

Report of a visit to New
Brunswick - Canada from
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Report of a visit to New Brunswick, Canada from 14 July to 4 August 1993

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1. Introduction

The Province of New Brunswick, along with the Department of Fisheries and Oceans and the fishing industry have decided to work towards improving herring quality and marketing for New Brunswick coastal fleets and seiners. This project is seen as a necessity in order to profit most from the underutilized herring resource.

It was decided to invite two herring experts from Europe, Jorgen Folmer Hansen and Cees J. Weber, to develop a three to five year action plan, in conjunction with the industry and the government.

These two experts received the request to make visits during about three weeks, to some vessels and processors in the three areas in the Province, namely South-West, South-East and North-East.

They were expected to make an impression of a survey in this period, of the present ways in which herring is dealt with.

Next they were to be expected to requested recommendations for setting up a modern herring industry, based as much as possible, on the use of the present facilities, and to indicate a way to realize this. Finally, they should indicate a way in which these recommendations could be realized.

2. Report of a visit to New Brunswick

The purpose of this visit is to obtain an insight of the supply and the processing of the herring as well as indicating the possibilities to improve the supply and the processing of herring.

July 14th, 1993

Arrival in Fredericton, picked up by Mr. Gilles Alain. Introduced to Mr. Amer Chuinnard.

July 15th, 1993

We visited Marine Fish Division of the Biological Station of Fisheries and Oceans in St. Andrews. We got acquainted with Robert L. Stephenson and Gary D. Melvin. We received general information about the herring stocks, the fishing grounds and the various catch technics that are applied in the Bay of Fundy and Nova Scotia Areas. In the afternoon we visited Jack Boone's Weir and we saw how these herring catch methods are applied.

We visited Oven Head Salmon Makers of Anne Pendleton and Joseph Thorne. A small salmon smokery with two AFOS smoke kilns. The plant is very hygienic and they produce a reasonably good product.

July 16th, 1993

Meeting with herring biologist Michael P. Chadwick and Theal Vienneau from Gulf Region in the Biological Station from Fisheries and Oceans in ST. Andrews. They explained to us the items concerning the herring stocks and fish grounds as well as the way of catching in the Gulf area. Then we visited the Canning factory of Connors at Blacks Harbour.

A factory with obsolete equipment where a great deal of handwork has to be done resulting in qualitatively bad products which have little added value. The storage of the herring occurred during our visit without cooling (water of about 15°C). The hygienic conditions in the factory were very moderate.

We visited DFO quality Laboratory in Blacks Harbour and we discussed the quality control and regulations.

Then we drove to Grand Manan.

July 17th, 1993

We visited the Salmon aquaculture site. We talked with Klaus Sonneberg of the Grand Manan Fishermen's Association about the specific problems of the herring supply and the processing of Grand Manan. Especially the lack of sufficient manpower is a big problem. It is also a fact that more herring is being caught than can be processed or transported. In the afternoon we visited the Mumps Weir. As a result of the fact that there was no sale we could not criticize the quality of the herring. Afterwards we talked with Helshiron Fisheries Ltd. We saw the smoke house for bloaters and the processing of salted cod and pollock fillets. The smoke house was very old and dirty. The bloaters were of a bad quality. We inspected the salted fish, which were usually of a good quality.

July 18th, 1993

We drove to Moncton.

July 19th, 1993

We visited William Le Blanc, Elphege and Norbert Le BLanc, Emille Le Blanc, Leslie Leger and Fils, Botsford Fisheries Ltd. Amco Fisheries Ltd, Gandet and Duchlette Ltd. In the afternoon we had a meeting with some bloater processors and fishermen. We explained to these people what they do wrong. We told them that they have to cooperate more intensely and that they have to start with the production of alternative products. We explained to them where the various qualities of herring are suited for. We also explained to them how the year cycle of herring proceeds. In general this group showed little ambition. There are of course exceptions.

Furthermore, we visited a small smokery of salmon, mackerel and herring products. Sea products of Maurice Allain, an nice innovative company with more modern equipment. They only have to improve the hygienic circumstances.

July 20th, 1993

We visited the "Centre de Recherche sur les Aliments" at Moncton. We were welcomed by Marielle De Grâce and Len Arnold. The microbiological lab is very well equipped and operates in accordance with the European standards. The chemical lab is reasonably well equipped but does not have the most modern equipment at its disposal. Fat estimation is done in accordance with the Soxhlet method. The technical lab is being built up and is poorly equipped. We referred Mr. Len Arnold for information to similar labs in Canada and Europe.

Much is known about the product development of herring especially in Europe.

In the morning we had a meeting with the C.C.R.H (F.R.C.C).

