The History of the Lowbush Blueberry Industry in Nova Scotia 1880-1950

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The History of the Lowbush Blueberry Industry in Nova Scotia

1880 - 1950

Nova Scotia Department
of Agriculture & Marketing

Gordon Kinsman

October 1986

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Acknowledgements

I am very grateful to the early blueberry pioneers who gathered lowbush blueberries for their personal use. This fruit, common to Nova Scotia, often growing on the poorest of soils, was recognized as having a potential to be marketed as a cash crop.

I am grateful to the staff and curators of the Yarmouth County Historical Museum and the Public Archives of Nova Scotia for help in locating information for this publication. I would like to acknowledge the great help I received from Philomon Pottier, Belleville; Fred T. Armstrong, Yarmouth; Arthur Crowell, Kemptville; Mrs. Lucy Crowell, Kemptville; Gerry A. Hines, Windsor; Seymour Dickinson, West Brook; Karl Dickinson, West Brook; Billie Wells, Amherst; E. L. Eaton, Kentville; Dr. A. D. Pickett, Deep Brook; J. Vickery, Yarmouth; Hedley Pettigrew, Springhill; and the many others that I interviewed and corresponded with over a period of 15 years.

I would like to thank Janice Walton for her great help in doing a lot of the archival research. Thanks are due to Cheryl Baird for her drawings and to Dawn MacKay for the typing. My special thanks go to the Nova Scotia Department of Agriculture and Marketing for their support in having my work published.

I would like to thank the lowbush blueberry growers and processors for the opportunity to work with them for over 38 years. I was their first blueberry extension specialist and through the years as Director of Horticulture and Biology Services and later as Director of Marketing and Economics for the Nova Scotia Department of Agriculture and Marketing, Truro, N.S.

Gordon B. Kinsman

Introduction

The wild lowbush blueberry grows in abundance in Nova Scotia and it has long since ceased to be a fruit which is gathered merely for the making of home-made pies and blueberry grunt. Blueberries have become an important source of income for many Nova Scotians. Today, over 19,000,000 pounds of this small fruit are harvested and marketed in 20 foreign countries each year. The development of this industry was a process which took many years and a great deal of trial and error. Blueberries are not common in Europe; therefore, cultivation in North America involved a lengthy learning process into cultural methods for producing the best berry and earning the highest returns.

The purpose of this report is to examine the early growth of the industry in Nova Scotia, of which little has been written. The report is divided into several sections in order to best deal with the various aspects and practices of the industry. Most of the information used for the report came from the newspapers of the periods, while some of it came from government documents printed at the time and from the personal accounts of Nova Scotians involved in the early industry. It is hoped that this report can provide an outline of the development of the industry which will prove useful to those whose interest lies in the area of blueberry cultivation.

Chapter 1 **Blueberries in Nova Scotia**

The most common species of blueberry harvested in Nova Scotia is the wild lowbush type, known scientifically as Vaccinium angustifolium Ait. The lowbush blueberry plants grow wild all over the province, requiring a high acidic soil. Their most common habitat is high, dry, thin, rocky soils where there is little or no tree growth. Many of the blueberry barrens in Nova Scotia are natural, having developed in areas where little else will grow. Others have grown on lands which have either accidently or purposely been destroyed by fire, or have been cleared and later abandoned. Although these berries grow all over the province, they are most abundant in Yarmouth, Cumberland and Guysborough counties.

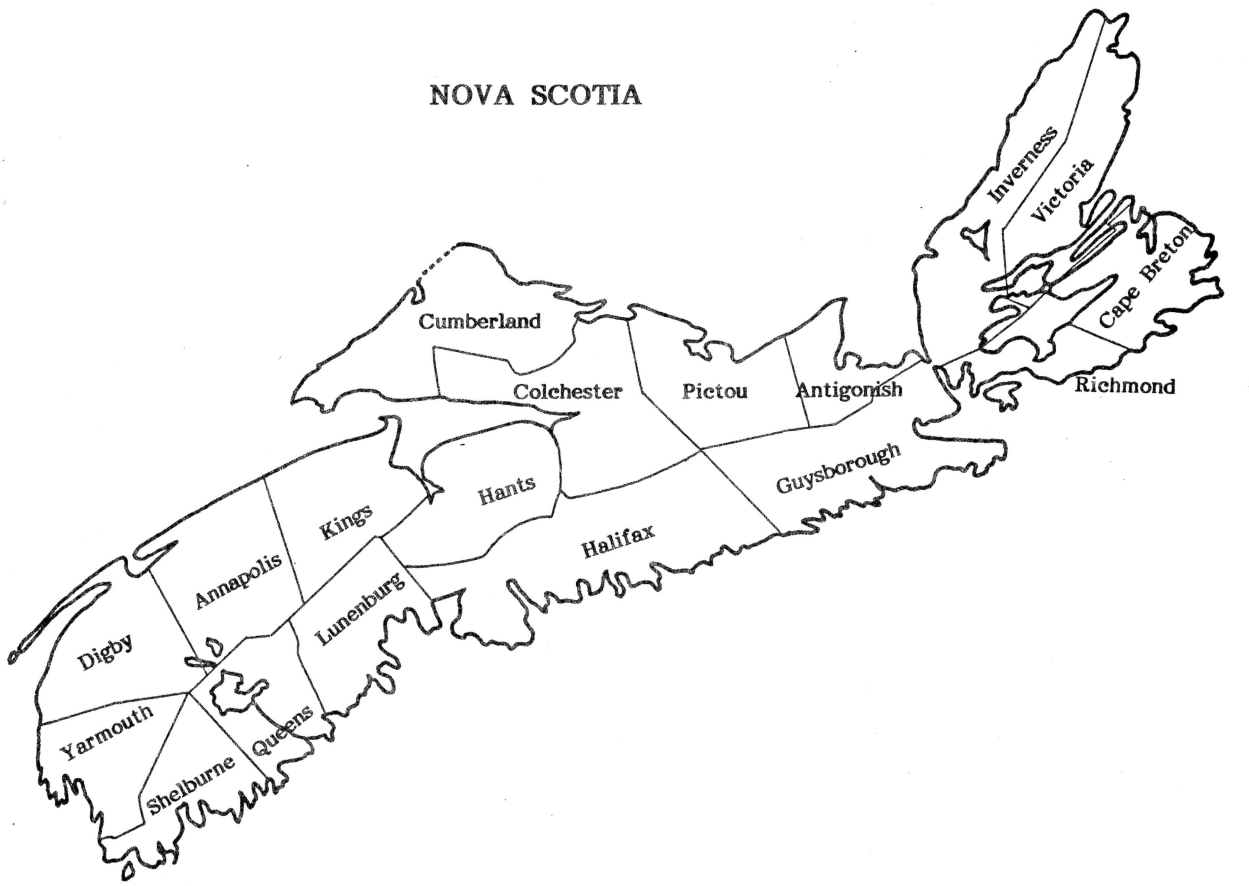

Figure 1

Vaccinium corymbosum L., the highbush blueberry, occurs in the southwestern counties from Digby around to Halifax - bogs, upland rocky barrens, dry soil and along lake margins.[1] The native population is too limited to be of commercial importance.[2]

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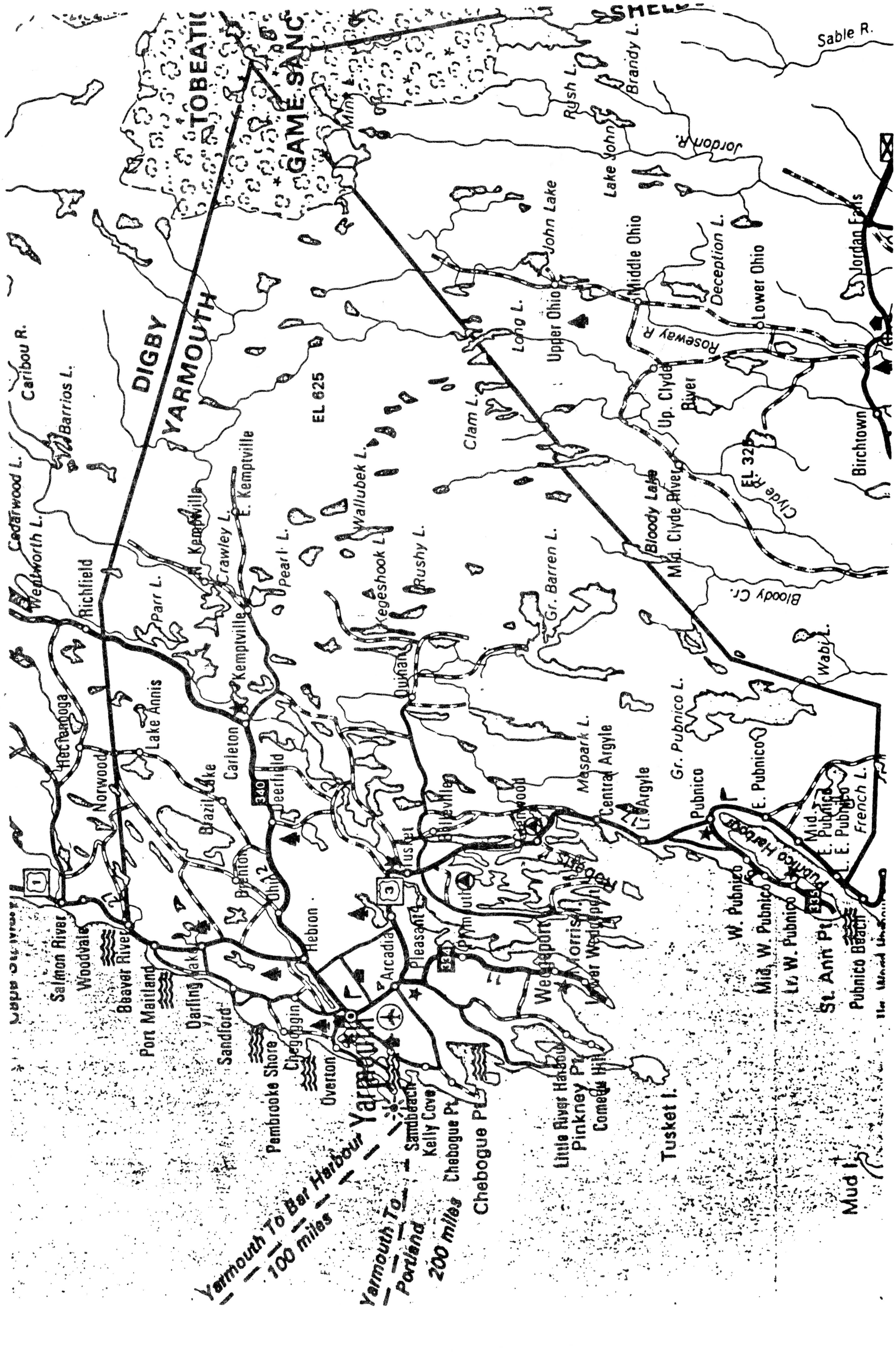
1. Roland, A. E. and E. C. Smith, 1969, The Flora of Nova Scotia, Nova Scotia Museum.
2. Barker, W.G., I. V. Hall, L. E. Aalders and G. W. Wood, 1964, The Lowbush Industry in Eastern Canada, Econ. Botany, Vol. 18 No. 4, Oct.-Dec.


DIGBY
YARMOUTH
TOBEATIC
GAME SANC
EL 625
EL 32
Sable R.
Brandy L.
Rush L.
Lake John
Jordon R.
Jordan Falls
John Lake
Middle Ohio
Deception L.
Lower Ohio
Long L.
Upper Ohio
Roseway R.
Up. Clyde
River
Birchtown
Clam L.
Caribou R.
Barrios L.
Cedarwood L.
Wentworth L.
Richfield
Parr L.
Kempville
Crawley L.
E. Kemptville
Pearl L.
Wallubek L.
Rushy L.
Bloody Lake
Mid. Clyde River
Clyde R.
Bloody Cr.
Gr. Barren L.
Kemptville
Lake Annis
Quinan
Wabi L.
Gr. Pubnico L.
Hectanooga
Norwood
Carleton
Deerfield
Brazil Lake
Pleasant
Maspark L.
Central Argyle
Argyle
Gr. Pubnico
Pubnico
E. Pubnico
Mid. E. Pubnico
L. E. Pubnico
French L.
Pubnico Harbour
Salmon River
Woodvale
Beaver River
Port Maitland
Darling Lake
Sandford
Pembrooke Shore
Chegoggin
Overton
Yarmouth
Hebron
Brenton
Ohio
Arcadia
Tusket
Wedgeport
Lower Wedgeport
Little River Harbour
Pinkney Pt.
Comeau Hill
Tusket I.
W. Pubnico
Mid. W. Pubnico
Lr. W. Pubnico
St. Ann Pt.
Pubnico Beach
Mud I.
Sandbeach
Kelly Cove
Chebogue Pt.
Yarmouth To Bar Harbour
100 miles
Yarmouth To
Portland
200 miles
1
3
340
334
335

Yarmouth County

Yarmouth County occupies the extreme southwestern end of the province. The area is bounded on the south and southwest by the Atlantic Ocean, on the north by Digby County and on the east by Shelburne County. It occupies an area slightly over 895 square miles.

The county population in 1881 was 21,184. The population rose gradually until the Twenties and Thirties when the Depression brought a sharp decline that took it below its 1881 figure. In the mid-Thirties, however, the population rose sharply and continued to rise after the Second World War.

Yarmouth County is well supplied with coastal roads but there is little inland transportation, with the exception of the highways to Kemptville and Quinan, the primary blueberrying regions. (see Figure 2)

The county is situated on a gently undulating plain rising slowly from sea level to an elevation of nearly 625 feet in the northeast.

The average temperature for the summer months is 59°F with milder temperatures and greater precipitation falling on the coastal areas. Inland soil moisture deficiencies often occur in the late summer.

Large areas in Yarmouth County have been burned over by forest fires - many areas having been swept by fire several times. These areas are slow to regenerate forest. Since the climate is conducive to the rapid growth of heath, the burned-over areas generally have a covering of heath, blueberries, lambkill, sweet fern and huckleberry, together with occasional red pine, wire birch and white spruce. Where burned-over areas are covered with bush growth, the dominant species are wire birch, poplar, red maple, willow and alder.

The rock formations of the county are shown in Figure 3. There are only two major geologic divisions represented in the area. The rock formations of the Devonian age are granitic and are exposed in three areas of the county. Approximately two-thirds of the county is underlain by Precambrian quartzite and quartz shist.

The parent material of granitic origin is very coarse and gritty in texture, and pale brown to light brownish-grey in colour. The soils are often very shallow over bedrock and in some areas are too thin to support forest growth, leaving room for lower bushes such as the blueberry. Due to the thinness of the soil it is not a county well suited to agriculture (Figure 3), a fact substantiated by the lack of inland population.

