

tion of the economic rent and of the family income of tenants. A rental rebate is to be granted on application by tenants on the basis of the relation between the economic rent and the family income. If family income is equal to the basic wage,<sup>5</sup> the rebate shall be the amount by which the economic rent exceeds one-fifth of the family income. If family income is less than the basic wage, this rebate is increased by one-quarter of the amount by which the family income is less than the basic wage. If family income exceeds the basic wage, this rebate is decreased by one-third of the amount by which the family income exceeds the basic wage. Family income and eligibility for rental rebate is to be reviewed every six months. Dwellings erected by States may be sold but, except with the written consent of the Commonwealth Treasurer, the price shall be not less than the capital cost. Losses on housing projects (including the net cost of rental rebates) shall be allocated as to three-fifths to the Commonwealth and as to two-fifths to the States.

5. In Australia, the basic wage is determined by government agencies, as a minimum reasonable living wage for the unskilled worker. It is much nearer to the actual average wage than is the minimum wage in other countries.

It will be noticed that the rental rebate scheme adopted is considerably less generous than that recommended by the Housing Commission; and that no subsidy whatever is proposed for government-sponsored dwellings that are sold.

Actual progress achieved in housing since the war has of course been disappointing, as it has been throughout the world, due to shortages of labour and materials. During the year 1944-5, 10,000 houses were commenced, of which 5,600 were completed. In June 1945, the Federal Cabinet set, as a target for the year 1945-6, 24,000 houses, for 1946-7, 50,000 houses, for 1947-8, 70,000 houses, and thereafter stable at that rate, until the shortage is overcome. It was hoped that about half would be constructed through government agencies, and half through private enterprise. On January 15, 1946, the Commonwealth Minister for Housing announced that, under the government-sponsored programme, 1992 houses were commenced in the September quarter and 2316 in the December quarter. These figures suggest that it might be possible for the target of 12,000 houses to be reached. However, industrial disturbances at the end of 1945 disrupted the flow of materials and the rate of progress may be slowed down.

## Problems of Nova Scotian Fisheries

By S. A. BEATTY

THE ground fishery is so important to the economy of Nova Scotia that the future prospects of this industry should be gauged with as much accuracy as is possible in this uncertain world. It is especially worthwhile to estimate the most probable trends to be expected during the present period of readjustment following the war. There seems to be enough evidence to outline the direction in which the industry will

move, but the actual timing of these moves is very difficult to forecast with any degree of accuracy.

To simplify our problem let us divide the industry into two parts: (a) the production and processing, and (b) the distribution or marketing, although the two phases in the industry are so closely related and so interdependent that in a discussion of one division, the other should be kept in mind.

One of the most important problems in relation to production is the supply

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of raw material, and since the advances in the technology of food processing have made fish a world commodity, we must consider our supply of raw material as against the supplies of fish available to actual or potential competitors anywhere in the world.

### Fish Supply Areas

A brief summary of the world's supply of fish as shown by production is given in the report "F. A. O. with Special Reference to Fisheries" by A. W. Anderson, Fishery Market News Supplement, October 1945. The only important fishery in the southern hemisphere is shown to be that of India. More than 90 per cent of the world's production is shared among four fishing areas, two in the Atlantic Ocean and two in the Pacific. The area yielding the greatest quantity of fish is in the Western Pacific, the total pre-war production of Japan, China, Chosen and Asiatic Russia being about 8,000,000 tons. This area does not offer serious competition in our better markets except in canned tuna, canned crab and canned salmon, practically the whole production being consumed by Asiatic peoples. The second great producing area extends from Iceland to the White Sea and south into the Bay of Biscay. The countries producing heaviest are Great Britain, Norway, Germany, France and Iceland. The centre of this area, the North Sea, showed evidence of serious overfishing previous to the war. The sizes of the catch and of the individual fish in the catch had decreased. British trawlers, engaged in the fresh fish trade fished the White Sea and waters around Iceland, while Spanish, French and Portuguese trawlers salting their catch fished North American waters. The only country in the North Sea area not seriously affected by overfishing was Norway. Because cod congregate in Norwegian waters during the winter and early spring, the effect of depletion so noticeable elsewhere was not seriously felt.