- DFO in Moncton. The problems concerning the groundfish fishermen were the main issues here.
During the explanation of some biologists we noticed that they were well informed about the stocks present of the various species of fish. Furthermore, during a souper with DFO-Inspection and Development, the different inspectors told us about their responsibilities. We also had lengthy discussions about the year cycle of the herring, the differences in quality between the supply of herring by Gillnet fishermen and purse seiner fishermen and spring and fall spawners.

In the evening we had a meeting with the Herring and Industry Coordinating Committee. About 11 representatives were present. We talked extensively about the year cycle of the herring, the differences in quality and the possibilities for using the herring. We explained that they manufacture herring products in an old fashioned way (bloaters) for the poorest countries in the world at very low prices. We also indicated that they have to do more about the upgrading of the products, the development of new products and that they have to intensivate their cooperation.

July 21th, 1993

We visited a number of companies:

Raymond O'Neill and Son Ltd., Bai Ste. Anne Fishermens Co-operative Ltd.

- Raymond O'Neill and Son, is a well equipped, relatively modern and hygienic company. In the afternoon we visited the Fisheries and Oceans, Reginald Boucher. We talked with some employees about the general problems concerning the herring.

July 22th, 1993

We visited the following companies:

- Island Fishermens Coop. Ltd. is a good company, it is well equipped with many processing possibilities, it has good hygiene and a good management.

- Belle Isle Fisheries Ltd. is a reasonably good company, which processes in the main crab and lobster. We talked about the herring problems and the possible herring processing.
- F. N. Fisheries, A.Finn, is an old company, moderately equipped but with many possibilities to process herring. The company has a reasonably good hygiene.

We visited various wharves and vessels. The general impression of the vessels of inshore fishermen is the following:

- Bad hygienic conditions.
- Good possibilities to supply herring of a good quality.

We visited R.P.C. in Shippagan and we talked with Peter A. Lewell, Daniel Lacombe and Germain Landry. After an explanation about the working methods of this institute and a conducted tour (good, modern equipment) we talked about the application of silage of waste and redundant fish for fishfarmers and stock-breeding. This is already applied at a small scale. Product development only takes place at the request of a company and it usually concerns the traditional products and production methods. We pointed out the necessity of applying better hygiene during the supply and the processing stages to adapt this to the European standards.

July the 23th, 1993

We visited the following fish processing plants.

- Produits Belle Baie Ltd. is a good company. The company is active in the field of lobster, crab and herring roe. They manufacture marinated herring but they claim to be unable to obtain a market for this product because the production costs are too high. We advised them to mechanize more. They now produce barrels with semi-manufactured pieces of marinated herring in a very old and dirty building elsewhere in the area.
- St. Paul Fisheries is the best company we visited. They have a good management, they are well equipped and they have a very good hygiene. They even organise some courses about hygiene, product and product development in the area for their own employees and for those of other plants.
- Blue Cove Group
We only visited the herring filleting plant. It is a good company with an enthusiastic young management. The hygiene is good as well as the equipment. They now manufacture marinated herring, spiced cured herring and herring fillets. They want to manufacture more herring products.
- Canadian Ocean Products Ltd.
We were not allowed to visit the company. Romeo Cormier has already developed a lot of herring products and is now trying to create a market for these products.
"I do not need advice, I would rather do it my way", he stated.

July 24th, 1993

Meeting with Maritime Fishermen Unicon Members (14 members).

After an introduction about the European herring fishery during the last few centuries and the bad experiences in Europe with the quality of the herring from Canada during the closing of the North Sea (1978-1985). We indicated which quality is expected. The quality means more than just freshness, it also means sorting, biological stage, fat content, bloodspots, damage and application possibilities. We explained how the biological development of the herring during the whole year proceeds and we told that, by fishing herring during the whole year, better qualities with more application possibilities at better prices can be caught. More attention will have to be paid to hygiene and the cooling of the herring. They should not pay so much attention to the quantity, but to the quality. This also creates possibilities for the gillnet fishermen, but first good arrangements will have to be made.

In the afternoon we had a meeting with the Gulf seiners Association (7 members).

The introduction was similar to the introduction of this morning. We also talked about our experiences of the past tour through New Brunswick. We also argued to fish the whole year around which will give more labour on boat and on shore, a better quality herring with other use possibilities and more return on investments. These fishermen also argued for a fixed quota per vessel, to be caught during, if possible, a whole year. This of course in consultation with the processors.

July 25th, 1993

We visited the Artic Char Farm, Lower Caraquet. The farm looks good and it works very well. When a good sale for this product is found, good possibilities for expansion are present.

July 26th, 1993

Meeting of the Industry advisory group, Caraquet.