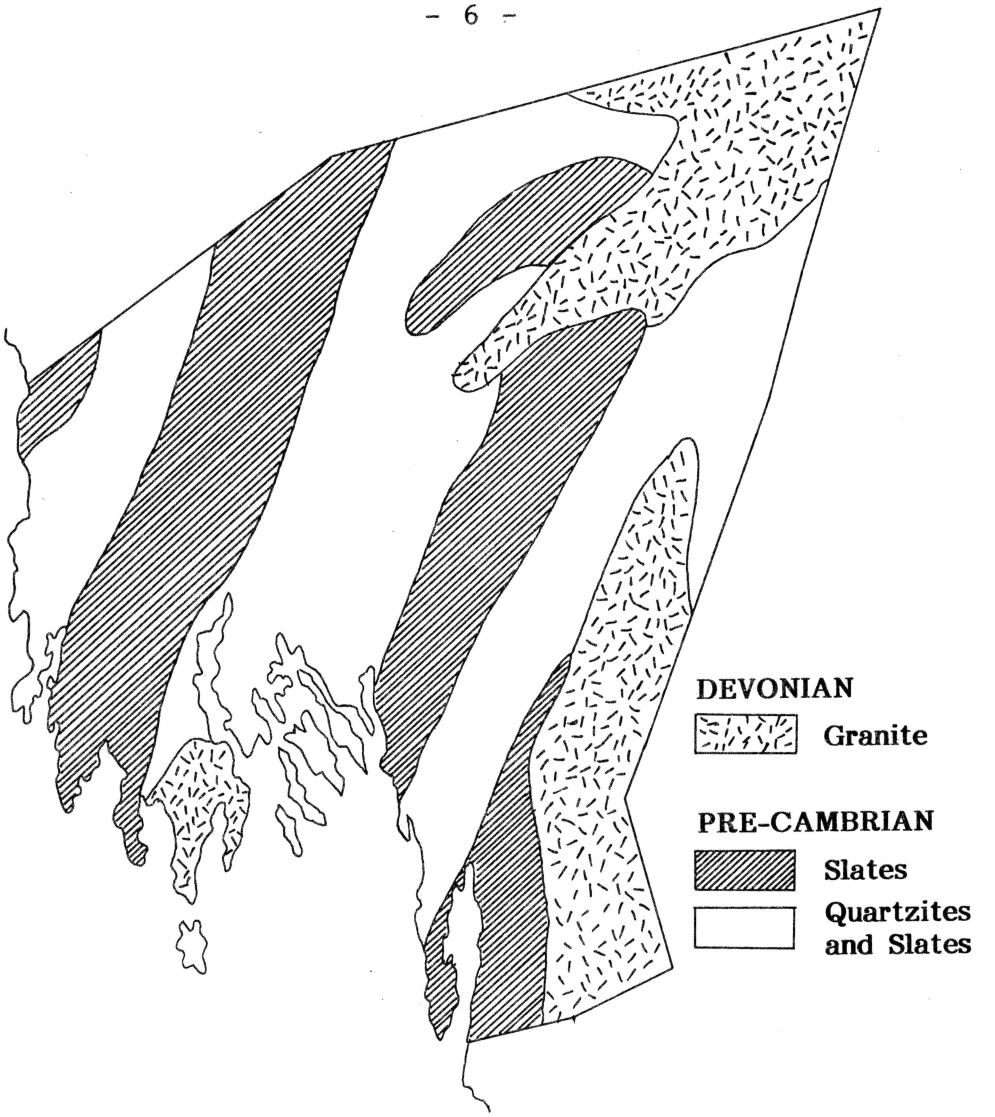


Figure 3. Bedrock formations of Yarmouth County.

Cumberland County

Cumberland County is Nova Scotia's western most county, occupying the isthmus which joins the province to mainland North America. To the southeast and southwest of the county are Colchester County and the Bay of Fundy respectively. To the west is New Brunswick, and to the north the Northumberland Strait.

Cumberland County may be divided into three physiographic regions which coincide with the underlying bedrock and agricultural land use. These are the Cobequid Mountains, a range of uplands to the south; the Cumberland plain, a broad area of lowlands extending from the Cobequids to Northumberland Strait and Cumberland Basin in the north and west; and the tidal flats along the coast and in the river estuaries around the head of Cumberland Basin.

The Cobequid Mountains rise to elevations from 850 to 1000 feet along a straight east-west line just to the south of Springhill. The summits of the hills are broad and rounded and have, in many instances, been cleared for agricultural purposes.[3] It is along the ridges of these mountains that most of the Cumberland County blueberries grow. Large amounts of land were cleared by both the French and English settlers, land which proved most difficult to farm due to both its relief and rocky soils. By the late 1800's the acreage of improved agricultural land had reached its greatest extent. By the turn of the century much of this land had been abandoned and was soon propagated by blueberries and other lowbush plants. Later, burning was used to keep back the forests which threatened to encrouch upon this newly found source of wealth.

Cumberland County is both well-populated and well-serviced. It has an abundance of roads which serve the large, dispersed rural population.

Guysborough County

Guysborough County is located on the northeast corner of mainland Nova Scotia, bounded by the Atlantic Ocean to the east, by Halifax County to the southwest, and by Pictou and Antigonish Counties to the west.

Guysborough County, much like Yarmouth, consists largely of rocky, acidic soils, and is covered for the most part by extensive forests. The bedrock formations consist of a granitic Devonian type, and a Mississippian shale. Like Yarmouth, Guysborough has a population which is settled largely in the coastal regions, with few roads servicing the inland areas. It has a very small population (one of the smallest in the province), and its few main centres house most of them.

Blueberries in Guysborough County have developed largely in areas where poor soils and fire have made the land good for little else. It was a latecomer in the berry business, becoming a competitor commercially only during the 1930's.

The Blueberry Season

The blueberry season in Nova Scotia tends to vary from one region to another. One common factor of the provincial season is that it is invariably later than the season in Maine. This was to prove advantageous for both Maine and Nova Scotia as it meant that competition on the Boston market was only tough in the period in mid summer when the two seasons overlapped briefly.

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3. Raymond and Rayburn, Agricultural Land Use in the Springhill Area.

In the southern part of the province the season usually started towards the end of July, although if the weather was warm the season would come earlier. In 1889, the first shipment of the season left Yarmouth on the 12th of July, the earliest recorded to that date.[4] In the northern part of the province it was usually well into the middle of August before any large amounts of berries could be harvested.

In these regions of the province a good season tends to last four to six weeks. The season is, of course, somewhat reliant upon Nova Scotia's unreliable weather. Too wet, too dry or too cold weather could and has often interfered with the length and success of the season (there is no record of it ever being too hot!).

Several years in the period under study sustained unexpected frosts in late August and early September which proved devastating to the late crop. In 1888 the Yarmouth Telegram reported that the berries in September were completely ruined by an early frost.[5] In 1934, the season and yield were greatly reduced in Cumberland by the extreme dryness throughout August,[6] while in 1936 the season was shortened by a long stretch of cool rainy days.[7]

Despite problems with unpredictable weather and other obstacles, both physical and human, the blueberry industry was and is still an important part of the Nova Scotian economy.

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4. Yarmouth Telegram, July 12, 1889.
5. Yarmouth Telegram, September 14, 1888.
6. Truro Daily News, August 28, 1934.
7. Amherst News and Sentinel, September 8, 1936.

Chapter 2 The Development of the Industry

The Indians in the New World were especially fond of the blueberry, and, because of its abundance, it was an important part of their diet, both in fresh and preserved forms.[1] In 1615, Champlain found Indians near Lake Huron gathering blueberries for their winter stores. After drying the berries in the sun, they beat them into a powder and added it to their parched meal to make a dish called 'Sautauthig'. Lewis and Clark, in their journey into the Northwest Territories, found Indians smoke-drying their blueberries to use during the winter in soups, stews and with meats. One of their first meals with these Indians consisted of venison cured by having blueberries pounded into the flesh and then smoke-dried.

Long cherished by the Indians, blueberries were probably the first familiar foodstuff found by many colonists, since these berries were almost identical to the hurtleberries which grew in large quantities over England and Scotland. The natural sweetness of the wild berries must have made them the most welcome of the native fruits since sugar was scarce and very expensive in the early years of North America.

In a letter dated 1803, Luke Harrison of Maccan in Cumberland County described the new lands in which they had settled. Included in this description was an observation regarding the many wild fruits which 'grow in the woods, such as cherries and blueberries'.[2] Today the blueberries on the Harrison land are harvested and commercially sold as part of an industry which, since the 1880's, has grown into an important source of income for many Nova Scotians.

Blueberries were known and gathered in every county of Nova Scotia, often giving high yields on the poorest of soils. Land producing only blueberries, however, was deemed of little value. It was not until the latter part of the 19th century that blueberry barrens began to be looked upon in a new light.

Early record of the harvesting and commercial localized sale of blueberries comes from the shores of Volger's Cove, Lunenburg County, from the 1880's onward. The pickers were paid two to five cents per quart. The berries were taken by tugboat to Liverpool and sold from wooden barrels by the scoopful in the local shops.

During the same period a similar procedure was being used in Yarmouth. A small trade had been built up whereby the berry pickers would peddle their blueberries in eight to twelve quart picking baskets from door to door. The berry's appearance, flavour and wide range of habitat all contributed to a well-merited popularity.

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1. Clark, Acadia: The Geography of Early Nova Scotia to 1760.
2. Public Archives of Nova Scotia Manuscript, Harrison Papers.

Prior to the growth of a localized trade of blueberries in southern Nova Scotia, the state of Maine had begun to discover the possible commercial viability of large scale blueberry harvesting. It started in Washington County, during the Civil War in 1866, when Maine blueberries were harvested and canned to help meet the food needs of the Union Army. By 1875 the blueberry fruit crop had become an integral part of the Washington County economy.

By 1883, the blueberry crop in Yarmouth County was starting to gain importance as shippers, merchants, and pickers began to realize its value. The industry was quickly expanding and developing in New Brunswick, and the ships from St. John were adding to their blueberry cargos when they stopped at Yarmouth.[3] Prices were good, the Boston merchants were eager and the new steamships brought the speedy transport of the fresh product to market. As early as 1883 there were signs of organization as men such as Henry Crowell were hiring pickers to harvest the berries to be sold commercially.[4] In that year shipments of blueberries from Yarmouth to Boston brought in good returns to the Yarmouth merchants.

In 1883 the editor of The Yarmouth Times wrote the following words:

> "During the debates of the House of Assembly a quarter of a century ago, on a bill for the building of a rail from Halifax to Windsor, the Hon. Joseph Howe was sarcastically congratulated on the prospect of the proposed railway's usefulness in moving the 'blueberry crop'. But it appears that the blueberries are not to be sneered at. At all events the Nova Scotia Steamship Company have no reason to despise this homely but very useful and delicious fruit. Local householders remembering that blueberries have been 'high' this year don't see any great fun in the matter. $5077 paid out on the spot has done a power of good among the Acadian population of the Forks and other localities adjacent to the barrens."

The Yarmouth folk were quick to realize the profits that could be made from a crop that required little work outside of the actual picking. Through the course of the next few decades the blueberry industry grew and flourished, as methods of picking, shipping and marketing became more efficient and well organized. Blueberries brought a welcome income to both the merchants and shippers, as well as the pickers of the region.

The blueberry industry prospered, not only in Yarmouth, but in New Brunswick and Maine, as well as other parts of Nova Scotia itself. The Boston market seemed to be unlimited. By the early 1900's the blueberry industry formed an important portion of Yarmouth County exports.

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3. Yarmouth Times, August 29, 1883.
4. Yarmouth Herald, September 13, 1883.

In Ottawa in 1906 a member of Parliament, Mr. Piche of Montreal, proposed that an amendment be made to the Fruit Marks Act to include wild fruits, an indication of their growing importance throughout the country. The Hon. W. S. Fielding of Nova Scotia took part in the subsequent debates on the matter and expressed this opinion:

> "I would like to take occasion to point out that in some parts of the lower provinces, including my own province of Nova Scotia, the wild berry industry is quite an important one. The collection of blueberries along some parts of the coast of Nova Scotia for export to the United States is a considerable business. There has hitherto been no restriction on the trade. As far as I can learn there has been no grievance, nobody is calling for a remedy. I should view with regret any attempt to place restrictions upon the manner in which this wild berry trade may be carried on."[5]

The amendments to the Fruit Marks Act in 1906 specifically noted that wild berries were not included in the act.[6]

By the time of the First World War the blueberry industry had begun to develop in some of the province's northern counties, specifically Cumberland. New methods of packing, processing, harvesting and cultivating had spurred the industry on. Burning was becoming more popular as a means of pruning and pest control, canning had grown somewhat in importance, and the market had expanded to include both New York and Central Canada.

By 1917 the Nova Scotia government had taken an interest in the industry. That year a revision was made to the Agriculture and Marketing Act which dealt primarily with the harvesting of the blueberry. (details in Chapter 4)

In the 1920's it was evident that a shift was beginning to take place in the industry. Although Yarmouth continued to lead in berry exports, Cumberland County was gaining. In 1922 the Amherst News and Sentinel reported that blueberries were 'big business all over the county'. Dealers in Amherst were reaping good profits and a great many pickers had discovered its potential as an income supplement.

Lowbush blueberries, nature's gift, grow abundantly in Cumberland County. Because of their abundance almost anyone who wanted blueberries as a dessert could go almost anywhere in the county and pick their requirements.

During the 1909-1912 period, blueberries were often harvested from along the side of the road and were later sold door to door in the town of Amherst for 5 cents per quart.[7] Blueberries would be gathered in maple sap buckets from West Brook during 1914-1915 and they would be sold in Springhill for 2 to 3 cents per quart.[8]

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5. Yarmouth Herald, May 8, 1906.
6. Public Archives of Canada, Canadian Acts of Parliament, 1906.
7. W. B. Wells, Amherst, interview and correspondence, 1971.
8. Karl Dickinson, West Brook, interview and correspondence, 1971.

After World War I two major blueberry areas developed in Cumberland County - West Brook and Truemanville.

In 1919, Mr. Smith Pettigrew, West Brook, started to organize blueberry picking in this area. His interest stemmed in part from the interest and foresight of two medical doctors, Dr. Jeffers, Parrsboro, and Dr. Copps, Sackville, New Brunswick. These doctors became interested in the potential of the lowbush blueberry industry. They noted there seemed to be an endless supply of lowbush blueberries in the Parrsboro area; however, there wasn't any local market. Farm income was low and these men saw a potential in this crop if it could be harvested properly and marketed outside the Parrsboro area.[9]

In 1926, another West Brook family, the Dickinson Brothers, Karl and Seymour, became interested in blueberries. Their sister was the first member of this family to show an interest. She picked some blueberries and sold them to Hedley Pettigrew.

In 1927 Dickinson Brothers started their first venture to sell their own blueberries, a business they have continued.

Mr. W. B. (Billie) Wells, as a young boy (1909-1912) living on a farm in Truemanville, can remember picking blueberries along the side of the road near his home. His father, who operated a meat cart in Amherst three days per week, would take the blueberries and sell them house to house for 5 cents per quart.

Mr. Wells, when only 9 to 12 years of age, each summer would visit his Uncle Harvey Wells, who lived in Penobsquis, New Brunswick. His uncle operated a large blueberry business, often employing 400 to 500 Indians to hand pick the berries. This gave the young Truemanville boy his first insight into blueberry production - a business he was later to develop to be Nova Scotia's largest producer.

His first blueberry business started in July 1922 when he picked two fields in Truemanville. These fields yielded 1,000 32-quart crates. He paid three cents per quart to the pickers.

Mr. Wells in the early 1940's started to branch out his operations into areas 20 or 30 miles away in Cumberland County (1946) as well as in New Brunswick (1943).

During the early 40's he had received many glowing reports about the excellent blueberry fields in the Westchester area. After several years of hearing these stories, in 1946 he paid his first visit to the area.

The first field he visited was owned by Mr. and Mrs. James Fraser, Westchester. The Frasers had taken great pride in their field and in the quality of their hand-picked berries. They sold their berries to Davidson and Ivan, Oxford, in 1945 for a reported 60 cents per crate. The yield had been excellent, in fact, not all the berries could be harvested by hand so Mr. Fraser reluctantly allowed some rakes to be used. It is reported several sections would average over 2¼ tons per acre.

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9. Smith Pettigrew, Springhill, interview and correspondence, 1971.

In 1946 the Frasers rented their field to W. B. Wells who paid them $2.00 per crate stumpage. Mr. Wells rented this field for several years and eventually bought it. Berries averaged 40 to 55 cents per quart - the highest price that has ever been paid for blueberries.

In 1946 Mr. Wells learned from Mr. Layton Stonehouse, a young man living in Millvale, about the tremendous blueberry area in Farmington. There were two houses in the area - Mr. Steve Heisler lived in one with his mother while his brother and his wife lived in another. The Heislers owned one of the largest fields. It hadn't been burned for many, many years. There was good plant coverage but very little fruit - about 30-35 crates. The Heislers had only sold $45 worth off the fields in 27 years. Mr. Wells was able to buy the field - the following year it was burnt. A tremendous crop was harvested in 1948 and in 1949.[10]

Mr. Drew Kelly, River Hebert, in the late 20's, started to buy and ship blueberries from his area. He was the most progressive buyer in this area.

