in value. Dried fish exports were the largest since World War II and amounted to 30,000 metric tons. Exports of klipfish totaled 50,000 tons, about 10,000 tons more than in 1955. Frozen fillet exports of 16,000 tons were also up from the 14,000 tons exported in 1955. Exports of herring and herring meal were also exceptionally large.

* * * * *

FISH OIL PRODUCTION DOWN IN 1957: Preliminary estimates place the 1957 winter herring oil production in Norway at about 72,000 short tons. Herring oil output in 1956 was estimated at 115,000 short tons and meal production at 270,000 short tons. About 80 percent of the herring catch last year was processed by the meal and oil industry. In 1955 the industry produced about 80,000 short tons of herring oil and nearly 200,000 tons of herring meal.

Cold-cleared cod liver oil production in 1956 was estimated at 7,100 short tons, a sharp increase from the 4,100 tons produced in 1955, according to Foreign Crops and Markets, March 25, 1957, a publication of the U. S. Department of Commerce.

* * * * *

FISHERIES REVIEW, 1956: Fishing: Norway's fishermen landed a record-breaking catch of herring and other types of fish during 1956 that amounted to 1,960,000 metric tons. This total was 313,000 metric tons over 1955 and represented an increase of roughly 80 million kroner (US\$11.2 million) in ex-vessel value. The total ex-vessel value of the landed catch amounted to 666 million kroner (US\$93.2 million) versus 583 million kroner (US\$81.6 million) in 1955.

The catch of winter herring in 1956 constituted a record; the cod fisheries also increased their output over 1955. By contrast, the brisling catch has been described as a failure; the catch of small herring was also disappointing.

Marketing: The year 1956 was marked by many difficulties as far as fish sales were concerned. Basically the problem stemmed from mounting costs of production in the face of a world demand that was at least leveling off with a consequent depressive effect on prices. A product of decades of hard experience, the fish marketing system in Norway today is highly regulated with the object of preventing cut-throat competition and of assuring a guaranteed minimum price to the fishermen. On the other hand, Norwegian fishery products are sold on the world market at prices determined primarily by supply and demand. The fishermen have tried to even out the ups and downs of world prices by establishing equalization funds that are built up from the profits of the good years for the purpose of making up deficits in bad years; the accumulated reserves are limited, however, and the sums paid out during 1956 on the fish catch were approaching the critical point by the end of the year. A direct consequence of this development was the stimulation of demands by fishing groups that something be done to reverse the trend. No generally acceptable solution has yet appeared.

Exports: Exports of Norwegian fish products increased considerably in 1956, reflecting the favorable catches in all but brisling and small herring. Exports of fish and herring, and herring livestock feeds, but excluding herring oil, rose to 991 million kroner (US\$138.7 million), or by 13 percent.

Note: Also see Commercial Fisheries Review, March 1957, p. 51.



Panama

SHRIMP TO BE SHIPPED TO FLORIDA BY AIR: The largest producer and exporter of fresh and frozen shrimp in Panama has contracted for space with an operator of an international airline for shipments of frozen pink shrimp from Panama City to Miami, Fla. The firm requested guaranteed space, consisting of four planes a week, to transport 17,600 pounds of frozen shrimp per shipment for a period of approximately two months.

It is estimated that the shipping rate for shrimp from Panama to Miami is five cents a pound via air transport. The Panamanian shrimp will be trucked from Miami to Jacksonville at one cent a pound, according to a March 12 dispatch from the United States Embassy in Panama.



Peru

NEW FACTORYSHIP FOR FISH MEAL: A 2,500-ton vessel has recently been converted into a fish meal factoryship at a cost of US\$100,000. The converted vessel, with a capacity of 20-30 tons of fish meal daily will operate off the Peruvian coast, using sardines and "conjinoua," states a February 26 dispatch from the United States Embassy in Lima.



Republic of the Philippines

IMPORTS OF FISH OILS, 1953-56: Included in the Philippine imports of fats and oils were small quantities of cod-liver oil and other fish oils (see table), states a March 29, 1957, review of the Philippine fats and oils situation by the Foreign Agriculture Service of the U. S. Department of Agriculture.

Philippine Imports of Inedible Fish Oils, 1953-56				
Item and Country of Origin	1956	1955	1954	1953
. . . . (Long Tons)				
Cod-liver Oil:				
United States	9	29	19	23
Norway	5	12	80	32
Other Countries . .	13	7	-	2
Total	27	48	99	57
Other Fish Oils:				
United States	-	2	35	23
Other Countries . .	6	4	-	-
Total	6	6	35	23



Portugal

FROZEN FISH DISTRIBUTION SYSTEM ESTABLISHED: The arrival of 3,000 metric tons of frozen fish from Germany the latter part of December 1956 marks the first attempt on the part of Portuguese fish distributors to supply consumers in the interior with fish, other than dried or salted. The first delivery of 3,000 tons is part of a contract calling for a total of 20,000 tons. Imports of frozen fish are considered to be necessary until the distribution system is established, thereafter local catches are to supply the fish for freezing.