This meeting was really a summary of the previous meetings. Its topics were the following:

- An introduction concerning the results of our findings in New Brunswick.
- An outline of use possibilities of herring, in case it is possible to fish during the whole year
- An indication which products can be manufactured and what quality improvements are necessary.

The result will be a better return on investments on boat and on shore.

Although the supply and the processing of lobster, crab, shrimps and groundfish are important, more attention will have to be paid to the herring industry as this is the only alternative that has a reasonable future. If this item is not dealt with thoroughly it will certainly result into a complete failure. A domestic market, which can serve as a basis for an export market, will have to be created. Eminent products will have to be produced for both domestic and the export market. It is important to make sure that deliveries can be made throughout the year. They can also deliver eminent semi-manufactures for both

markets. A good cooperation in all branches will have to be accomplished in order to avoid splitting up, double research and the risk of getting played off against each other.

July 27th, 1993

Meeting with representation staff in Fredericton in the presence of the Minister and the deputy Minister. The introduction by Jean Paul Richard about sale and goal of the project was followed by an introduction by Onner Chuimard about sale and goal of this meeting. All items we already mentioned before in this report were dealt with again in this meeting, including the political problems concerning the opening of herring catch season throughout the whole year and the alleged expected recruitment problems originating from the unemployment regulations in Canada.

We indicated, in our advisory capacity to the government of New Brunswick, that a herring industry can only be successful if it is possible to fish the whole year. Who, where and when the vicious circle in which they now can be found, will be broken is a matter for the government of New Brunswick (to be solved).

July 28th, 1993

The weather is too bad to fly to Grand Manan. We started formulating our recommendations after going through our findings.

July 29th, 1993

We flew to Grand Manan and we visited the Canning factory of Connors. This plant is more modern than the similar plant in Black Harbour. This plant also manufactures cheap products which fetch little money on the world market. The employees of this plant also only work a few months per year, what consequently means a very low return on investments.

Accompanied by Klaus Sonneberg, we visited some fishermen and we inspected the quality of some herring samples from the Weirs. Having seen the good quality of this herring, eminent products could be manufactured. We also demonstrated which semi-manufactures of the present dogfish can be made for the European market.

July 29th, 1993

We worked up our notes into our first recommendations.

July 30th, 1993

We left Fredericton after we had a discussion with the deputy Minister.

July 31th till August 4th, 1993

We composed the report and our final recommendations concerning the herring fishery and the processing in New Brunswick.

Aug 4th, 1993

Departure to Europe

3. Recommendations for the herring industry

Recommendations concerning the herring industry in New Brunswick as a result of observations in companies and on ships, studying of catch and processing capabilities and consultation with representatives of government, processors and fishermen.

3.1 South East New Brunswick including Grand Manan

In Grand Manan the labour force is too small to develop a large scale herring industry. As a result, the enormous quantity of herring that is potentially available will have to be shipped to the mainland. This means that transport by ship or truck needs better cooling than presently available. Seeing that the catches in the weir are seasonally bound and controlled by quota's, investments in transportation methods will have to be adjusted accordingly. Extension of the season and reductions in catches could be one solution. Companies like Connors will have to automate, produce value-added products, and produce for a longer period of time during the season. In addition, in periods of reduced catches, high quality frozen raw materials will have to be used. This means that companies producing these high quality frozen products will have to be established to contribute to the situation. A recommendation to increase the yearly supply of material is justified. Companies could use this to increase home markets as well as semi-processed export products.

The extension of the catching season over a longer period of time has many advantages:

- better use of the quota
- lower catches per trip leading to the possibility of a better quality supply
- supply of herring and its various uses leads to better prices for herring products
- better use of equipment and buildings increasing their efficiency
- less unemployment for managers, labourers, and spin-off employees (truck-drivers, supply companies, etc.).

3.2 South West New Brunswick

Except for the expansion of the herring season, cooperation between the existing bloater producers has to be increased and reorganised, in order to keep producing for a longer period of time for the remaining companies.

In addition, a better end product will have to be manufactured. In many cases, low quality products are presently produced. By having more salted herring on hand, an

extension of the production season can be obtained. Because they are producing for cheap markets, which will be decreasing in the future, the emphasis must lay on producing other high-value items next to the existing bloater production.

These items include:

- cold smoked herring
- cold smoked herring fillets
- hot smoked herring
- hot smoked herring fillets
- cold smoked mackerel
- hot smoked mackerel fillets
- hot smoked dogfish belly-flaps
- hot smoked dogfish bodies
- different kinds of spreads and/or patés made from smoked herring- and mackerel products.

- Some companies already have the possibility to produce these items in existing smoke facilities for both a home and export market. However, a better quality product will have to be produced, and stricter health controls are to be implemented. Education of management and employees is of crucial importance.