Blueberry development was also occurring in the Annapolis Valley. Amos S. Burns, a businessman in Kingston, N.S., is said to be the first to ship in the late 19th century Annapolis Valley blueberries to markets outside of Nova Scotia. He raised his blueberries on his farm at Tremont, Kings County.[11]

In 1930 a Truro businessman, Bill Flemming, shipped by rail 1000 - 32 quart crates from Truro. The berries had been harvested in the Gore area, Hants County.[12]

In 1925 the Yarmouth Herald reported that there was a drop in berry sales, wondering why this was so. This was only temporary. By the end of the decade exports reached a record high in the entire province.

In the 1920's the berry industry expanded as Colchester, Guysborough, Shelburne and Pictou counties became prominent; and Digby and even Richmond played a role. During this time methods of burning became more widely practiced and began to create serious problems for the Department of Lands and Forests, as many acres of woodland were lost to indiscriminant fires started by berry cultivators.

In 1928 the Nova Scotia government decided to deal with the problems of burning and the general lack of organization by passing the Blueberry Associations Act. This act was designed to provide a framework by which blueberry burning, picking and marketing could be more effectively carried out. The Act read as follows:

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10. W. B. Wells, Amherst, interview and correspondence, 1971.
11. Marble, Dr. Allan, 1978, The Burns Family of Wilmot Township-Scotch Irish Folk in Annapolis County, The Nova Scotia Historical Quarterly, Vol. 8 No. 2, June.
12. Bill Flemming, correspondence, 1971.

An Act to Encourage the Cultivation of Blueberries
(passed March 30, 1928)

Be it enacted by the Governor, Council and Assembly as follows:

1. This Act may be cited as "The Blueberry Associations Act, 1928".

2. When not less than ten persons of the age of eighteen years and upwards resident in any place or settlement in Nova Scotia and actually engaged in the occupation of berry picking, signify their intention of forming an Association by signing a declaration in the form in the Schedule to this Act, a certificate of incorporation may be issued by the Registrar of Joint Stock Companies to such persons, as may become members of such Association shall thereupon become a body corporate under the name of "Station No. .... Blueberry Association of Nova Scotia". Said declaration with an affidavit verifying the signatures thereto, and the fact that the persons signing the same are actually engaged in the occupation of berry picking, shall, before such certificate is issued, be filed with said Registrar.

3. The Minister of Lands and Forests may, in his discretion, upon the application of a Blueberry Association formed under the provisions of this Act, set aside an area or areas of Crown Lands as blueberry commons. Such area or areas shall first be surveyed and properly marked by posts and stones by the Department of Lands and Forests.

4. The objects of such Association shall be:

   (a) the obtaining of an area of Crown Land for the cultivation, picking, and co-operative shipping and selling of blueberries therefrom;
   (b) the procuring of reliable information as to the latest improvements in the methods of cultivating, picking, shipping and selling of blueberries, and the acquiring and collecting knowledge regarding markets for the sale of blueberries; and
   (c) the doing of all such matters and things as may legally tend to or assist in the attainment of the objects of such Association.

5. Every Association incorporated under the provisions of this Act shall hold its first meeting within two months of the date of its certificate of incorporation.

6. Each Association shall at its first meeting elect from its members a chairman and a secretary-treasurer, both of whom shall together with three members of the station administer the affairs of the station.

7. Immediately after the meeting of an Association the chairman shall notify in writing the Minister of Lands and Forests of the formation of such Association, and the names of the chairman and secretary-treasurer thereof.

8. The members of each Association shall meet at least once a year at the call of the chairman for the passing of accounts and for the conduct of general business pertaining to its objects.

9. Each Association shall have power to make rules and regulations regarding the conduct of its meetings, the annual fee to be paid by its members, and such other matters pertaining to its conduct and objects as are not consistent with the provisions of the Act, and as may be approved by the Minister of Lands and Forests. A copy of such rules and regulations shall be forwarded to the Chief Forester appointed under the provisions of the Lands and Forests Act, and shall be of force and effect until disapproved by the Governor-in-Council.

10. Any person contravening or committing any breach of, or committing any offence against any of the provisions of this section, shall be guilty of an offence against this Act.

11. In every case where no penalty has been provided for any offence against this Part, the penalty shall not be less than five nor more than twenty dollars.

12. Any penalty provided for by this Act may be recovered under the provisions of "The Summary Convictions Act".

13. Any penalty under the provisions of this Part, when recovered, shall be paid one-half to the complainant, informant or prosecutor, and the other half to the Provincial Treasurer, to be applied in the protection and the suppression of fires under the provisions of the Lands and Forests Act.

14. Nothing in this chapter contained shall be held to limit or interfere with the right of any person to bring and maintain civil action for damages occasioned by fire.

15. An annual return shall be furnished by the Secretary-Treasurer of each Association to the Minister of Lands and Forests on or before the 31st day of December, showing:

(a) the number of members of the station;
(b) the annual fee to be paid by members;
(c) the number of meetings held;
(d) the names and addresses of the officers;
(e) the receipts and expenditures of the station during the year; and
(f) the property held by the station and its value.

The following pages show a copy of the first incorporation of a blueberry association. Below is a list of all associations to be incorporated between 1928 and 1953.

Station No.	Location	Date
1	Garden of Eden and East River St. Mary's, Pictou and Guysborough Counties	Sept. 1, 1928
2	Quinan, Yarmouth County	Feb. 2, 1929
3	Agricultural Society of Argyle and Glenwood, Yarmouth County	Feb. 8, 1929
4	East Pubnico and Brookside, Yarmouth County	Mar. 11, 1929
5	Pubnico and Argyle, Yarmouth County	Mar. 8, 1929
6	East Pubnico, Yarmouth County	Mar. 13, 1929
7	Middle East Pubnico, Yarmouth County	Apr. 4, 1929
8	Agricultural Society of Kemptville, Yarmouth County	Mar. 20, 1929
9	Pubnico, Yarmouth County	Apr. 29, 1929
10	Centre and Lower East Pubnico, Yarmouth County	Apr. 27, 1929
11	Oak Park, Shelburne County	June 26, 1929
12	Bear River, Digby County	Dec. 20, 1929
13	Moose River, Pictou County	Aug. 29, 1929
14	Sheet Harbour, Halifax County	Apr. 9, 1930
15	Berwick, Springfield and Halifax	Mar. 5, 1931
16	Larry's River, Guysborough County	Mar. 25, 1936
17	Quinan, Yarmouth County	Oct. 8, 1940
18	Lower East and Middle East Pubnico, Yarmouth County	Aug. 2, 1947
19	Dover, Guysborough County	Sept. 12, 1951
20	Louisdale, Richmond County	Mar. 23, 1953

No. 1

PROVINCE OF NOVA SCOTIA

I Hereby Certify *that*

Station No. 1 Blueberry Association of Nova Scotia is this day Incorporated under Chapter 8 of the Acts of 1928 entitled "An Act to Encourage the Cultivation of Blueberries".

GIVEN under my hand and seal of office at the City of Halifax, in the Province of Nova Scotia, this

Eighteenth *day of* September

One thousand nine hundred and Twenty-eight.

Arthur B. Barnstead

REGISTRAR OF JOINT STOCK COMPANIES

We, the undersigned residents of Garden of Eden and East River St. Mary's in the Counties of Pictou and Guysboro, and engaged in the occupation of berry-picking, hereby agree to form ourselves into a Union and desire to be incorporated under the provisions of Chapter 8, of the Acts of 1928 as Station No. Blueberry Association of Nova Scotia.

Dated September 1st, 1928.

NAMES OF SUBSCRIBERS.	ADDRESS.	WITNESS
John James Fraser	Garden of Eden	
Colin J. Miller	Eden Lake	
L. A. Gunn	Rocky Mountain	
Leslie Macdonald	Eden Lake	
George b Fraser	Eden Lake	
Alex McLaren	Garden of Eden	
H D Fraser	Garden of Eden	
J. H. Macintosh	Garden of Eden	
Frank McIntosh	Garden of Eden	
Neil McLaren	Eden Lake	
Gumping Campbell	Garden of Eden	
John Fraser	Garden of Eden	
George McIntosh	Garden of Eden	
Elmer Fraser	Garden of Eden	
William McDonald	Garden of Eden	
Mrs McDonald	Garden of Eden	
A D Wood	Eden Lake	
Don Miller	Eden Lake	

Witness { Don Miller, Eden Lake, Pictou

Colin J. Miller, Eden Lake, Pictou Co.

Ironically, Cumberland County, which by 1950 was the leader in blueberry exports, had no blueberry associations formed in that period.

In 1929, thanks to better organization and excellent weather, there was a bumper crop which was not to be equalled for many years.

In the late Twenties, the Nova Scotia government began to be closely involved with the industry. The Department of Agriculture and the Department of Lands and Forests both worked to ensure its future. Investigations were carried out to study packing procedures, burning practices and marketing methods. In 1930 the Department of Agriculture prepared a report on blueberries which was made available to interested parties upon request. Unfortunately for this research 56 years later, there is no trace of that report.

In 1930 difficulties were encountered with the blueberry maggot, primarily in Yarmouth County. The presence of this insect badly hurt the industry that year and it was from that point that Yarmouth's position of dominance began to wane. By the mid 1930's the northern counties had gained considerably in importance in the export of blueberries. There are several reasons for this shift.

In Yarmouth County the effective control of forest fires carried out by the Department of Lands and Forests had reduced the amount of barrens that were being burned each year. General employment in the county improved because of the opening of new fish plants and the harvesting of Irish moss, leaving fewer people with time for blueberry picking. Unemployment benefits were such that there was less income incentive than there had been formerly for a family to spend four to six weeks each summer camping on a blueberry barren. Old age pensions and family allowances played an important role in this lack of incentive.

In Yarmouth much of the harvesting had been done by fishermen and their families, or by townsfolk who were short of work, especially during the Depression. By the late Thirties, however, the economy had picked up and the amount of harvesting of blueberries was considerably reduced. In Cumberland County much of the berry harvesting was and indeed still is carried out by farmers and their families for whom the blueberry season was a normal part of their yearly schedule. Those individuals were less susceptible to changing urban employment figures.

Although the Boston market continued to buy the berries, demand was increasingly being met by the producers from Cumberland, Guysborough and other northern counties. In 1942 Yarmouth lost a great advantage when the shipping lines between Yarmouth and Boston were terminated because of World War II.

By the 1940's more and more berries were being shipped out of the province frozen rather than fresh. The frozen berries were easier to transport as handling was not as delicate a procedure with less chance of damage. It also helped to guarantee against quantities of blueberry maggot being shipped as the berries were sorted and cleaned before freezing.

As most of the freezing was carried out in the northern part of the province, Cumberland gained a further advantage. By the 1950's Cumberland had become the leader in blueberry exports to outside markets. It had become a most important source of income to much of the rural population of that county. Meanwhile, in Yarmouth, the trade was sharply reduced to a very localized industry - see Figure 4.

Thousands of acres of abandoned land in Cumberland in the Cobequid Mountains and along the upper slopes of the Maccan River Valley came into production after World War II. The net profit per acre was estimated at $100 to $150.[13] The counties of Guysborough, Pictou and Colchester also experienced an increased production rate in the late 40's and early 50's.

In view of the ease of production, the high level of profits and the presence of the blueberry in areas throughout the province, it is not surprising that the industry has developed into the important source of revenue it is for Nova Scotia today.

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13. Springhill, An Industrial Survey, 1941.

NOVA SCOTIA

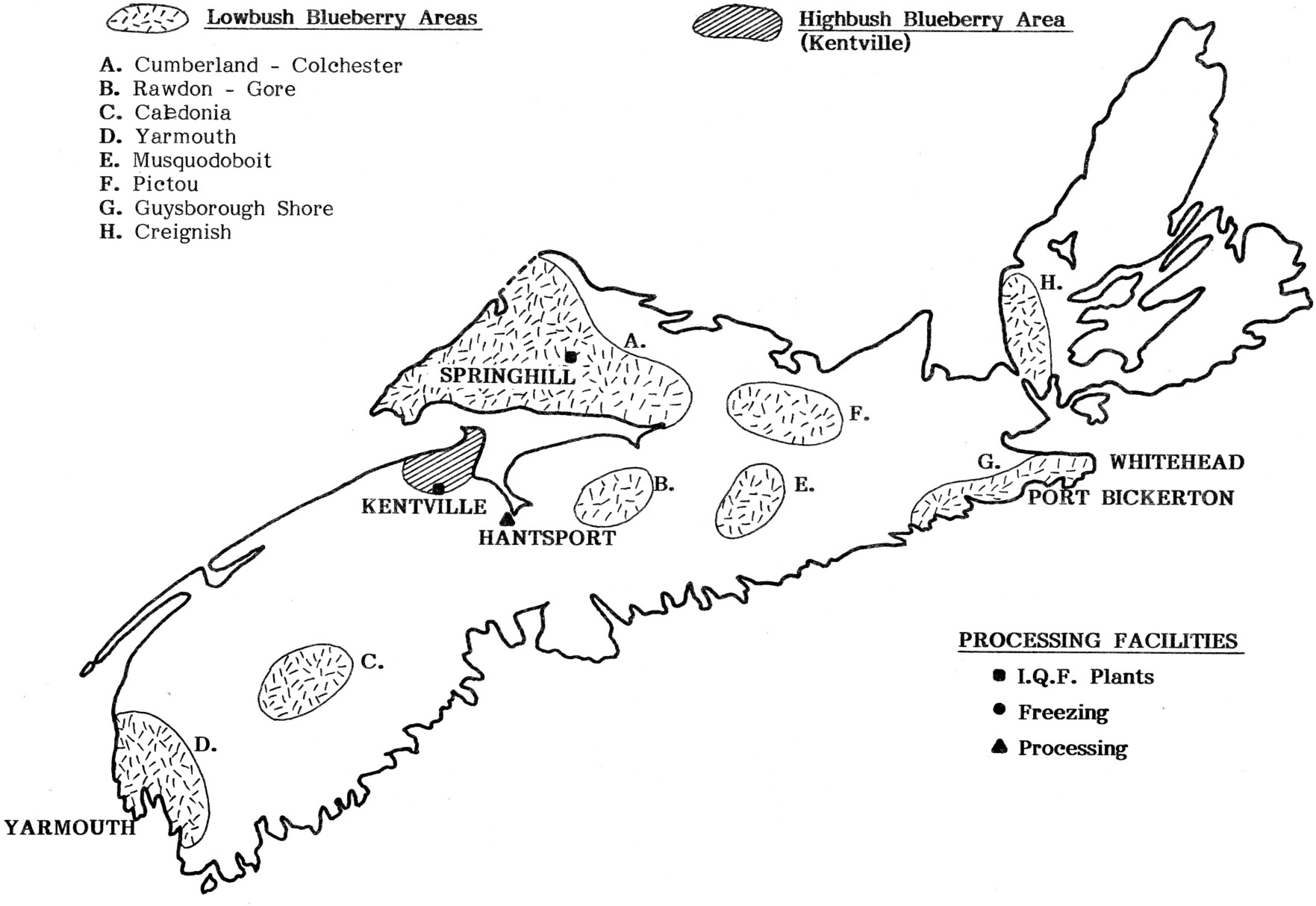

Figure 4

Chapter 3 The Cultivation of the Barrens

Blueberry plants must be pruned as one year old shoots are vigorous and productive. A biennial cycle has been adopted in the most productive areas. Fire has proven to be the most successful method of pruning. The use of fire is for the sole purpose of pruning and nothing else. Deep burns must be avoided as they result in plant injury and humus loss which can eventually lead to a running out of blueberry fields. A flash fire is considered to be the best method since it prunes the old tops and will not cause any damage to the litter on the ground. Fires are usually set early in the spring and care is taken to prevent the fire from getting out of control.