But the period of rapid growth of cod and haddock is about six years, and since

fishing was reduced almost to a standstill during the war, this European area is all now practically virgin water. Norwegian catches should not be materially greater for the same reason that during the prewar depletion, they were not materially lessened. Icelandic catches and those of the Barents Sea and the White Sea should not be much different from prewar catches. But the North Sea catches have been large since fishing has been resumed. This fact is reflected in the lessening interest of the British Ministry of Food in frozen fish from this continent, and a continuing market for fish in Great Britain or western Europe is improbable.

The fishing area of the Pacific coast of North America extends from the region of the Gulf of California northward to the Aleutians, but it is only in this northern part that the Continental shelf extends seaward to form extensive banks. Hence there is not a large area to hold fish, and the ground fish production of our west coast is relatively small. The main commercial fish are halibut, salmon, tuna, pilchards and herring. The first three are all very important food fish, which, because of their excellent flavour are in great demand. Pilchards and herring are used in the main as raw material for the production of fish meal and fish oil. All are fished to the limit, and it is unlikely that there can ever be a worthwhile increase in production.

Last of all we come to the east coast of this continent, the important fishery of which is located on the continental shelf, narrow in the region of Cape Cod and extending eastward to the Grand Banks, the eastern boundary of which extends almost 600 miles east of Nova Scotia. Two distinct types of fishing for ground fish are carried on here. The American fishery is almost entirely a deep sea fishery using otterboard trawls. The Newfoundland fishery is carried on almost exclusively by shore fishermen in small boats and using baited gear. The Canadian ground fish fishery is divided between the shore fishermen and deep sea fishermen in about four

Figure 1. Sources of Income of Nova Scotia Fishermen.