The new system of frozen fish distribution, established by a Lisbon firm, will supply frozen fish to eight districts in the interior of the country. Plans include the erection of modern refrigeration plants in 16 inland centers. The first refrigeration plant was opened in Guarda about December 20 and will serve as a pilot op-

eration for other installations. The new cold-storage warehouses will serve as centers for a network of sales outlets, states a December 20 dispatch from the United States Embassy in Lisbon.

The new distribution system should facilitate carrying out the intent of the decree-law of September 27, 1956, by diverting salted sardines from the interior markets and making them available to the canners.

Note: Also see Commercial Fisheries Review, December 1956, p. 77.



Spain

VIGO FISHERIES TRENDS, 1956: Fishing: Landings of fish at Vigo during 1956 amounted to 57,701 metric tons (127.2 million pounds) as compared with 60,700 tons (133.8 million pounds) in 1955. Catches were quite poor during the early months of the year, but picked up as the season advanced. The 1956 catch of albacore tuna was good and later in the year there were signs of small sardines returning to Spanish coastal fishing grounds.

An increase in average prices for fresh fish is one more indication of the higher cost of living. Operating expenses of the fishing fleets and distributors went up as the result of the new official wage rates. It is said that the new wage scales represent an increase of about 30 percent for the fishing industry.

Landings at Vigo during November 1956 totaled 10.9 million pounds valued at about US\$963,970. The November catches were about 29 percent lower than those of the previous month and about 12 percent below the November 1955 catches. However, November 1956 was considered a fair month by the fishing industry.

Small and some medium-size sardines (3.4 million pounds) were the principal catches during November, followed by horse mackerel (*Trachurus trachurus*) with 1.9 million pounds. Albacore tuna catches were insignificant during November--as the season was over. One other species of commercial importance in November was the "castaneta" or dollarfish.

A number of fishing vessels operate out of small ports in the Province of Lugo, but part of the catches are landed at ports in Asturias, especially their albacore catches which amounted to 2.9 million pounds during the June to November season.

Canning: In 1956 the canneries in the Vigo area suffered from a chronic shortage of tinplate which was aggravated by the revaluation of the peseta from 357.7 to 715.0 paper pesetas per 100 gold pesetas in April. This had the effect of raising the import duty on tinplate. At the end of the year exports of canned fish were at a low level due to unfavorable exchange rates and uncertainty as to prices due to an estimated 30-percent increase in costs following wage and social security increases.

The fish canneries continue to be deeply concerned over the tinplate situation. Some of the leading canneries (about 14 in the Vigo area) make their own cans but have lithographing done outside. It is reported that the imports of tinplate amounted to 8,000 cases (approximately 1.7 million pounds) during November. However, a portion of this quantity reached other parts of Spain, but a fair share was made available to the canneries in the Vigo area. The supply of tinplate is considered inadequate by the canneries.

Olive oil for fish packing is usually scarce and often difficult to obtain. Although the official price is 18.6 U. S. cents a pound, there is an open market and the canneries usually find it necessary to pay higher prices. It is the general opinion, however, that there will be no serious shortage of olive oil and the prospects are good for an adequate supply during 1957.

For some cannery workers, there is an increase of 100 percent in wages. Women packers formerly earning around US\$0.51 a day are now being paid approximately US\$1.03 a day. It is believed that the price of canned fish will be increased about 20 percent in some manner as the result of the new wage scales. Domestic sales have been fair but slowed up slightly around the end of November.

Exports of canned fish also slowed up as of November, due to the price situation. The canneries now feel that the Spanish Government should allow a higher rate of exchange (presently 33,385 gold pesetas to the U. S. dollar) on exports or increase their percentage of foreign exchange (presently 20 percent) which is allowed for the payment of approved imports.

During December the canneries in the Vigo area purchased 1.9 million pounds of fresh fish at the local fish exchange as compared with 1.4 million pounds in December 1955.

December generally marks the beginning of a slow season for the canneries, due to the scarcity of suitable varieties of fresh fish during the winter months. Some canneries resort to anchovy packing, since anchovies can be purchased in bulk.