Burning blueberry barrens is a practice which came into use gradually over a long period of time. Barrens usually refer to Crown lands. Pastures and fields refer to private lands. When berries first began to be harvested in Yarmouth burning was not carried out with blueberries specifically in mind.

In 1880 Yarmouth County passed a fire regulation prohibiting the burning of woods, bushlands or marshlands between June 15 and September 30 under a penalty of $12 for each offense.[1] It is interesting to note that this legislation did not specifically mention blueberries or any other particular form of plant life.

In 1890 an article in the Yarmouth Herald in July brought attention to the experimental use of burning for strawberry cultivation, a procedure that was thought to destroy weeds, insects and loosen the soil. The article went on to suggest that this method could be utilized for other products such as blueberries.[2]

By 1904 the fire rangers' reports to the Department of Crown Lands confirm that burning for the cultivation of blueberries had become quite widely practiced and indeed somewhat of a problem. Many fires were started during the summer months which burned deep, destroying the natural humus of the soil as well as killing many of the blueberry plants. Many of these fires got out of control and not only burned large tracts of blueberry barren, but woodland and an occasional house and barn as well. It is interesting to note that the first indication of such burning comes not from Yarmouth but from Lanesville in Colchester County, an early sign of the northward shift of the industry. The fire ranger at Lanesville filed this report in 1904:

> "The fire at Lanesville started near a blueberry barren, and it would appear that it was set for the purpose of burning the barren to promote growth of blueberry bushes next year, but I could not procure information against anyone."

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1. Yarmouth Tribune, March 24, 1880.
2. Yarmuth Herald, July 23, 1890.

In 1905 this report was filed from Yarmouth County:

> "In the municipality of Argyle, in the first part of the season, there were a number of small fires started for the purpose of burning the blueberry barrens and 7 different persons were caught in one day setting fires without permission."

In the course of the next few years the rangers' reports indicate that many permits were being given for the purpose of barren burning, and that the burners were becoming more closely watched. In 1907 the Yarmouth County ranger granted 200 such permits. In Barrington, in 1909, a number of illegal fires were set upon Crown lands for blueberrying but the ranger reports that "they caused no damage to the woods".

By 1918 burning had become a continuous problem and one ranger from Barrington reported posting extra fire warnings during the blueberry season.

In 1924 petitions were circulated in Yarmouth to the effect that the authorities in Halifax would be asked to grant permission to burn over the vast acreage lying in the interior of the county. On the other hand, many county residents felt that the barren land in the county could be put to use through careful burning. The Yarmouth Herald reported:

> "As previously stated, the land, under present conditions, is practically valueless, but if with care it can be burned over and within a year or so be the means of returning to this and adjoining counties thousands of dollars from blueberries, then we say by all means have it burned that one and all, either directly or indirectly, shall reap the benefits."[3]

There seems to be no record of this petition ever reaching Halifax.

The burning of forest lands during dry seasons is one of the factors that led to the rise of the blueberry industry in Cumberland County. Forest fires in the early 1920's left many Cumberland County acres barren and within a few years blueberries were growing in abundance. The people of the county lost no time in exploiting this newly found source of wealth.

In 1925 the Department of Crown Lands filed a report on experiments that were done in Yarmouth County to test the suitability of Kemptville lands for blueberry production. The Department set out four plots in various areas and made numerous conclusions. Plots 3 and 4 were situated on a range of low hills, east of Kemptville. They were granite barren lands, very suitable to low-bush blueberries, and after burning produced berries of excellent quality. These plots were left untouched for a few years and their

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3. Yarmouth Herald, August 19, 1924.

yield of berries dropped drastically. Plot 1 was open barren, considered unlikely to reforest or reproduce in any way, as was Plot 2. Both of these barrens were burned in thirds over a period of three years, in hopes that the result would be a continuous supply of fruit. At the time of the report there was every indication that the crops would be good, and the experiment successful.

In 1926 the following report was filed by the Department of Crown Lands:

> "About 18 square miles (13,320 acres) of blueberry barrens were burned in Yarmouth and the western part of Shelburne County. These fires were started purposely by persons in these counties on the extensive barrens covered by blueberries and laurel - they got out of hand. They were put out by personnel of the Nova Scotia Department Lands and Forests several times but were started again. It has been the custom of the people in these counties to burn over a great part of these blueberry barrens under the supposition that it is necessary for the growth of blueberries that the barrens are burned over. The acreage so burned has never been included in the statistics furnished by the Government in previous years. The Department is presently investigating this question and if it should prove necessary to burn the barrens for the growth of blueberries, this burning will be under the supervision of the fire rangers."

It was later stated in the report that 13 per cent of all destructive fires in the province had been caused by berry cultivators. The forest fires caused by blueberry barren burning were widespread throughout the province, the most taking place in Yarmouth, Shelburne, Halifax, Cumberland and Antigonish counties. Anyone wishing to burn was instructed to obtain a permit from the appropriate fire ranger.

In 1927 there was a series of fires caused by berry burning in Shelburne and Yarmouth Counties, amounting to 1085 acres, a large drop from the previous years. That same year one large berry fire caused 250 acres of damage. In the case of both areas the lands burned were barren and thus there was no damage done to the forests. The drop in the amount of fires set was attributed to the work of fire rangers who warned citizens not to set fires without permits. The forest rangers in Yarmouth and Shelburne counties assisted the population in burning their blueberry barrens and several hundred acres were safely burned with assistance and supervision.

Also in 1927 the Department made an effort to fine any person who burned without a permit, and succeeded in collecting $680.

Conflicts between the forest and blueberry industries had long existed and the Department of Lands and Forests was anxious to reconcile them. Approximately 460,000 acres of land in Yarmouth,

Digby and Shelburne had become totally unproductive for any vegetation including blueberries as a result of careless burning. The Department expressed their wish for co-operation with the industry in order that indiscriminant burning could be controlled and the deforested lands could be left to rejuvenate, a process which was to take a great many years and indeed is still going on today. The Department also suggested that specific lands be set aside as blueberry barrens and that these lands be burned under supervision early in the year.

The accompanying photographs taken in 1927 show blueberry pastures burned over in different seasons. The first picture (Figure 1) shows a blueberry pasture burned in the spring of 1925. It will be noted that although a number of vines are producing berries freely, the whole patch is overgrown with weeds of laurel, ferns, etc. A barren of this nature should be burned or mowed so as to destroy the weeds and prune the blueberry bushes. The second picture (Figure 2) shows a blueberry pasture burned in the spring of 1926. This pasture is producing well but in 1928 will be much like the field in the first picture. The third picture (Figure 3) shows a pasture burned in the spring of 1927. The vines are not yet producing berries but in 1928 will be producing berries like in Figure 2. The pictures illustrate the necessity of burning the blueberries, and show that burning should be done in the dormant season, the early spring or late fall, when the damp and often frozen ground will not be adversely affected by a destruction of the peat moss layer on top.

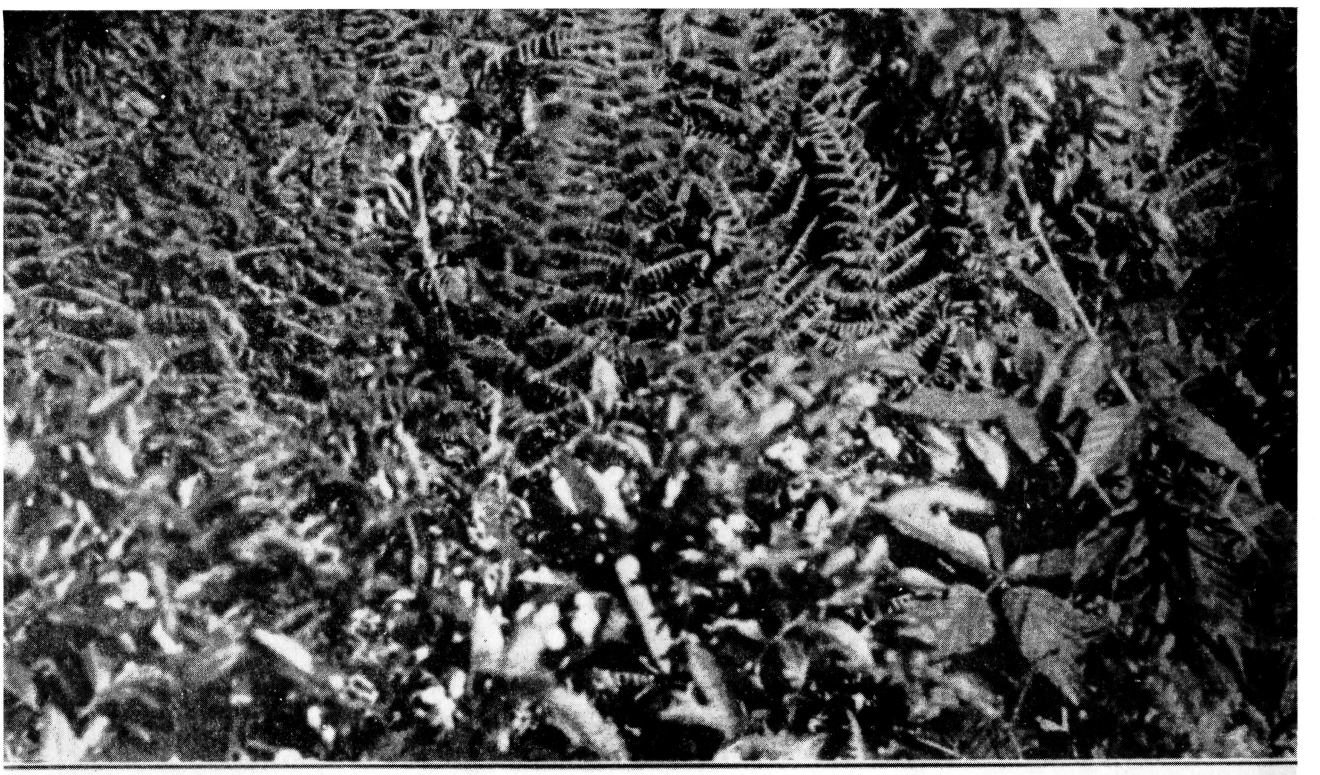

FIGURE 1. BURNED SPRING 1925.

FIGURE 2. BURNED SPRING 1926.

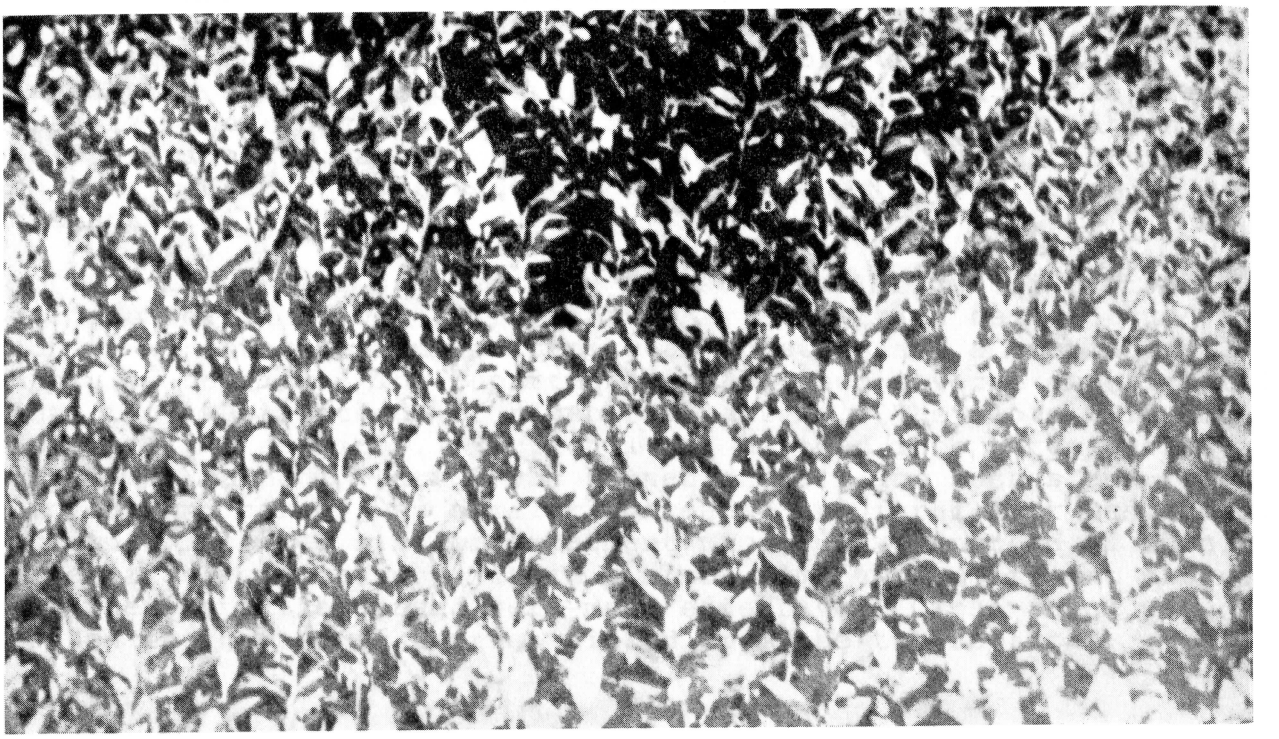

FIGURE 3. BURNED SPRING 1927.

In 1927 the Department of Lands and Forests was of the opinion that mowing of the blueberry pastures resulted in better crop than burning. The vines were always damaged a little when burned no matter how carefully the burning was done. It was suggested that an even better method of weed control was to graze the pasture over by cattle or sheep and goats.

Reports from a United States experimental station indicated that the blueberry crop could be greatly augmented not by burning but by the use of fertilizers. The Department recommended a fertilizer as follows:

Nitrate of Soda	170 pounds
Dried Blood	230 pounds
Steamed Bone	340 pounds
Phosphate Rock	340 pounds
Potash	170 pounds

mixed and applied at the rate of 600 pounds per acre. With this information at hand the Department of Lands and Forests laid out a number of experimental plots in several of the blueberry growing areas.

In 1928 the fire season commenced early in the spring. Sixty-six per cent of all fires that year occurred in areas which had previously been used for the same purpose and thus there was little damage done to timber growth. Most of the burning was done with the permission of a fire ranger and under close supervision. Through the efforts of the fire rangers the fire loss was minimized. Only 470 acres were damaged in Yarmouth, Shelburne and Digby counties.

In order to cope with the situation, the Blueberry Associations Act was passed during the legislative session that year. This Act covered many acres of blueberry cultivation, including the burning of Crown Lands for blueberries could only be carried out safely through a system of Associations, to whom pieces of land could be turned over for the purpose of blueberry cultivation. It was believed that such an Association would provide a responsible crew to assist the rangers in the burning process. The Association would provide limitations on the amount of land burned each year and thus prevent needless destruction of young timber (copy of Act in Chapter 2).

The Department of Lands and Forests also suggested that all fields be divided into thirds that year, one-third being burned each year, thus creating a three year rotation and a continuous supply of berries. The Department established several experimental plots for the treatment of blueberry barrens. The plots were divided into two sections. Section 1 was divided into three parts; part 1 was burned. Part 2 was burned and all low bushes and trees removed, and part 3 was similarly treated and fertilizer was added. Section 2 received similar treatment except that instead of burning three parts were mowed. Within a short time the experiment showed that the fertilizers used were most effective. Close check was kept on the number of berries picked from the two sections.

In 1928 the Amherst News and Sentinel gave the following report on the methods of burning used in Maine, an indication that the ideas of the Department of Lands and Forests were not unique:

> "Burning over the barrens is an economical system of pruning and it is the foundation on which an important blueberry industry has been built up in Maine. The success of these industries which have transformed practically useless farms into valuable lands has been due to periodic burning of blueberry lands. On the larger and better organized tracts, one-third of the land is burned over each year. One-third is always producing a good crop of large berries which follows a year after the fire and the third area is producing a second crop which is not so abundant. After the second crop is picked, the ferns, weeds, and grasses are cut. These are allowed to wither and dry on the land, and all the growth is burned the following spring. This practice has a tendency to fertilize the land and allow the sun and air to reach the new crop of bushes which follow after the burning. The new bushes do not yield a crop that year, but the following year may run as high as 100 bushels, or 3200 quarts to the acre and it is well worth waiting for."