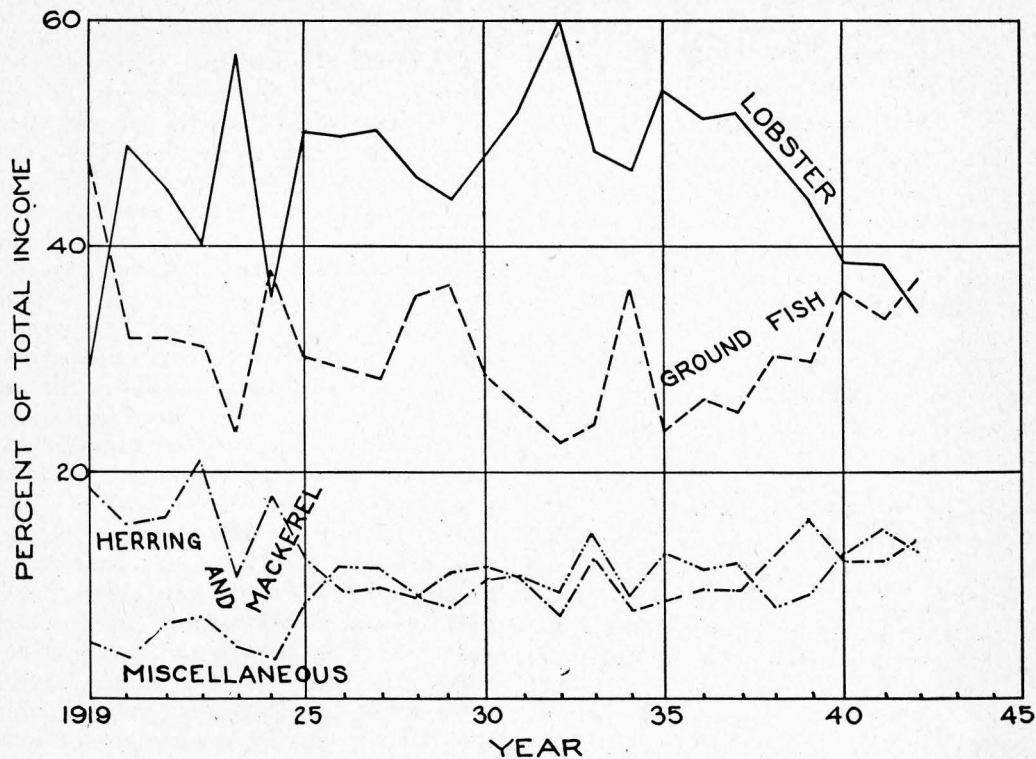
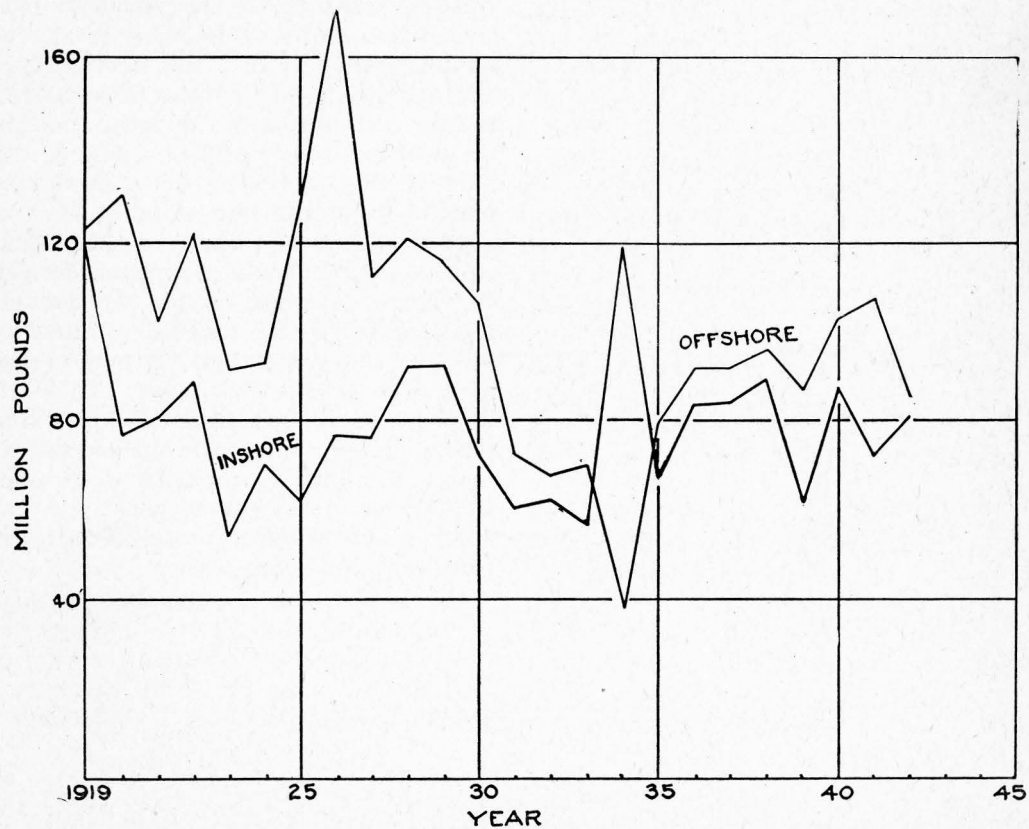


Figure 2. Production by Nova Scotia Shore and Deep Sea Fishermen of Cod, Haddock, Hake, Cusk and Pollock.



to five ratio. The latter uses both baited lines and otterboard trawls.

### Shore Fishery

The shore fishery has given a rather scanty income to a large proportion of the population in the period between the two wars, and no discussion of the future of the Nova Scotia fishery would be complete without some estimate as to the future place of these people in the industry. This shore fishing is a very diversified production, but the catch can be divided into four main classes, lobster; ground fish, including cod, haddock, hake, pollock and flounders; herring and mackerel; and various other fishes, none of relatively great importance, which may be grouped as miscellaneous products. Figure 1 shows the relative importance of these four divisions to the shore fishermen from 1919 to 1942.

The lobster fishery may be examined first. Like the various fish of the Pacific region coast the lobster is fished to its maximum. The fishery is very drastically curtailed, both by closed seasons and by size limits. But Maine, the Canadian Maritimes, and Newfoundland have a virtual monopoly on the world production. Greater skill in handling has gradually extended the markets until now our lobsters reach the Pacific coast. The lobster is definitely a luxury product and may suffer in depression periods more than the staple fish. But on the whole, the future should be bright, with a gradual shift from canned lobster to the more profitable live lobster trade. The lobster has been and probably will remain the mainstay of the shore fisherman, and his gear and equipment, boats, etc., will be of a size and construction suitable for the fishing of lobsters.