The fish canneries in the Vigo area purchased 2.2 million pounds of fresh fish in November as compared with 4.9 million pounds for the previous month and 3.7 million pounds in November 1955. Most canneries were operating during November 1956, but on a reduced scale as compared with the previous month.

Small and medium-size sardines and clams were the principal species available for packing in November. However, during the latter part of November, the canneries commenced to purchase a portion of the heavy catches of horse mackerel. Fishing interests feel certain that the sardine is returning to Spanish coastal waters due to the presence of small fish in the catches. The present sardine catches range from 14-18 fish to a pound as compared with 11-13 a pound for the large sardine taken in past years.

Note: Values converted to US\$ equivalent at rate of 1 peseta equals US\$0.0257.



Sweden

FISHERIES LOAN FUND INCREASE REQUESTED: The Swedish Fishery Board has requested that the fund for loans to fishermen be increased from 2.6 million Swedish crowns (US\$504,000) to 5.0 million crowns (US\$969,000). The reason for this request is that for several years possibilities to obtain loans from the fund have been very limited. There are at present on hand applications for loans amounting to 6,302,675 crowns (US\$1,221,000), which is more than double the amount that may be granted. This situation presents difficulties not only to the individual fishermen but also to the Swedish fishing industry.

The present value of the craft and gear used in the fishing industry amounts to about 175 million crowns (US\$33,915,000) and in order to maintain the current value of the craft and gear, a minimum amount of 30 million crowns (US\$5,814,000) a year is required.

Since fishing chiefly is carried on by persons with little surplus capital and whose position has been further weakened by reduced catches and loss of gear, difficulties have arisen which have been further aggravated by the credit restrictions.

In order to increase profits Swedish east coast fishermen are especially interested in increased credit and a considerable part of the loan applications come from this district. Another factor accounting for the large amounts requested by fishermen in the east coast area is the large loss of gear that has taken place in the southern part of this district. This gear must be replaced if fishing is to continue on the same scale in this area.

The increased request for loans has resulted in reduced loans and 20 percent of the purchase value of craft or gear is the average granted. The credit restrictions have also reduced the number of fishing boats built for west coast fishermen from 20 vessels in 1955 to only 7 in 1956.



Thailand

CANNED SARDINE MARKET: In Thailand there are no sources of the true sardines or sardinelike fish common in United States and Europe. A domestic fish, which is of the greatest importance to the Thai canned fish industry, is the "Pla-Tu" (*Rastrelliger chrysozonus*), a striped mackerel approximately six inches in length.

The Pla-Tu is the principal source of canned fish and is processed in each of the 12 major canneries of Thailand. These canneries also produce canned fruit, vegetables, and fish sauce for local consumption. The quality of canned Pla-Tu, although satisfactory by local standards, is considered inferior to that of imported sardine products.

In addition to commercial canneries, the Thai Army produces canned Pla-Tu for its own use, the surplus of which is sold on the local market. The surplus is estimated to be approximately 10,000 cans a year, with an annual value of 35,000 Baht (US\$1,750). At present, the Thai Navy is considering the possibilities of organizing its own cannery for the production of Pla-Tu.

Although detailed figures are not available from either Thai Government sources or the canning industry, local sources estimate that the total annual production of canned Pla-Tu is approximately 3.4 million cans of the 15-oz. size. The wholesale value of this pack is approximately 14.5 million Baht (US\$725,000). It is estimated also that the present production now exceeds the market demand by 20 percent. Taking the overproduction into consideration, the annual consumption of canned Pla-Tu is estimated at 60,000 cases (48 15-oz. cans a case).

The consumption of canned Pla-Tu is higher in the north and northeast of Thailand where fresh fish is scarce, and proportionately less in areas with an abundant supply of fresh fish. The largest consumers of canned Pla-Tu are in the lower and middle income groups. For reasons of taste and economy, canned fish is not considered part of the regular daily food of the Thai and Chinese.

For the canned Pla-Tu, 50 percent of the customers prefer the 15-oz. oval can, 25 percent the 7½-oz. oval, and 25 percent the 5-oz. flat. For style of pack, 100 percent prefer Pla-Tu in tomato sauce. Retail prices for canned Pla-Tu are: 7.50 Baht (37 U. S. cents) a can for the 15-oz. oval can, 3.5 Baht (17 U. S. cents) for the 7½-oz. oval, and 2.5 Baht (12 U. S. cents) for the 5-oz. flat.

Sardines, salmon, and tuna are the leading imported canned fishery products in Thailand. The consumption is largely limited to Western residents and the local higher income group.