In 1929 the Department of Lands and Forests had heartening reports. The attempts made at organizing the burning process were showing results. In Yarmouth County only 111 acres of land received any permanent damage through barren burning. That same year 10,000 acres of barrens were safely burned. In late March when there was no danger of the fires spreading out of control the burning was done under the supervision of the rangers who received a great deal of co-operation from the blueberry cultivators. The assistance provided by the Department was one of the primary factors which resulted in the largest blueberry crop in the history of the industry.

In 1930, reports in early March indicated that there was great activity and organization taking place throughout the province by the rangers in anticipation of the upcoming blueberry burning season.[4] Plans were made for the burning process and several new lookout towers were erected. The rangers could not predict, however, the coming of the dryest season in Nova Scotia for over a century. A mild winter coupled with excessive heat, strong winds and a minimum of rain resulted in a lower water table. About 46,188 acres of Nova Scotia lands were devastated by forest fire and approximately one-third of these were caused by blueberry burning.

In March of 1930, before the danger of forest fire was too great, 12,000 acres of barren were burned under supervision of the rangers. In Yarmouth County the starting of fires in the summer months by four groups caused 5200 acres of damage to timberlands.

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4. Yarmouth Herald, March 18, 1930.

Most of the blueberry burning in 1930 was done on Crown lands, although the rangers also assisted people in burning their own pastures. Roughly 4,500 acres of private land were burned under ranger supervision.

Over the next few years the rangers continued to supervise the burning of the blueberry barrens. More regions in the province participated in the burning process. In 1931 Cumberland County had approximately two-fifths of all barrens burnt that year. The problems caused by indiscriminate burning of blueberry barrens continued, although they tended to fluctuate with the dryness of the season. In 1934 it was reported that the passing of the Blueberry Associations Act in 1928 had lessened the problem considerably, particularly in the southwestern part of the province.

In Cumberland County, during the 20's and 30's, the biggest portion of their berries came off land that forest fires had burnt over. The growers didn't practice any systematic burning and what burning they did was on a "hit and miss" basis - free burn. There was a big fire that went through the Maccan area in 1920. Dickinson bought a lot of berries that were picked at the head of Maccan Lake, then transported by boat to the power station at Maccan where vehicles would gather the crates to take them to the Maccan railway station.[5]

In 1931 a large fire occurred near Thomson's Siding, Cumberland County, and burned approximately 8,600 acres.

A large forest fire occurred in Rawdon, Hants County, where 3,700 acres were burnt.

By 1931 there were approximately 43,000 acres in production with 33,000 acres belonging to blueberry associations and the remainder were privately owned.

About 1940 Dickinsons started to spread straw by hand, in the fall, over some of their fields to be burnt the following spring. When the straw was in short supply, it would be spread in strips 20 feet wide, then 20 feet skipped, then straw spread again.[6]

Pettigrews always used a free burn - usually every other year.[7]

In 1935 the Nova Scotia Legislature passed an Act which was designed to control the burning of Crown lands. It laid out guidelines such as prohibiting burning between April 15 and December 1, and called for the supervision of all fires for industrial purposes by the fire rangers. The Act took every precaution to see that burning was as safe as possible. Violation of the Act brought a fine of not less than $20.

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5. Karl and Seymour Dickinson, West Brook.
6. Karl and Seymour Dickinson, West Brook.
7. Hedley Pettigrew, Springhill.

In 1936 alone, 7,420 permits to burn were granted under the new law; however, these were not all for the purpose of berry burning. Despite the new law, berry cultivators were responsible for 12 forest fires in the province that year. Many were started during the picking season by careless pickers. It was reported in 1936 by the Department of Lands and Forests that much of the blueberry burning was causing irrevocable damage to barrens. The Department suggested that lands be left for a few years before they became totally unusable for any crop.

By the late 1930's, burning was practiced all over the province. Guysborough County reported that in 1937 an increased amount of land was being burned over and that it was proving quite successful in terms of blueberry yields. As the Yarmouth County industry declined and the focus of the blueberry business shifted northwards so did the practice of barren burning. In Yarmouth most of the lands burned were Crown lands, while in the north, especially Cumberland, the burning of private lands was quite common. Whomever the land belonged to, the burning was done under the careful watch of a fire ranger.

As the blueberrying industry developed in Nova Scotia from 1880 to 1950, burning gradually became the accepted method of berry cultivation. Although alternative methods of spraying, dusting, mowing and animal grazing were suggested and tried, the practice of early spring burning has remained the most efficient and widely used method. Early burning practices caused problems for Nova Scotia forest, and resulted in the loss of many acres of valuable timber and bushland. As the process became more widely used, however, control and organization became greater and by the 1940's sufficient knowledge had been gathered, and laws passed, to make the practice of periodic blueberry bush burning a viable and safe system of blueberry cultivation.[8]

Weeds

Blueberry plants form a natural succession in the change from cleared land to forest. On the Crown 'pastures' there could be found sweet fern, bracken fern, sheep laurel or lambkill, spiraea, hardhack, brambles, birch, alders, etc. They all compete with the blueberry for light, space, moisture and soil nutrients.

There was no weed control practiced on Crown pastures; however, it was used on private lands. Sweet fern was often regularly mowed in the summer months as this was found to be the best time to control it.

The bracken fern was found to be sensitive to calcium arsenate dust. Hand mowing (scythe) or the use of three-foot horsedrawn mowers was often employed to control this weed. Many growers had developed special homemade tools which they used on specific weeds. The pasturing of many of the blueberry barrens by cattle or sheep helped to reduce the weed population. As the cattle numbers dropped, the blueberry pastures started to grow up with weeds.[9]

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8. Unless otherwise indicated, all information in this chapter came from the Annual Reports of the Departments of Lands and Forests and Agriculture.
9. Arthur Crowell, Kemptville.

Chapter 4 **Picking, Packaging and Processing**

Picking

When the harvest season begins in July or August it is not long before the blueberry fields are filled with pickers. Blueberry picking has long been a family affair and the industrialization of the berry did nothing to change that. The merchants who shipped the berries out of Yarmouth in the 1880's usually did not directly hire specific people to do the picking. The buyers bought the berries from the pickers at the fields and then transported them to the shipping depot. Thus virtually anyone who wished to earn some extra cash could do the picking.

The pickers put their berries into round boxes, which in turn were put into crates which held 24 boxes. The boxes were made available from the berry buyers, from general merchandise stores, or from the place of manufacture. In the 1880's the storefronts in communities such as Eel Brook were described as being hidden by the stacks of boxes piled up for distribution to the pickers.[1]

Because picking could be done by virtually any member of the family capable of walking and holding a box or picking into a basket, and the pickers did not have to worry about the transportation of their berries from the fields, blueberry picking soon became a valued source of income to many of the inhabitants of Yarmouth County who otherwise saw little cash all year.

A grower from the French Shore reminiscing about the 'old blueberry days' recalled that he and other members of his family used to sell blueberries to Mr. Charlie Wyman of Beaver River who was a shipper and buyer. Mr. Wyman bought the filled 32-quart crates once per week. He would hand over a dollar and then wait for the picker to give him 4 cents change. Mr. Wyman was thus paying 3 cents per quart for the berries, a standard price for many years.[2]

As time passed and more blueberry barrens were being harvested, the method of obtaining the berries remained basically the same and continued to provide a welcome income for many inhabitants of the province.

As early as 1883 there is record that the picking procedure had become organized, evidence of which can be found in a letter sent to the Yarmouth Herald in September of that year. The letter was sent from Deerfield, but is unclear as to the identity of the sender. The author describes setting out for the blueberry plains early one morning with two close friends with the intention of camping on the barrens to the east of Kemptville. After setting up camp and watering their horses, the men met up with Henry Crowell who was buying berries from a number of pickers, both young and old. Mr. Crowell informed them that some pickers earned up to $3 and $4 a day, a healthy day's pay in 1883. He told the men that he and some others had paid out $1500 to the pickers already

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1. Yarmouth Herald, August 6, 1884.
2. E. L. Eaton, Kentville.

that season and expected to pay an additional $1500 before the season was out. In the course of the afternoon the author and his friends were able to pick a bushel a piece.[3]

In 1885 an American paper stated that a smart picker in Maine could harvest one-half bushel a day. The Yarmouth Herald remarked on this with great amusement in the following fashion: "Let some of the Maine dealers come to Nova Scotia where it requires no smart picker to harvest half a bushel in part of a day!"[4]

Blueberry picking was often an excursion for the whole family, especially the women and children, who would start early for the fields carrying a lunch with them. In 1887 it was described as a 'campaign' in an article which observed that the pickers travelled in groups on wagons some 10 or 20 miles to the fields. That year, however, the berries were scarce, and even a price of 5 cents per quart was proving too small to make picking worthwhile for many.[5]

In the 1890's the process had not changed. One report in the Yarmouth Herald described the method as follows: "Agents of American firms send teams out and the teamsters leave crates of empty boxes with farmers. The farmers take the boxes to the fields and fill them. The teams collect the boxes, pay cash to the farmers and take them to be shipped."[6]

Often these teams carried the berries only short distances to the railway stations. In Yarmouth many of the wagons would move directly to the piers where they could be placed on board the steamers which carried them southwards.[7] The advantage of such transportation was that it minimized the number of times the fresh berries were shifted, and thus prevented extensive damage.

In Yarmouth County, there were four major blueberry areas in the county (see Figure 5).

> "Kemptville At the turn of the century blueberries weren't too plentiful in the Kemptville area; however, there were plenty of blueberries east of Kemptville on Crown land ten or more miles away. These blueberry areas were in the Bear Lake area, Blue Mountains, Bartlett, Oakland and Oak Park areas. The Blue Mountain area was rated as the best blueberry area in 1908. Families would often go by boat down Pearly Lake and put into shore around the lake and pick 'likely blueberry spots'."

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3. Yarmouth Herald, September 13, 1883.
4. Yarmouth Herald, August 19, 1885.
5. Yarmouth Herald, August 6, 1887.
6. Yarmouth Herald, August 1898.
7. Yarmouth Herald, August 18, 1908.

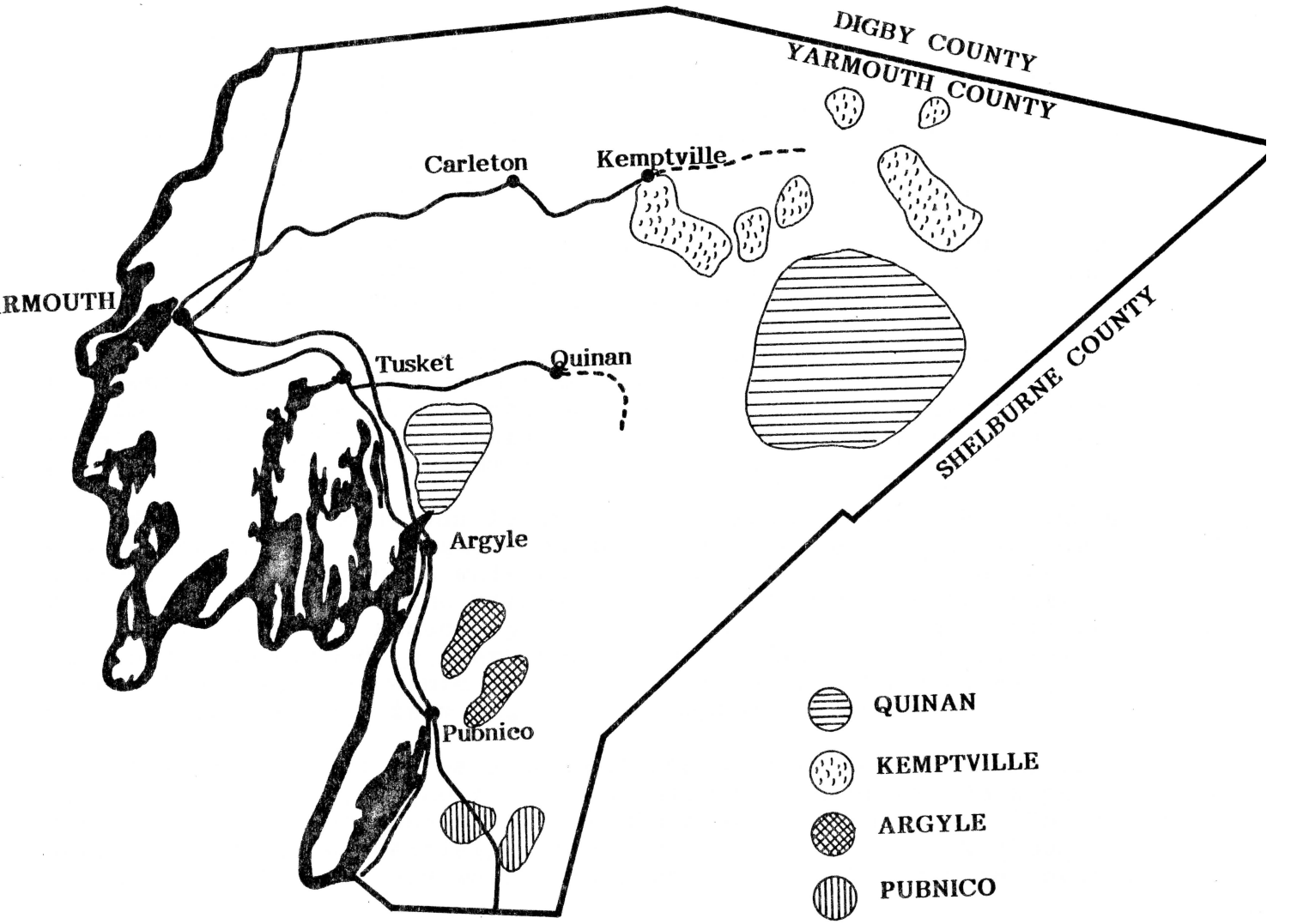


Figure 5

The pickers would usually go to the barrens on Monday morning. The distance was approximately ten miles. It would take the ox teams, picking their way around the rocks and following the trail, almost all day to get to the picking areas. There might be time, after the tents were set up, for some members of the families to pick a few berries before night set in. The oxen wouldn't be tied, but would graze nearby.

Usually three or four families would make up a picking party. On occasion the picking party might be larger, ranging from 15 to 40. They would be of all ages from babies to grandparents.

The families would take their utensils and provisions for the week. This would usually include home-baked bread, home-canned meats, salt herring, potatoes, etc. The families would usually have one hot meal per day cooked over open fireplaces. A good water supply would be located nearby.

The work was hard, living conditions rather primitive, yet families would look forward to their 'berry picking time' as it

was their family outing for the year. The families had an opportunity to camp and work outdoors. The blueberries provided food for the winter - preserves, pickles, stews, etc. - as well as being a crop that could be sold for cash. Mosquitoes and black flies were not a problem. Bears were never seen on the barrens.

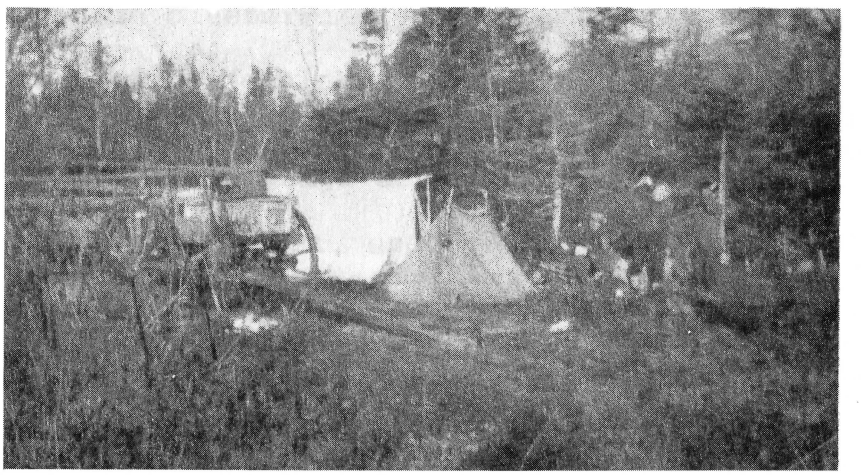
The pickers would pick the areas handy to their tents. They would pick directly into the quart boxes. As soon as the box was filled, the picker would place it into his or her crate.