The second important product of the shore fisherman is ground fish; cod, haddock, pollock, hake and flatfish. It is in the production of these fish that the interests of the shore fishermen and deep sea fishermen conflict. While the former derive only about one-third of their total income from ground fish, deep sea

production on our east coast both from schooners and trawlers consists entirely of ground fish. There has been a conflict of interest in the past between these two, resulting in the anti-trawler legislation of 1929. Therefore it might be wise to deal with this problem in some detail.

The first consideration is probably the relative efficiency of the two methods of ground fish production. Figure 2 shows the production of ground fish by inshore and deep sea fishermen in the period between the two wars. During the thirties we had about 750 fishermen in schooners and trawlers. We have no means of knowing the number of shore fishermen because the greatest number are part time fishermen, and their period of fishing may extend from a matter of a few days to the greater part of the year. No one has defined satisfactorily what period of the year a man should work to be considered a fisherman. In the Dawson Report three methods were used to estimate the number of shore fishermen. The fishery officers' values for statistical purposes placed the number at 14,600, the census figure of 1941 was 10,600, and the number who received bounty money in 1941 was 8,800. Since the minimum requirement for bounty claims is the fishing for three months or catching about \$40.00 worth of fish at prewar prices, even this figure may include a number that could at best be considered but part time workers. However, taking the smallest value as correct, the shore fisherman is on the average less than one-tenth as efficient man for man in the production of ground fish as the deep sea fisherman. Therefore there must be reasonable doubt as to the ability of the shore fisherman to maintain supplies, especially in the face of foreign competitors who are not hold at a reasonably profitable level in the latter for some time.

Let us turn to a discussion of the fresh and frozen fish market. Previous to the war this continent consumed Atlantic ground fish to the extent of about 460,000,000 pounds, equivalent to 160,000,-

Figure 3. Processed Cod in Nova Scotia. Values calculated as gutted heads on.