Total imports of canned sardines during 1955 amounted to 46,264 pounds with a c.i.f. value of 216,974 Baht (US\$10,849). Fifty percent of the consumers use the 5-oz. oval; 20 percent, the 8-oz. oval; and 30 percent, the 4½-oz. rectangular can of sardines. Sixty percent of the consumers prefer canned sardines packed in tomato sauce, and 40 percent, olive oil. The percentage of sardines consumed by the high and middle income groups is estimated at 80 and 20 percent, respectively. The retail market price for the 15-oz. oval can of sardines packed in tomato sauce is 16 Baht (80 U. S. cents a can), 8-oz. oval in natural oil, 12 Baht (60 U. S. cents); 4½-oz. rectangular in olive oil, 6 Baht (30 U. S. cents); and 4½-oz. rectangular in tomato sauce, 5.5 Baht (27 U. S. cents).

There is no import control on canned fish at present in Thailand. The import duty, however, is 50 percent ad valorem (approximately 34 U. S. cents a pound).

Imports of canned salmon in 1955 amounted to only about 200 pounds.

Imports of canned fish January-August 1956 amounted to 41,897 pounds (c.i.f. value of 367,041 Baht or US\$18,352). Of these imports, 13,682 pounds (c.i.f. value 82,450 Baht or US\$4,123) consisted of sardines of which 3,276 pounds (c.i.f. value 16,630 Baht or US\$832) came from the United States. Canned salmon imports totaled 3,307 pounds (c.i.f. value 50,303 Baht or US\$2,515) of which 3,159 pounds (c.i.f. value of 47,931 Baht or US\$2,397) came from the United States. The balance of the canned fish imports amounted to 24,908 pounds (c.i.f. value of 234,288 Baht or US\$11,714) of which 13,028 pounds (c.i.f. value of 134,150 Baht or US\$6,708) were shipped from the United States.

Among the higher income group (including Western residents) the average annual per capita consumption of imported canned fish, mostly sardines, is approximately 3 pounds.

Among Thai and Chinese consumers the principal demand is for fresh and dried fish products. These products are abundant and available at prices within the range of the lowest income group. These factors tend to limit the consumption of domestic canned fish, which is only one-half the cost of imported canned fish. In view of the above, the general pattern of consumption is not expected to change appreciably in the near future, a February 9, 1957, dispatch from the United States Embassy at Bangkok points out.

In general, canned fish products are imported either directly by wholesalers or by general import companies. The largest supply of imported products is distributed to retailers in the general area of Bangkok, and only a small amount to other cities in the Provinces.



United Kingdom

FACTORYSHIP "FAIRTRY" PROVES SUCCESSFUL: The British stern-trawling factoryship the M/V Fairtry developed to fillet and freeze fish at sea, has landed 5,000 metric tons of fillets, 1,000 tons of fish meal, and 100 tons of cod-liver oil during 2½ years of continuous operations. The Fairtry, both as to methods of fishing with the otter-trawl and in the filleting and freezing of fish at sea, was admittedly somewhat of an experiment at the time the first trip was landed in July 1954. The tenth trip was completed in November 1956 and in the intervening 2½ years many technical and personnel problems have been overcome, according to an article in the November 23, 1956, issue of The Fishing News, a British trade publication.

The catches made by the factoryship are usually frozen and in the storage holds about six hours after capture. It is generally conceded that for eating qualities this frozen-at-sea fish is unrivaled.

At the start of the venture the Fairtry's production was very slow, even at times when fish were plentiful. To begin with it was not expected that the layout and arrangements on the fish deck and in the processing section would be even near perfect until tried out in practice, nor that the fishermen, new to the methods and gear employed in stern trawling, would avoid mistakes; and the fish workers, however skilled they might be in land-based production, were bound to find production at sea raised new and difficult problems.

Many alterations and improvements had to be made each time the ship arrived back from a fishing trip and time had to pass before the crews became thoroughly familiar with and skilled in their tasks. But slowly the fishing performance and production rate began to improve. New filleting machinery was ordered and installed in haste.

Most important of all, the turnover of personnel serving from voyage to voyage began to decrease as men found the terms and conditions of the job to their satisfaction. As the struggle to obtain good crews slackened and good men presented themselves for re-employment, voyage after voyage the morale on board improved and grew high.

The vessel holds over 600 tons of frozen fillets, 100 tons of fish meal, and 50 tons of liver oil and can remain at sea for over 80 days before requiring to refuel.