If good picking was located several hundred yards away from the tents, the pickers would take their crate and boxes with them and follow the same procedure. Some of the picking crews had one person - a carrier - who carried the full quart boxes to a central packing area and placed them into the crates.

When good picking was located some distance away, the pickers would pick into 8 or 12 quart baskets. As soon as the basket was filled, the picker would walk back to where the quart boxes and crates were located. The berries would be poured into the quart boxes. In order to reduce spillage, a shallow metal pan would be placed on the ground, a quart box placed in it. If any berries missed the box, they would be caught in the pan. Hand picking would be carried out from August 1 to September 15.

The berries had to be plentiful for pickers to average a 32 quart crate per day. There would usually be one or two days per harvest season when many pickers would average 40 quarts. "There were some years the berries were so thick you could track a man through them."[8] Pickers were paid approximately 5 cents per quart.

Usually every Friday the families and their harvest would leave the barrens. Sometimes, when the picking was good, families would remain out in the barrens for a period of four or five weeks. The supply wagons would bring their provisions usually once per week.



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8. Arthur Crowell, RR#1, Kemptville, Yarmouth Co., N.S., interview and correspondence, June-August 1971.
9. Mrs. Lucy Crowell, RR#1, Kemptville, Yarmouth Co., N.S., interview and correspondence, June-August 1971.

Quinan Quinan area was often called The Forks, where the river forked, and the inhabitants of this area were called Forkmen.

Pickers would harvest their berries around Ricker Lake, Randall Lake, Bad Falls Road, Hemlock Falls, Aggies Rock area near Upper Frog Pond, Solomon Lake, Nepsedek Lake, Rushmere Lake and areas around Davis River.

The pickers were prepared to pick in many areas wherever the berries were, regardless of terrain, hardships or distance. Many of the pickers would go by ox team to the barrens. A regular farm wagon would be used with arched ribs fastened to the wagon box and over this canvas would be stretched, giving a covered wagon effect. In 1900, John Armstrong used to buy blueberries harvested from these barrens. They would be taken by ox team into Yarmouth.

Some of the families would take all their regular provisions as well as chickens and pigs. Some families would spend four to six weeks picking blueberries until early frosts would drive them out. Quite often the families would be awakened in the morning to the sound of a rooster crowing.

Many families would ride the wagons as far as the teams could go and then they would 'strike out' following twisting trails across the barrens. One favorite area was Aggies Rock - a four to five hour walk, and about 12 miles inland from Belleville.

Above Hemlock Falls the ox teams and pickers would have to go across the river. Quite often the water would be up to the floor boards of the wagon box. When the water level was too high for the wagons to cross in the normal way, the oxen would be unyoked and made to swim across the river. The team would be yoked, stout ropes or chains would be fastened to the wagons and then the wagons would be floated across the river.

Cooking was done over an open fire as there were no cook stoves. Neither deer nor bears were found on the barrens in the early 1900's. The families would supplement their salt fish and potatoes with fresh meat, usually moose or trout, provided by their 'hunter'. He would be paid in blueberries.

Blueberries would be picked into baskets and the same dumping procedure as carried out in Kemptville would be followed. In the early years the pickers would be paid approximately 3 cents per quart. A picker would average about 32 quarts per day.[10]

Gordon Hatfield, Tusket, used the six quart carriers, and as the berries were brought in from the field the number of quarts was punched on the card. The card was usually tied on a string and hung around the picker's neck. These cards were used ca 1915. These cards were still being used in Chebogue ca 1928-1930.

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10. Philomon Pottier, Belleville, Yarmouth Co., N.S., interview and correspondence, June 1971 - August 1972.

FROM

HATFIELD BERRY FARM

TUSKET, N. S.

GORDON HATFIELD : PROPRIETOR

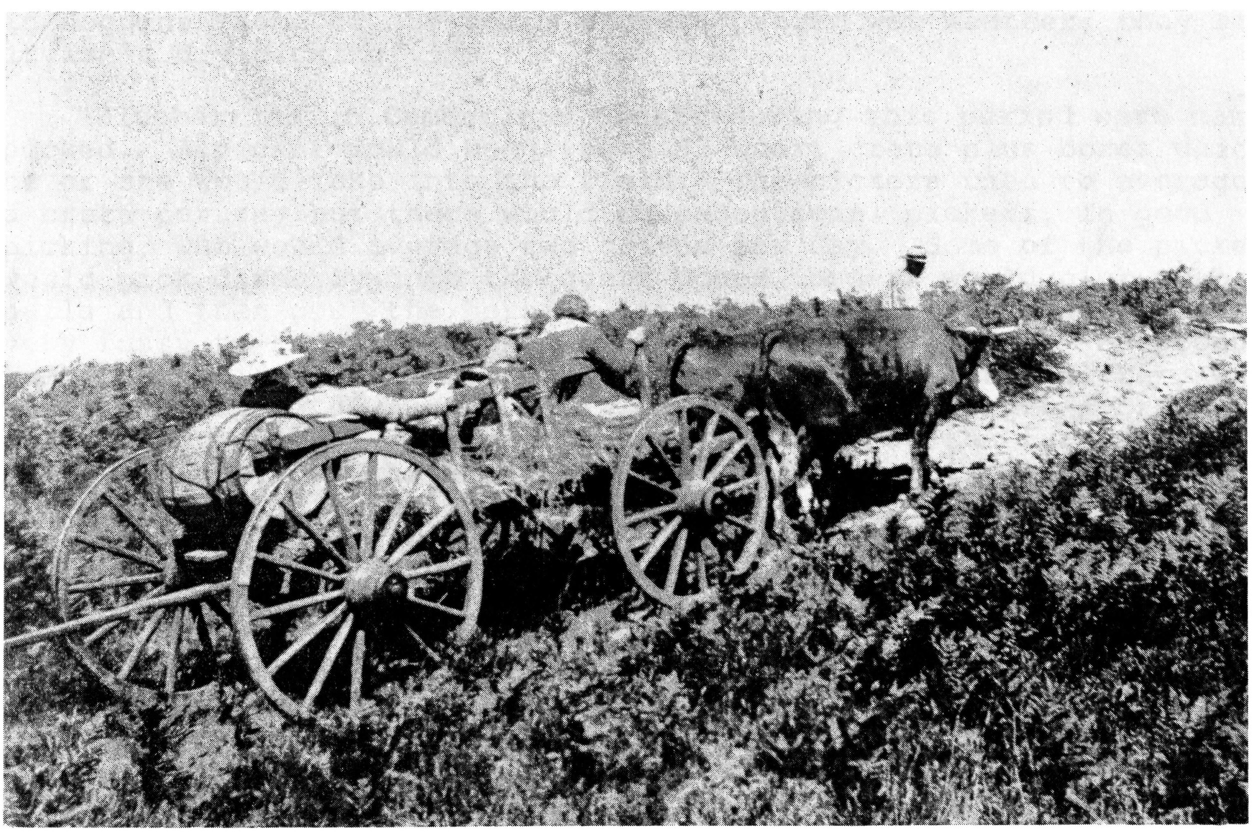
Output Strawberries 1913--1026 bus.

To ....

....

picker's card -

6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
6	6	6	6	6	6	6
5	5	5	5	5	5	5
4	4	4	4	4	4	4
3	3	3	3	3	3	3
2	2	2	2	2	2	2
1	1	1	1	1	1	1



Pickers on their way to the barrens.

Pubnico-Argyle-Chebogue The Argyle pickers used to concentrate in the large blueberry tracts around Cranberry Lake.

Pickers from Pubnico harvested their blueberries mostly in the vicinity of French Lake and in towards Second Lake, as well as Lower West Pubnico.[11]

Quite often the Pubnico and Argyle groups would pick together in the Cranberry Lake area.

The Pubnico and Argyle pickers usually went out each day and returned by evening. Their areas were located much closer to their homes. They would use wagons with the hay racks on them. A ridge pole would be used to hang the canvas on. Each picker would give a quart of blueberries for his transportation payment. Old lobster buoy rope was sometimes used to line the field to form picking lines. Many pickers picked into Indian baskets (6-8 quart size) and when full they would dump their berries into quart boxes. This would sometimes hurt the quality of the berries.

Chebogue In the 1928-1935 period, pickers on private pastures were paid 5 cents per quart. Each picker would wear a numbered tag on a string around his neck. The tag would be punched as to the number of quarts harvested. Each picker had a shallow tray that held six quart boxes. As soon as the quart boxes were filled, they would be taken to a packing shed and the berries inspected as to their quality before the tag was punched.[12]

The first mention of berries being picked in Cumberland County to any great extent was in 1915 when an Amherst paper reported that in Joggins "some of our berry pickers prefer wet weather, they say it isn't dry picking".[13]

Blueberries in Cumberland County during this period were hand-picked. A picker would be given a 32 quart crate plus boxes which he or she would take into the field. The pickers used to average a crate per day but there would be exceptional pickers, in good picking, who would average two crates per day. Some of the pickers would pick directly into the quart boxes, others would pick into pails and then pour the berries into the boxes. The pickers were very fussy to see they picked and packed a good product - a product they took pride in.[14] Average price per crate, to the picker, was approximately $1.00 . Buyers in 1927 paid $2.25 per full crate of blueberries. In some cases, buyers would pay the farmers 25 cents per crate stumpage to be allowed to put their pickers into their blueberry fields.

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11. Benoit d'Entremont, Agricultural Representative, N.S. Dept. Agriculture and Marketing, Yarmouth, N.S.
12. Hartley Cunningham, Truro, N.S., July 1972
13. Amherst News and Sentinel, August 20, 1915.
14. Karl and Seymour Dickinson, West Brook.

The "local" people would pick their own fields. For fields owned or rented by local buyers, they would usually employ Indians. These Indians, often from this province, New Brunswick or Prince Edward Island, would pick berries first in Maine, then move to Nova Scotia for berry picking as the fruit ripened and later move to Prince Edward Island to pick up potatoes.

Hedley Pettigrew remembers (1930) approximately 50 to 60 Indians camped out in the blueberry areas. In 1919-1920, approximately 90 Indians camped at Newville Lake and each family lived in teepees made of long poles tied at the top with wire and the poles covered with tar paper.

It was the ingenuity of the Indians who invented the first homemade blueberry rake. The frame was made out of wood, the teeth out of steel bed springs. This was done in secret by the Indians as Nova Scotia had long boasted on the market that their berries were all hand picked and were of better quality. The Indians who had invented the rake also didn't want their secret to become generally known by the other pickers. Those with the rakes were able to pick faster and thus earn more money.

Mr. W. C. Robinson, the buyer, approached Mr. Pettigrew one day to enquire what was happening to some of the berries. Some of the berries had lost their "blueberry bloom" and their appearance wasn't as good. One day he caught a group of pickers using the homemade rakes. Even though he realized the berries weren't as good market-wise, being raked, he kept on accepting the berries. Mr. Pettigrew can remember an Indian man and his wife, using the rake, making $5.00 per day, excellent money for those days.[15]

The method of picking used was largely by hand. Blueberry rakes were not used extensively as they tended to pick up leaves and twigs as well as berries and did considerable damage to the softer berries. As most of the berries at this time were sold fresh it was considered important that hand picking be used as the berries fared better by this method. Indeed it was considered so important that the following clause was added to the Agriculture and Marketing Act in May of 1917:[16]

An Act for the Protection of the Growth of Blueberries

Be it enacted by the Governor, Council and Assembly as follows:-

1. No person shall take, pick or rake from bushes any blueberries by means of any scoop or other mechanical device or otherwise than by hand.

2. No person shall, knowingly, have in his possession or sell or offer for sale any blueberries taken, picked or raked by any such scoop or other mechanical means.

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15. Hedley Smith, West Brook.
16. Nova Scotia Revised Statutes, 1917.

3. No person shall sell, or offer for sale, or barter or furnish to any person, any scoop or other mechanical device to be used for the purpose of taking, picking or raking blueberries contrary to the provisions of this Act.

4. Any person violating any of the provisions of this Act shall be liable to a penalty not exceeding $20, and any scoop or other mechanical device used by any person contrary to the provisions of this Act shall be subject to confiscation.

5. One-half the amount of any penalty collected under the provisions of the Act shall be paid to the informant and the balance shall be paid to the treasurer of the municipality in which the offence was committed.

With minor changes this clause was to remain law until 1950.

The quality of the Nova Scotia berries, due to their being picked by hand, was higher than that of the Maine berries which were usually gathered with rakes. The Nova Scotia berries earned higher prices on the United States markets than those from Maine. The higher price was considered ample reason for the prohibition of a device which would allow greater efficiency to the picker.

By 1922 the price being paid to a picker had not risen a great deal. It was reported in that year that Mr. George Christie of River Hebert in Cumberland County paid only 6 cents per quart.[17] In contrast to this, a report only five years later from the Truro Daily News states that the pickers were receiving 17 to 19 cents per quart.[18]

In the late 1920's the Department of Crown Lands received complaints from rural pickers that their blueberry grounds were being invaded by hired pickers from the towns, who worked mostly for American buyers. These pickers generally started picking too early, picking the berries when they were green in order to get onto the barrens before the local people. This was understandably considered detrimental to the crop.[19] The passing of the Blueberry Associations Act in 1928 helped with the situation as it provided for the organization of pickers and put the regulation of the picking in the hands of the Association.[20]

In 1929 the Blueberry Associations Act was taking effect. The Amherst News and Sentinel reported that the owners and lessees of blueberry barrens had commenced taking action against trespassers. Since the beginning of the blueberry season that year, parties from Amherst and other centres had been visiting the barrens which were under lease for commercial purposes, and had been removing hundreds of boxes of berries each day. As these lands were owned or leased by private individuals for the berry rights, it was decided that action would be taken.

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17. Amherst News and Sentinel, September 8, 1922.
18. Truro Daily News, August 29, 1927.
19. Department of Crown Lands Annual Reports, 1927.
20. Blueberry Associations Act reproduced in Chapter 2.

On August 25 a charge was proffered against Winifred Edgett who, with others, was accused of picking blueberries upon barrens owned by Harvey Brownell and under lease to William Wells, one of the leasing berry dealers in the county. Each of the defendants was charged with trespassing and fined $1.00 a piece. According to A. C. Milner who represented the plaintiff in the case, land holders would take further action against berry pickers if necessary. The blueberry crops were regarded as financially important and men owning barrens were determined to protect their investments.[21]

By the early Thirties the price paid to the picker was again low. The Yarmouth Herald reported it to be only 4 cents per quart in 1932. However, the lack of cash flow throughout the province during the Depression made berry picking, even at this low price, an attractive temporary occupation for the many unemployed in the region.

Despite the efforts of the barren owners, blueberry picking was not restricted to hired help. In spite of laws which protected the berry grounds, the Amherst News and Sentinel reported in 1943 that scores of people were driving to likely spots in the rural districts and returning with kettles filled to the brim with blueberries, a luscious addition to the wartime diet.[22]

By the middle of the 20th century, an increasingly large portion of harvested berries was no longer being shipped fresh, but were being canned and frozen to be sent to both the United States and central Canada. As the berries were cleaned and sorted before processing, the pickers and buyers became more aware of the fact that the prohibition of the use of rakes and scoops was becoming more of a hinderance than a help, as hand picking was a slow process. In 1950 the Nova Scotia government revised the Agriculture and Marketing Act which provided for the appointment of municipal berry committees who were to decide whether or not rakes and scoops could be used in their districts:[23]

Be it enacted by the Governor and Assembly as follows:

1 Section 116 of Chapter 4 of the Acts of 1939, the Agriculture and Marketing Act is repealed and the following substituted:

(a) There shall be in every municipality a Berry Committee consisting of the Warden, the Clerk, the District Forester and the Agricultural Representative of the municipality or for the county of which the municipality is a part.