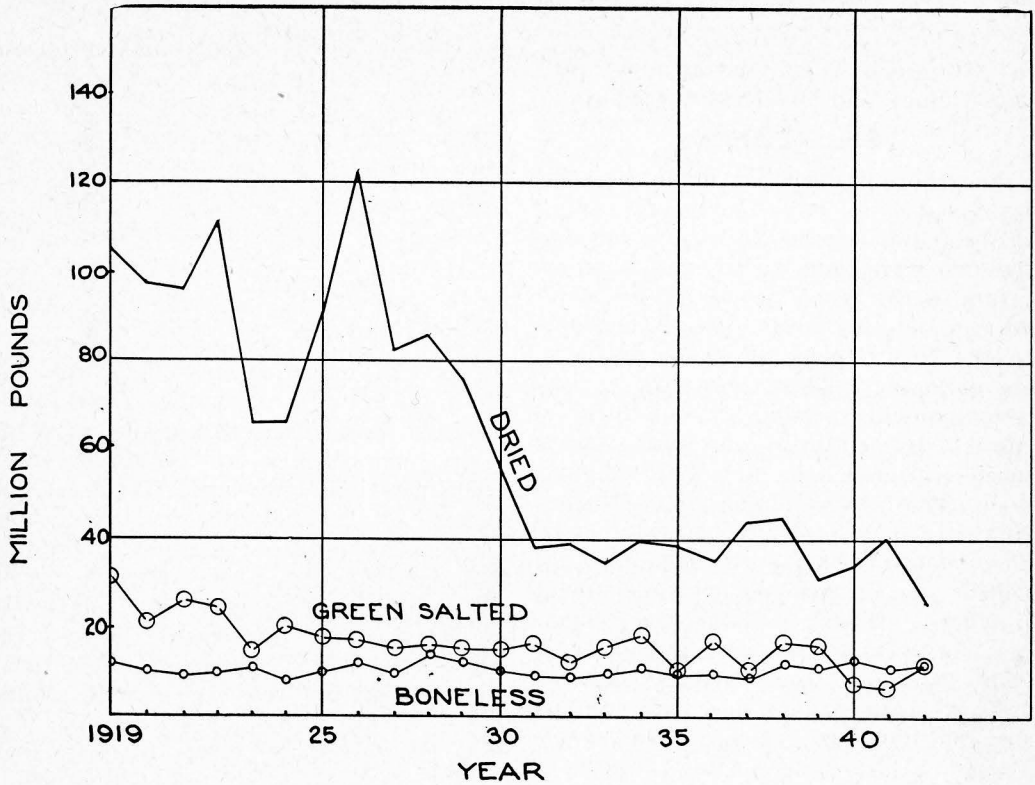
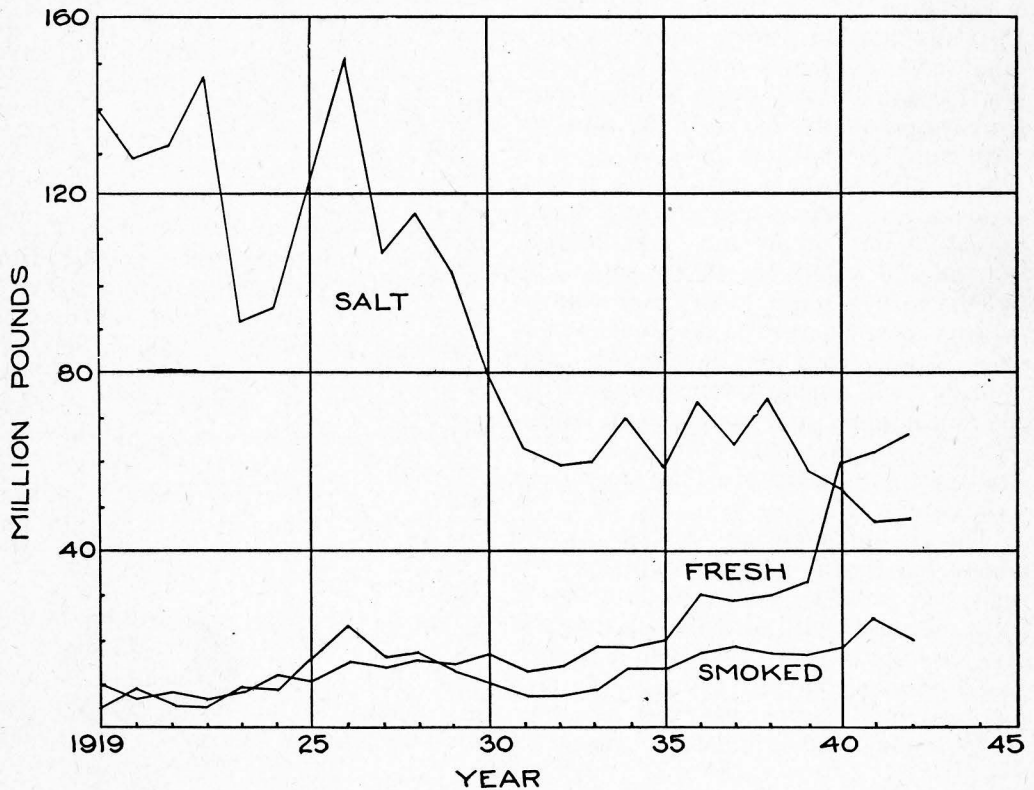


Figure 4. Salt Codfish Marketed in Nova Scotia. Values calculated as landed, gutted heads on.



000 pounds of fillets, the form in which the great bulk of this fish is sold. The market to which we readily cater is about 40,000,000 people so that the annual per capita consumption of Atlantic sea fish as it reaches the consumer is about four pounds.

During the war, the demand for fresh and frozen fish became very firm because of a number of factors. There was a serious curtailment in trawlers as the governments concerned took over the greater proportion of these vessels for naval purposes. Heavy shipments of food to Europe increased the demand for fish, and heavy purchases of Canadian fish by the British reduced the available supply.