3.3 North-East New Brunswick

Some companies with the necessary equipment to process finished products from whole and fillet herring are present. These finished products include:

- heavily salted herring
- spiced-cured herring to produce different marinates and sauces
- marinated herring fillets, semi-processed or final products
- matjes herring, semi-processed or final product.

4. Recommendations for the federal and/or provincial government

To realize this project, some measures will have to be taken by the appropriate governmental authorities. These will be the following:

- opening the herring catching season for as long a period as possible during the year
- setting up of quality specifications regarding supplied herring
- distribution of knowledge and where necessary avoidance of differing herring qualities during the yearly herring cycle
- continuing education of management and employees of fishermen and processors dealing with quality control and health standards, as well as development of herring and its end products
- introduction of quality control standards for herring supplies and during herring production
- building and equipment requirements for herring production companies
- quality control on herring exports
- promote access of export products into USA and European markets
- guarantees in relation to credit for export to USA and Europe
- increased promotion of herring products in home- and export markets
- protection of the home market from imports
- support to the institutes that we visited to bring them in a position to give scientific support in order to produce the above recommendations as well as aid in implementation
- set up of facilities for searching databases to gather and abstract previous research studies conducted elsewhere in the world. A system which effectively archives and communicates with international research agencies, in order to prevent duplication of applicable research.

Hereby we would like to thank the staff of the New Brunswick Department of Fisheries and Aquaculture, the Federal Department of Fisheries and Oceans, processors and fishermen for their cooperation and assistance to successfully complete this survey.

This report contains two appendices, namely Appendix I with our preliminary recommendations as we have left in the office of DFO, Fredericton on 29th July 1993, and Appendix II (annual biological cycle of herring).

THE NEW BRUNSWICK HERRING INDUSTRY IS CHARACTERIZED BY:

1. short fishing season.
2. quality of the herrings, especially the ones caught by the inshore boats, is low.
3. cheap/primitive products mostly produced with very bad equipment and in buildings with low hygienic level.
4. mass production of very few types of product.
5. sale to some of the poorest countries of the world.
6. lack of innovation. The products made today are, with a very few exceptions, the very same as produced 40,50,60 or even 100 years ago. And, even worse: produced exactly the way they were produced way back.
7. the total lack of a home market.

What can/should be done to improve the present sad state of affairs:

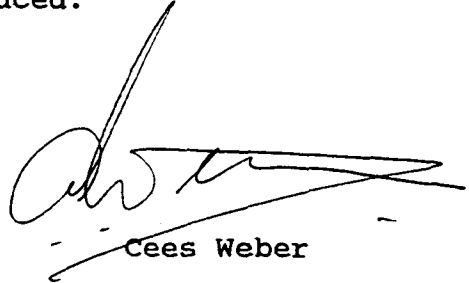
- ad 1. leave it to the industry to decide when the herrings should be caught. The mere fact that the very expensive processing equipment can be used over a long period will add enormously to the economy of the trade.
- ad 2. implementation of regulations and control of the quality of the herrings being landed.
- ad 3. refine the products/make higher class products, invest in modern equipment.
- ad 4/5. develop new markets - they are there - in richer countries for a wider range of products.
- ad 6. develop new products (new to the Canadians but well known in other countries.).
 - teach the consumers in Canada to eat herring-products by marketing/promoting (new) products they will like. Evidently they do not like the ones being produced so far.
 - In this connection eastern/mid USA, can be considered a "home market" and the big number of ethnic minorities in USA will make it relatively easy to build up markets there. Many of these

minorities are used to/love certain herring products, which have been part of their life where they come from. Jews, Poles, German, Dutch, Scandinavian, Spanish, Italian, Greek to mention the most important.

Our final reports will deal with the specific problems we have met in each of the areas we visited, as well as suggest product-type which should be produced.



Folmer Hansen



Cees Weber

Cibler la récolte et l'apprêtage

Ci-dessous est reconstitué le diagramme du cycle annuel de nutrition et de contenu en gras du hareng.

A chaque stade, l'utilisation du hareng sera destinée à un produit qui correspond à sa condition. Par exemple, le meilleur temps pour produire du hareng mariné est lorsque le hareng est au stade de Matful, à mi-chemin entre le stade Matjes et le stade où il est prêt à frayer.

Targeting Harvest and Processing

Below is the diagram reconstituting the annual cycle of nutrition and fat content of the herring.

At each stage, herring will be used for a product suitable to its condition. For example, Matful herring is the best condition to use it for marinated herring, halfway between Matjes and the stage where the herring is full, ready to spawn.

Fall Spawners - Cycle - Géniteurs d'automne