(b) Every Berry Committee may from time to time by order fix a time or times during which it shall not be lawful to take, pick or rake cranberries, foxberries or blueberries in the municipality.

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21. Amherst News and Sentinel, August 26, 1929.
22. Amherst News and Sentinel, August 24, 1943.
23. Nova Scotia Revised Statutes, 1950.

(c) A Berry Committee may apply any such order to all or any of the berries mentioned herein to a polling district or districts defined and described in the order.

(d) No such order shall be of any effect until it has been approved by the Minister and published in the Royal Gazette, and every order shall, as soon as practicable, be published in a newspaper having a general circulation in the municipality concerned.

(e) No person shall take, pick or rake cranberries, foxberries or blueberries in any municipality or part thereof during such times as the Berry Committee of the municipality from time to time fixes by order with respect to any such berries and to the municipality or part thereof.

(f) Until a Berry Committee otherwise orders, no person shall take, pick or rake any cranberries, foxberries or blueberries between the first day of August and the fifteenth day of September, both dates inclusive, in any year.

(g) A municipal council may by by-law prohibit use of a scoop, rake or other mechanical device for the taking, picking or raking of blueberries in the municipality.

This section applies only to the counties of Antigonish, Cumberland, Guysborough, Halifax, Richmond and Yarmouth.

With the introduction of scoops and rakes the blueberry picking industry of Nova Scotia was organized more efficiently, thus cutting back on the amount of labour needed to pick one field. This organization was indicative of the progress that the entire blueberry industry was taking at this time.

Packaging

The Packages - Prior to 1910, fresh blueberries were hand picked into round boxes. When the box was filled, a lid was placed on top. The top and bottom were made of soft wood while the side was hardwood veneer. The round boxes were 6½ inches in diameter and 2 3/4 inches high. In turn these boxes were put into crates which measured 27¼ inches long, 14 3/4 inches wide and 12¼ inches high. The sides were slotted, the bottom was solid wood, and the top was hinged on one side and held by a metal hasp on the other side. Each crate held 24 quarts and weighed 13¼ pounds when empty.

As far as can be determined, these round boxes were made in Virginia and were made only for blueberries. They were bought by the fruit and vegetable commission houses in Boston who would send them to their buyers in Yarmouth to be distributed to the pickers. As early as 1884, towns such as Eel Brook would pile these boxes up in front of the stores where the pickers could collect them.[24] Commission houses charged their buyers 50 cents for

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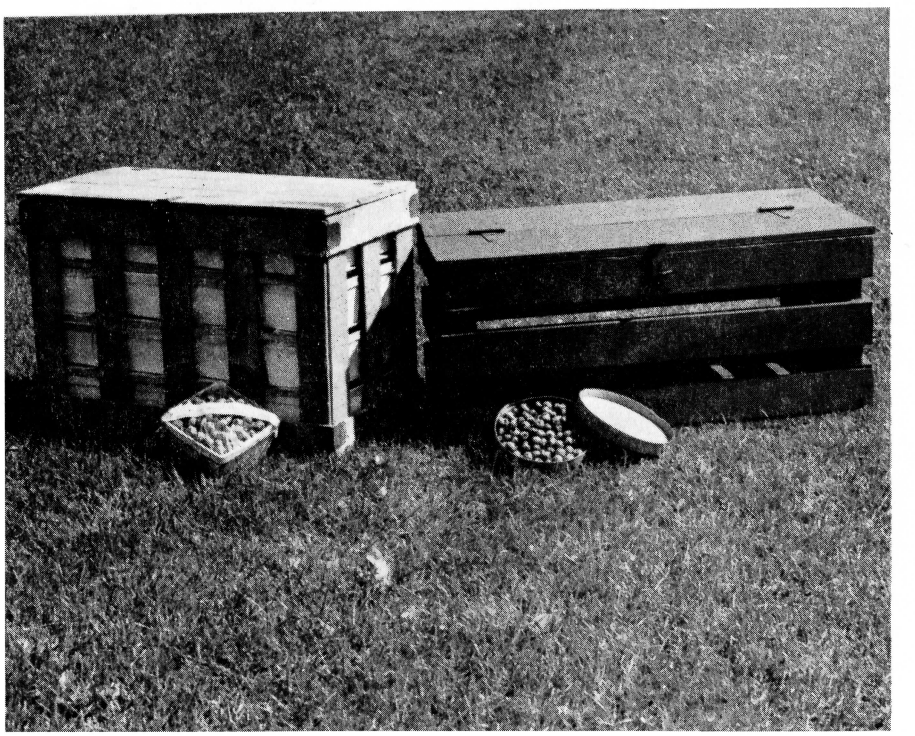
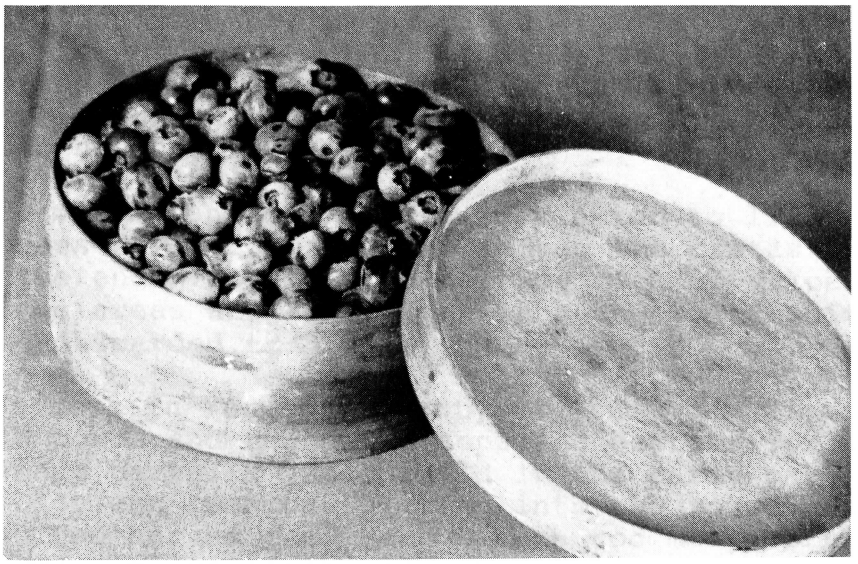
24. Yarmouth Herald, August 6, 1884.

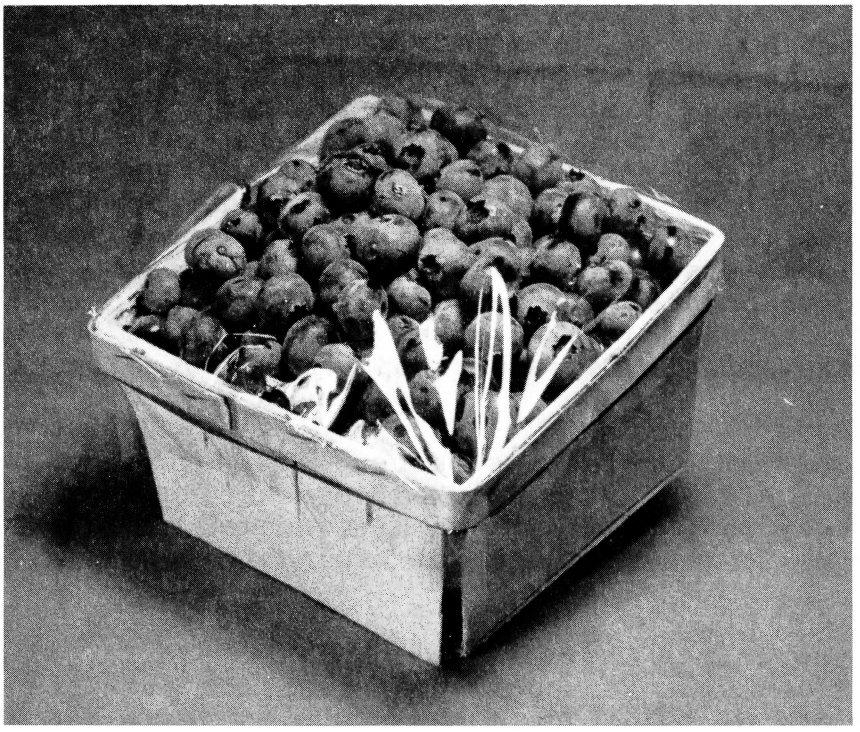
A six-quart picking basket.



The crate on the left held 32 square top quarts.
The crate on the right held 24 round quart boxes.



Round boxes were mainly used until WWI.



The square box came into widespread use during WWI. Cellophane overwrap was first used in 1925.

the crates and boxes and refunded the money when the boxes were returned. Thousands of these crates and boxes were used. At this time there was no Canadian source for the containers. The quality of the boxes used was controlled by the commission houses in New England as the Canadian government did nothing to regulate the packaging in this period. Indeed, in 1901, the Fruit Marks Act passed by the federal Parliament specifically stated that the regulations controlling fruit marks and packaging did not include wild fruits and berries.

The round boxes went out of use just prior to 1910. The Boston commission houses disliked having to redeem the crates which accumulated at the end of the season as they took up valuable space in their storage areas and were often in such poor condition that they had to be discarded.[25]

Many oldtimers in Yarmouth County can remember discarding the sides of these boxes and using the tops and bottoms for wheels on their homemade carts.[26] As a child in the early part of this century, one lady can remember picking into the round quart boxes. These boxes suited her as they didn't take too many berries to handle as the pickers couldn't pile the berries high in them due to the fact that a lid had to be placed on when the box was full.[27]

The wooden square-top quart box, as used today, came into use between 1907 and 1910 while the round boxes were being phased out. Some round boxes continued to be used up until 1916.[28] The square quart boxes took more berries, as they could be rounded. Subsequent increases in pickers' pay followed when the square boxes came into use. These boxes were made of veneer wood, usually poplar. They were placed into wooden crates which held four layers of eight boxes a piece, or 32 quarts, an even bushel. When the crate was filled, the top down and hasp closed, small tin pieces were bent over the front edge of the top and then nailed secure to both the top and side. This prevented the crate from coming open during shipment. Filled crates usually weighed 60 pounds; however, some have been known to weigh up to 68 pounds. Many of these 32-quart crates were imported from the United States until local production could be developed.

Many of these crates were reused and shipped back and forth between the producing areas and the markets. In 1916 the Boston and Yarmouth Steamship Company, in an effort to encourage greater freight movement, removed charges for the shipment of empty crates back from Boston.

Around 1920, right-angled white cardboard strips were placed along the top edges of the filled quart boxes, and over this was placed a cardboard sheet to cover the eight boxes in the row. A wood veneer strip was placed over this. These additions helped to reduce movement of both the berries and the boxes in the crate.

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25. George Martin Sr., Boston, Massachusetts.
26. Arthur Crowell and Lloyd Floyd, Yarmouth County.
27. Mrs. Lucy Crowell, Kemptville, Yarmouth County.
28. Benoit d'Entremont, Pubnico, Yarmouth County.

As the volume of blueberries to Boston increased during the period 1910-1920, several box and crate manufacturing plants were opened in Yarmouth County and Hantsport. The Hantsport Fruit and Basket Company Limited was probably the earliest manufacturer of the 32-quart crates and boxes. Prior to this they had been manufacturing boxes for the strawberry growers of Kings County. Later figures from the Hantsport company show a steady increase in production of the berry boxes, indicative of the growing importance of the industry itself.[29]

1928	500,000 berry boxes
1929	500,000 berry boxes
1930	500,000 berry boxes
1931	600,000 berry boxes
1932	700,000 berry boxes
1934	800,000 berry boxes

In 1927 blueberries were sold in Cumberland County in wooden 20 pound tubs supplied by Western Canners, St. John, New Brunswick.[30]

Dickinsons turned to the 32 quart wooden crate and wooden veneer boxes made by the Hantsport Fruit and Basket Company, Hantsport, Nova Scotia. The crates contained 32 quarts, 4 tiers of eight boxes, with a wood separator or tray made from three pieces of wood cut 7/16 inch, with 4 pieces of 1/16 inch wood veneer. The veneer was stitched with wire to the three sticks. The separators were used mainly for ventilation. Between the tiers, a flat sheet of this cardboard was placed on top of each layer of boxes. Even with this, there were a lot of berries lost. In hot weather, the berries would sweat and often arrive in a very wet condition - in some cases spoiled berries.[31]

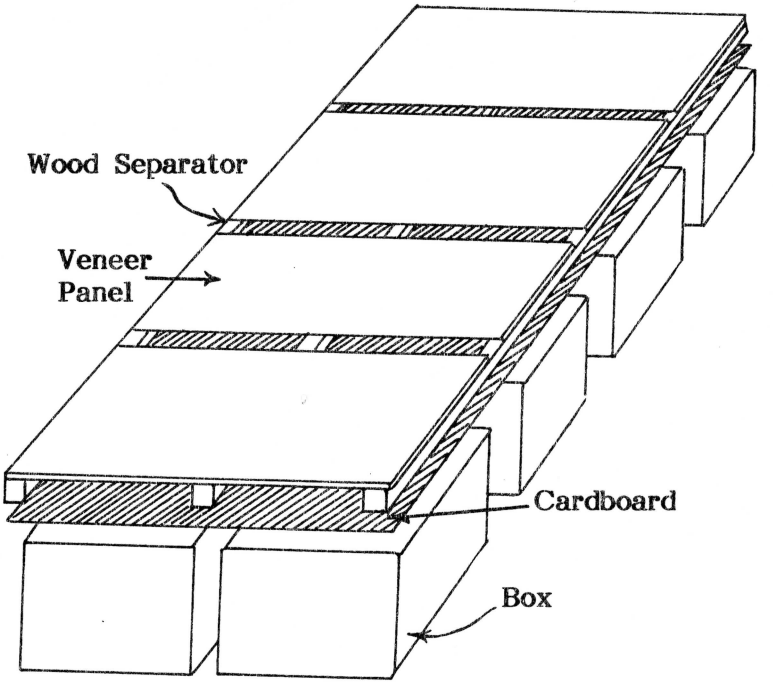

Figure 6 - Wood Separator and Cardboard

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29. Department of Lands and Forests Business Reports, Public Archives of Nova Scotia.
30. Karl Dickinson, West Brook.
31. Seymour Dickinson, West Brook.

Pettigrews used a 32 quart crate but the boxes were made of waxed paper. The boxes were manufactured by Sackville Paper Box Company, Sackville, New Brunswick.[32]

The quart boxes used until approximately 1927 weren't the Imperial quart but were only four-fifths the Imperial size, an American quart.

The Sackville Box Company started to develop a cardboard top to be attached to a wooden veneer box but they weren't successful. They had hoped, by using a top, to reduce the pilferage, aid in better sanitation and prevent loss of berries by spilling.

Before a satisfactory new box and top was invented, thousands of small corners (scored cardboard) were cut to fit into the corners of the veneer boxes to keep the berries from filtering out through the open corners of the veneer boxes.

The Sackville Paper Box Company made a waxed (both sides) cardboard quart box with small side vents to reduce the berries sweating. The first waxed boxes didn't have the two flanges. The side flanges were needed to stiffen the box as the sides of the box would bulge when full of berries. A hinged cellophane window cover was stitched to the box and the new box patented in 1938. The tops were not waxed as most of the tops were printed in the seller's name. Different cellophane designs were used for the cover - some oblong and some square. Some years, production runs ran over 1,000,000 boxes. This box was one of the best ever produced in construction, appearance and rigidity.