But the market on this continent for fresh and frozen fish appears near saturation. Fresh fish production in Canada actually increased during the war. The Canadian government endeavoured to increase production by subsidizing vessel construction. Enhanced fish prices resulted in a greater fishing effort, and because of a greater profit in the fresh and frozen fish trades, a great quantity of fish that normally would have been salted, was diverted to this market. Therefore, at the end of the war, Canadian production of fresh and frozen fish was considerably in excess of pre-war production. The American fleet has been very rapidly expanded and is now capable of producing more fish than in pre-war days. The Newfoundland and Iceland production that during the war was shipped to Great Britain is now entering the market on this continent in increasing amounts, and it is conceivable that, in addition to the American and Canadian production, over 100,000,000 pounds of frozen fillets would be offered for sale. Will the very strong demand for fish built up during the war be sufficient to absorb this increased amount of fish offered for sale, or will this demand decrease to something like its pre-war level when now-scarce alternative foods become available? It is quite probable that the price of fresh and frozen fish would have broken at the

end of this year's Lenten period, had it not been for the strike of New England deep sea fishermen, the serious concern for food supplies of Europe on the part of American and Canadian governments, and the expectation of reasonably heavy purchases of Canadian and Newfoundland fish by Great Britain and France. It is doubtful if prices will hold at present levels throughout the summer, and it is quite possible that there will be a very serious decline in prices during the summer of 1947.

### Long Term Outlook

What is the long term outlook of the trade? If we can remove the cause or causes of the very low annual per capita consumption, the prospects should be very bright. Any considerable increased demand for fish can be met by increased production only in the North Atlantic, because all other fishing areas are now exploited to or very near their maxima. While the low demand for fish on this continent can be ascribed to many causes, probably the greatest single cause is the uncertainty of the quality of the product as purchased by the consumer. It is very difficult to market in the centre of this continent unfrozen fish of constant high quality, and frozen fish is not as acceptable to the consumer as unfrozen fish. Frozen fish has never been given a chance to create a consumer demand. A decade or so ago fish was frozen only when the quality had deteriorated to such an extent that it was entirely too poor a risk to put on the fresh fish market. Now, freezing is used in the main to handle surpluses. While the quality of the product is excellent when frozen, the flavour leaves it if held in storage any appreciable time. Therefore, the area that can land and freeze fish without deterioration, and get them to the consumer in the matter of a few weeks, should command the greatest share of the market. The east coast Canadian seaboard is the only region on the North American continent that can fulfil these conditions throughout the year. The American fleet is too far from the banks

to land fish of consistently high quality. The Newfoundland and Icelandic fish cannot be shipped to the market as fast as it is frozen without such small shipment as to increase transportation costs unduly, and the west coast fishery is altogether seasonal. If we take advantage of our geographical position with respect limited in their choice of gear. In 1929 an effort was made to assist the shore fisherman by drastic curtailment of trawlers. The effect of this action is shown in Figure 2. The catch of the shore fishermen actually declined during the worst of the depression about as fast as did that of the deep sea fishery. The failure of the shore fishermen to benefit from the trawler limitation is probably due in part to the curtailment in the fresh fish markets during the depression but mainly to the schooners, which while less efficient than the trawlers, were still more efficient in the production of ground fish than the shore fishermen. Therefore if the shore fisherman is to be assisted during difficult periods by curtailment of deep sea fishing, all methods of deep sea fishing must be curtailed. With the greater productivity of European waters, a curtailment of all methods of deep sea fishing might very easily result in a fatal handicap to the Maritime Provinces without any commensurate betterment of the status of the shore fishermen.

On the other hand the shore fishermen represent such a large section of our population that a drastic decrease in their earning power should be prevented. It would appear that little can be done to increase materially the returns from the main source of income, the lobster. It is fished to its maximum, and while by careful control the productivity may be increased, it is improbable that this increase will be great. The potential production that can be most readily increased is probably herring and mackerel. Therefore every effort should be made to extend the market for these fish. Experimental and development work have shown possibilities in purely inshore fisheries, such as seaweed production, oyster

and clam farming, smelt fishing, etc. These should aid in maintaining a respectable standard of living along the shore.