* * * * *

CANNED SARDINELIKE FISH IMPORTS: The imports of pilchards, sardines, and sild by country of origin for 1954-56 were incorrectly shown in "Table 3 - Canned Sardineline Fish Imports into United Kingdom, 1954-56" published on page 110 of the November 1956 issue of Commercial Fisheries Review. A revised table showing the correct United Kingdom imports for all sardineline fish follows:

Product & Principal Country of Origin	January-April 1956			12 Months 1955			12 Months 1954		
	Quantity 1,000 Lbs.	Value		Quantity 1,000 Lbs.	Value		Quantity 1,000 Lbs.	Value	
		£1,000	US\$1,000		£1,000	US\$1,000		£1,000	US\$1,000
Brisling:									
Norway	82	21	60	1,867	507	1,421	3,760	1,045	2,925
Denmark	6	1	3	23	4	10	15	3	7
Other	1	1	1	5	1	2	1	1/	1
Total	89	23	64	1,895	512	1,433	3,776	1,048	2,933
Pilchards:									
Union of South Africa	995	69	193	4,922	328	919	2,139	154	431
South-West Africa .	4,961	347	973	12,460	799	2,237	5,903	374	1,046
Other	-	1/	1/	2	1/	1/	2	1/	1
Total	5,956	416	1,166	17,384	1,127	3,156	8,044	528	1,478
Sardines:									
France	53	12	34	47	11	29	227	50	140
Portugal	2,557	376	1,053	13,209	1,842	5,158	14,720	2,038	5,707
Yugoslavia	-	-	-	-	-	-	301	25	70
French Morocco . .	10	1	3	9	1	3	801	107	300
Other	47	6	15	99	13	36	170	21	59
Total	2,667	395	1,105	13,364	1,867	5,226	16,219	2,241	6,276
Sild:									
Norway	192	37	104	321	63	177	629	121	338
Other	-	-	1/	6	1	3	1/	1/	1/
Total	192	37	104	327	64	180	629	121	338
Grand Total . . .	8,904	871	2,439	32,970	3,570	9,995	28,668	3,938	11,025

1/ LESS THAN 1,000 LBS., £1,000, OR US\$1,000.

* * * * *

SUBSIDIES FOR FISHING INDUSTRY INCREASED: A further £879,000 (US\$2,461,200) to help the fishing industry during the current year is included in supplementary estimates for the British Ministry of Agriculture and Fisheries presented to the Commons early in February. This will raise the total for the year to £5,728,770 (US\$16,640,556).

The largest portion of the new allocation £660,000 (US\$1,848,000) is needed for the White Fish Authority's (W.F.A.) increased grants to fishermen for vessels and engines, states the February 15 issue of The Fishing News.

Total sum available for grants goes up to £1,610,000 (US\$4,508,000) but it is expected that the W.F.A. will save £300,000 (US\$840,000) on loans to fishermen.

An additional £187,000 (US\$523,600) is needed by the W.F.A. for loans for re-organization and development of the industry, making a total of £247,000 (US\$691,600).

Higher subsidies to near- and middle-water vessels will cost a further £315,000 (US\$882,000).

Scottish fisheries and the United Kingdom herring industry need a further £49,950 (US\$138,600), making a total of £2,479,951 (US\$6,943,863).



TASTE IMPORTANT TO ATTRACT THE CONSUMERS

Give your customers food that tastes good and advertise your products, a former Kentucky Governor told some 800 delegates to the 12th annual convention of the National Fisheries Institute April 29, 1957. The address entitled "The Bait That's Best," advised taking advantage of impulse buying and cooperating with other industries.

He pointed out that United States food consumption is increasing at a rate of more than 4 billion pounds a year. People have more money to spend for food; they are eating more and better food than ever before. "When it comes to interesting the public," he said, "it's the taste of the fish that determines the best bait, not the taste of the fisherman."

"One of the most revolutionary developments in recent years," he pointed out, "has been the phenomenal growth of the frozen food industry." "Last year 8.7 billion pounds of frozen foods were distributed in the United States. Of that quantity, 316 million pounds was fish processed in this country. An additional 260 million pounds was imported."



"As you angle for more of the housewife's dollar, remember you've got a convenience food in frozen fish to offer her," he said.

He emphasized that one-third of American women are employed in full-time jobs and therefore are especially interested in foods that are prepared quickly and with the minimum of labor.

"The modern woman," he said, "can throw together a 30-minute meal that looks like she spent two hours on it." But ease

of preparation is not enough. "The consumer fears inferior quality and if she gets it she's through."

Impulse buying accounts for a high percent of purchases in supermarkets. A recent survey shows, for example, that 87 percent of frozen fish bought resulted from decisions made after entering the store; 73 percent of fresh fish, and 82 percent of canned fish were bought on impulse. This makes attractive packages a highly important feature of "the bait that's best" for the buying public.

--Address given at the 12th Annual Convention of the National Fisheries Institute, April 29, 1957, Chicago, Ill.