Probably the most certain means of ensuring prosperity along the shore is to build up the deep sea fishery to its maximum. Prosperous processing plants mean highest prices for the shore catch, and a prosperous deep sea fishery provides alternative employment, on trawlers, in the processing plants, and in auxiliary industries such as the manufacture of boxes. If these methods fail either because they are not sufficiently effective or because they cannot be developed in time to take care of rapidly developing situations, direct assistance to the shore fishermen would seem preferable to direct curtailment of deep sea fishing.

### Marketing Problems

The ills of the Atlantic coast fishing industry have arisen not so much from inability to produce an economic article, but from a lack of markets, and the future of the industry will be determined by the success with which new or expanding markets can be developed.

Figure 3 shows the trend in the marketing of cod, the main ground fish of Nova Scotia, in the period between the two wars. While there was a definite increase in the sales of fresh fish this did not compensate for the very serious decline in the volume of salt fish. Figure 4 shows that the main loss was incurred in the dried fish trade. While many reasons can be given for the loss of markets for salt fish, possibly the main direct reason was that our competitors, Norway, Iceland, and Newfoundland derive a large part of their total incomes from the sale of dried fish, and in the price war during the depression, these peoples were forced to lower their standards of living below the standard that Nova Scotians are willing to or have to accept. If this is true, we can maintain living conditions for our people higher than those of competing countries only in so far as our natural resources, our better technology, our geographical position, and our general marketing abilities

permit. The immediate future of the salt codfish trade looks reasonably bright although it would not seem probable that war-time prices will be maintained even through 1946. The better prospect for the salt fish trade is due to a shift from salt fish to frozen fillets in the important salt fish producing countries, Norway, Iceland, and Newfoundland. The two former countries were supplied by Germany and the Allies respectively with freezing equipment, and Iceland has already exported considerable quantities of frozen fish to this continent. With the curtailment of shipping facilities to the West Indies, the Newfoundland processors also entered the frozen fish trade. All are loath to return to what they deem the generally less lucrative salt fish production. Nor can they, equipped as they now are with expensive producing and processing equipment, scale prices down to as low a level as they were able

to do previous to the war. Therefore, unless these countries increase production to supply both their frozen fish market and the salt fish trade, prices should to both fishing banks and markets, what can we reasonably hope for in the way of increased sales? An increased annual consumption of east coast fillets from about four pounds to about eight pounds does not seem impossible in view of an annual consumption of meat of 120 to 150 pounds. And the area which can be served, could be increased very materially. Therefore, there is a possibility of increasing the market by as much as 400,000,000 to 500,000,000 pounds of round fish, or about six times the total Canadian pre-war production of fresh fish. While admittedly the above goal is at present simply wishful thinking, whether or not it becomes a reality will depend on the vision and leadership of the industry.

## Iceland and Its Sea Fishery

By KELD CHRISTENSEN

SINCE the sea fishery is an integral part of the economic structure of Nova Scotia it would not seem out of place to present some background material with regard to Iceland, one of the world's major fish producing countries.

It has only been very recently that Icelandic fish began to find a market in the United States, but recent developments seem to indicate that Icelandic fish may soon be shipped to the United States in increasing quantities. That such a practice would be of concern to producers in Nova Scotia may be assumed. Prior to World War II Icelandic exports of fish to the United States were negligible. Icelandic fish at that time found their markets in Portugal, Spain, the United Kingdom, Denmark, Sweden, Germany, and Italy. The war obviously necessitated a completely different trade pat-

tern; the hazards of sea transportation removed Portugal, Spain, and the Scandinavian countries from the list of countries with which Iceland could do business. Great Britain was able, however, to consume during the war the bulk of the Icelandic production. At that time Iceland also began to make shipments to the United States.

It is believed that Iceland's foreign trade is more naturally associated with Europe than with North America, but at the moment it is understood that the producers are anxious to gain an expanding market in the United States in order to obtain the dollars needed to maintain the essential imports from the United States.

### I

Iceland is situated close to the Arctic Circle, and is about the same size as Ireland, or about 40,000 square miles in area. The population in 1945 was about 124,000. The warm current of the Gulf

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