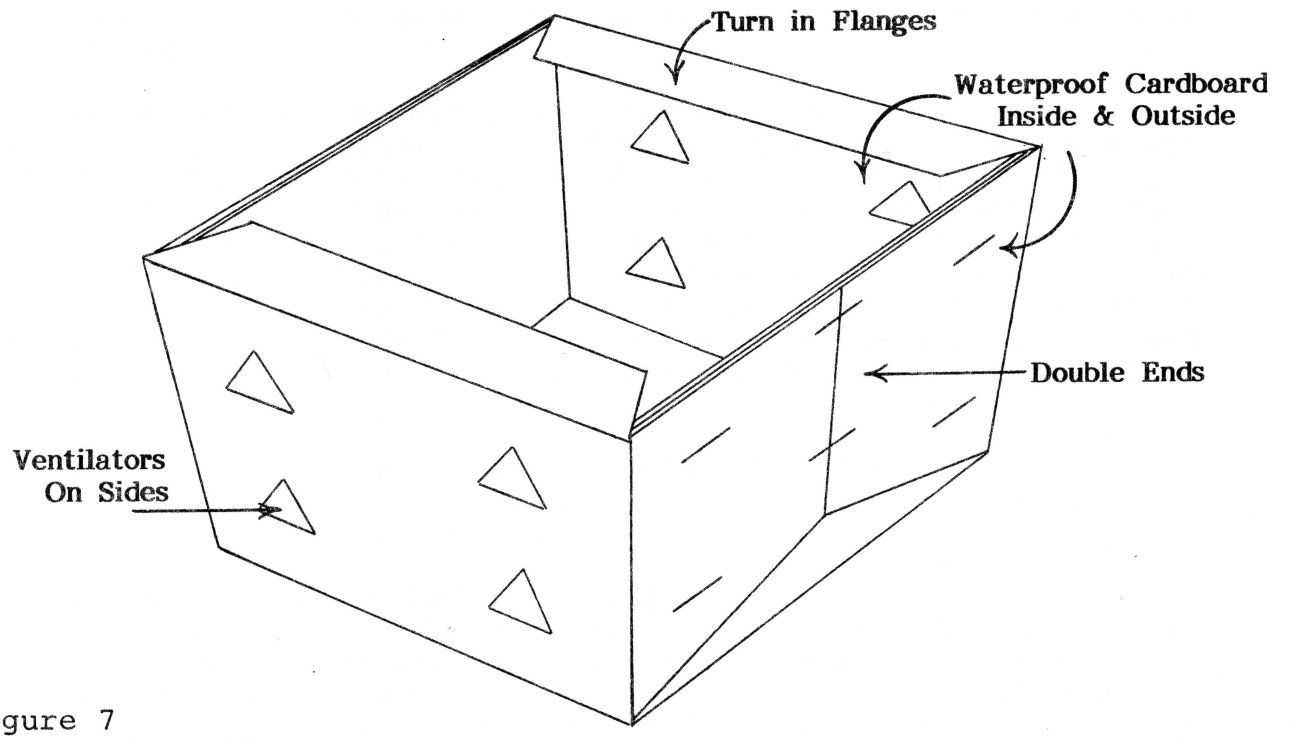

Figure 7

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32. Hedley Pettigrew, Springhill.

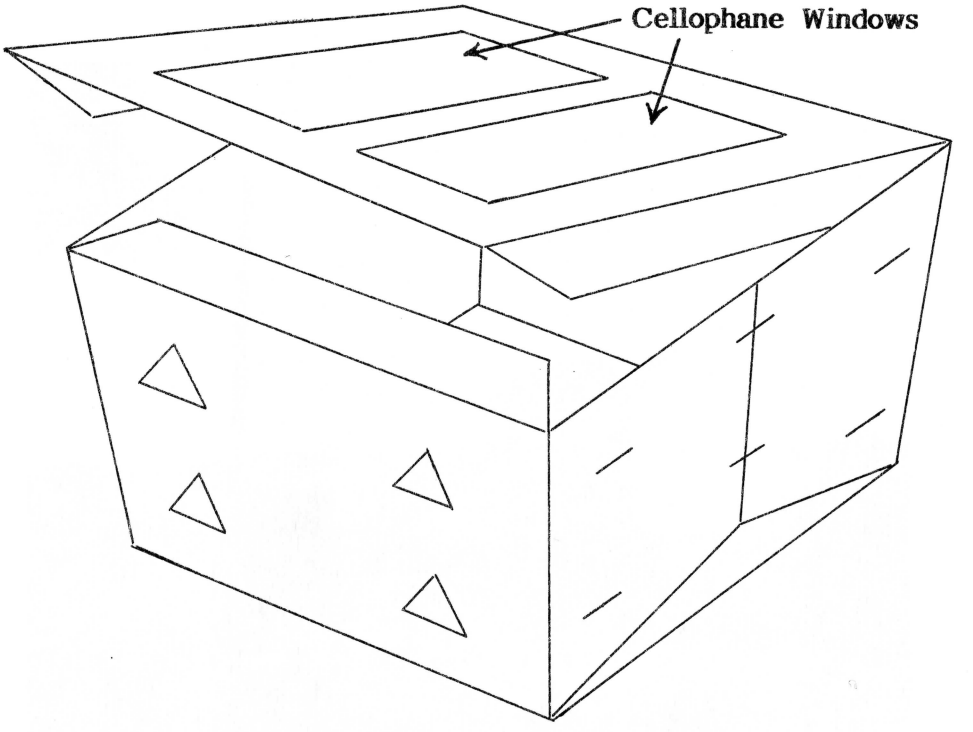

Figure 8

There were many efforts made by competitors to duplicate this box as near to the patent as possible. Thinner stock in the boxes, smaller number of staples used, and non-waxed cardboard were some of the attempts made.[33]

Millard Box Company, Yarmouth, made a limited quantity of the boxes and crates. Several sawmills operated in Yarmouth to build these boxes.

The Miller and Gordon Box Manufacturing Company Limited of Carleton, Yarmouth County, was the most modern and efficient box and crate manufacturer. The company was founded by William E. Miller. Mr. Miller had previously been in business with Clarke Brothers at Lake Joli, about nine miles from Bear River in Digby County.[34] He sold his shares to Clarke Bros. and moved to Carleton, a move prompted by his discovery of a large tract of hardwood on the Carleton River. He bought up a considerable acreage of hardwood land as well as a mill site on which he built a mill and plant in 1921.

Miller's son, Roy D., and a cousin, Winfred Gordon from Worcester, Massachusetts, joined him in the business, hence the name Miller and Gordon.

The Miller-Gordon Manufacturing Company started operations making clothespins, hardwood dowels, washboards and house building materials (lumber and lathes), and their products were sold all over the world. They brought several families from Bear River - Wright, McSwaine, McLean and Frizzell - as well as several other families from Kemptville, Forest Glen and Richfield. The mill employed approximately 60 people.

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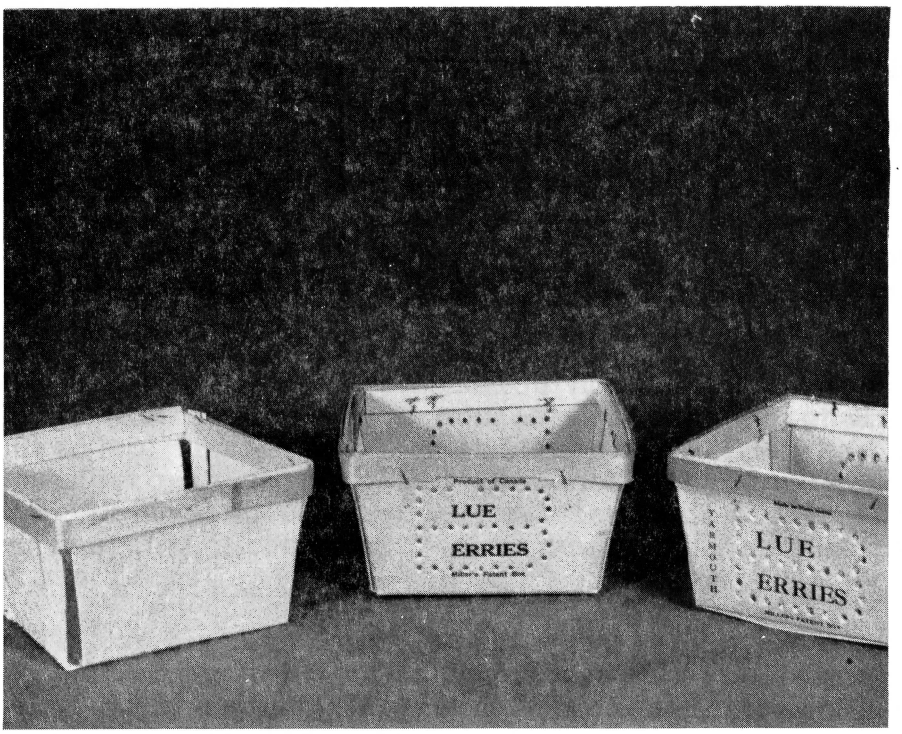
33. Emmerson Davis, Sackville, N.B.
34. Lovitt Frizzell, Yarmouth.

Miller-Gordon Manufacturing Company
Carleton, Yarmouth County



Quart box on left is a regular quart box with open corners. Miller-Gordon Box Co. made boxes with two sides veneer and two sides of a heavy waxed paper, with no open corners.

William Miller died in 1929 and the business was carried on by his son and cousin. It was that same year that the plant began to manufacture blueberry boxes and became an important part of the Yarmouth berry industry. The first boxes were made of veneer, similar to their competitors. It was hard to make the corners tight, so a new design was made.[35] Two sides of the new box were made of veneer. The outer band was made of birch, while the inner band was made from poplar. The other two sides were made of heavy waxed paper which was bought, already cut to shape, from the Brown Box Company of Coldbrook, New Brunswick.

In the plant were five box machines, plus one machine that stamped out the letter 'B' on the side of the box, as well as printing the paper. The men operating the machines became very proficient at making boxes. One man could make seven finished boxes per minute. The boxes were made year-round by the hundreds of thousands and were shipped throughout Nova Scotia, to other Canadian provinces, and it is believed to the United States as well.

The Miller-Gordon Manufacturing Company Limited was destroyed by fire on November 10, 1953, being valued at $100,000.[36]

Packing

As time passed, the pickers and buyers alike became increasingly aware of the importance of careful packing. A well packed box gained a higher price on the American markets. The buyers were very quality-conscious and took great pains to see that no leaves, sticks or green berries went into the quart boxes.

The packers would take the berries and check each quart for quality before the boxes were put in the crates. Fresh berries sell on the appearance of the top layer of the crate. Quite often each box was 'topped off' by picking larger berries, or 'toppers', especially for this purpose. One commission agent said that it was the last handful of blueberries which was placed on each quart that sold the package. Additionally, many commission houses began to discourage the use of secondhand crates as they detracted from the appearance of the package.

Stress was made by the commission houses that tacks should not be used in making the quart boxes. Bakers and chain lunchroom buyers refused to purchase fruit in containers fastened together by tacks, owing to these becoming loosened and the danger of them getting into the finished products and law suits resulting. Wire staples for fastening the quart boxes were more satisfactory to the trade than tacks.

In 1925 some pickers began to place cellophane over the top of the filled quart boxes. This improved the appearance of the blueberries as well as helping to hold the berries in place. The cellophane was held in place by a rubber band. In order to speed up the operation of placing the cellophane and rubber band over the box, a special wooden frame with copper flanges was developed.

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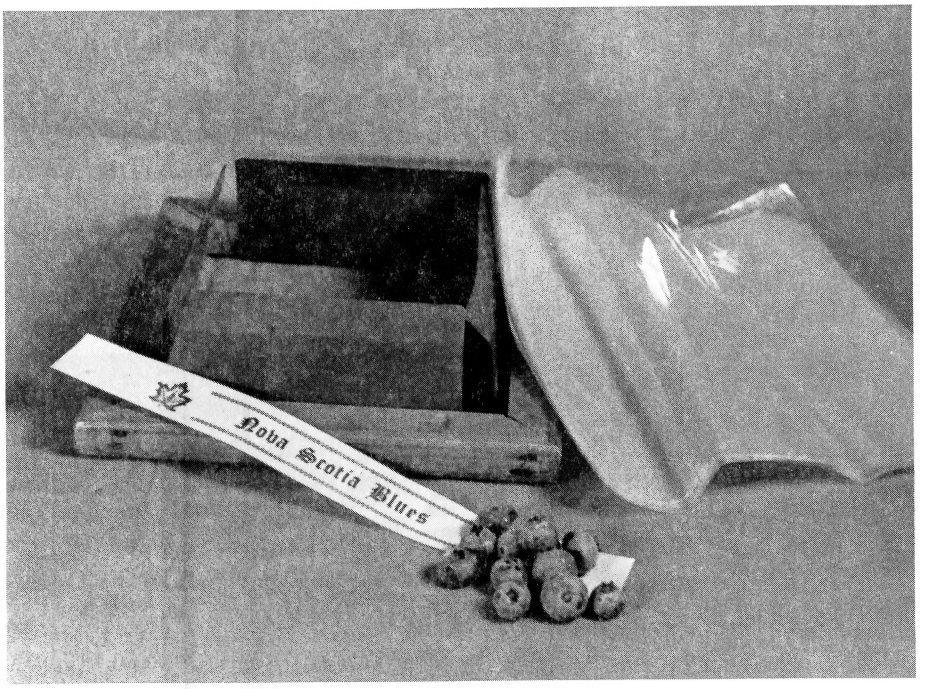
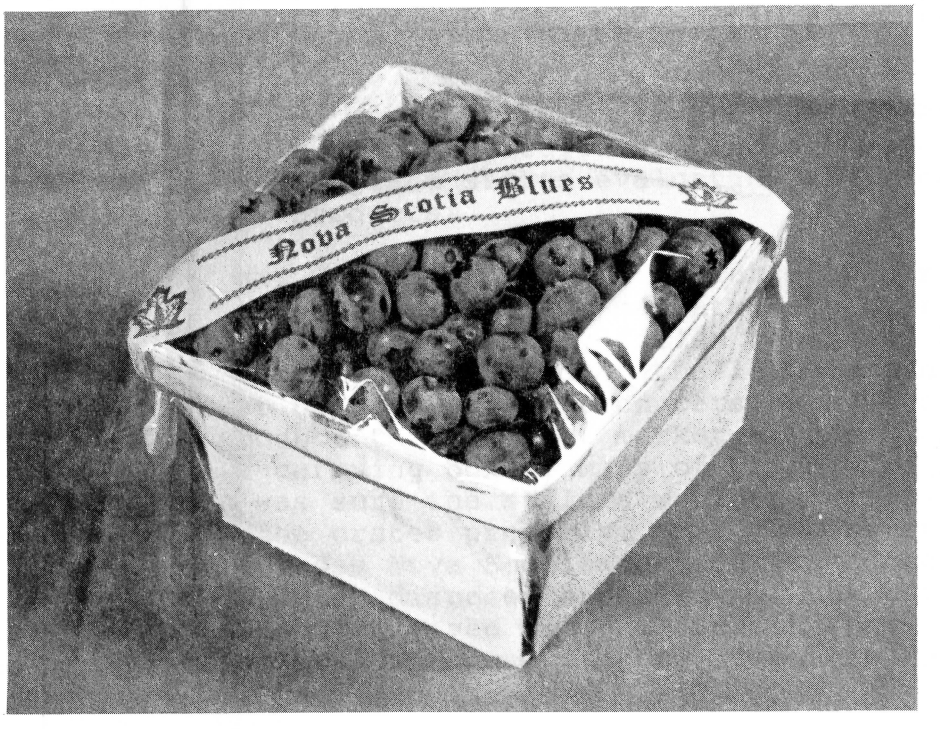
35. James Nickerson, Carleton, Yarmouth County, N.S.
36. Mrs. Alice Richardson, Carleton, Yarmouth County, N.S.



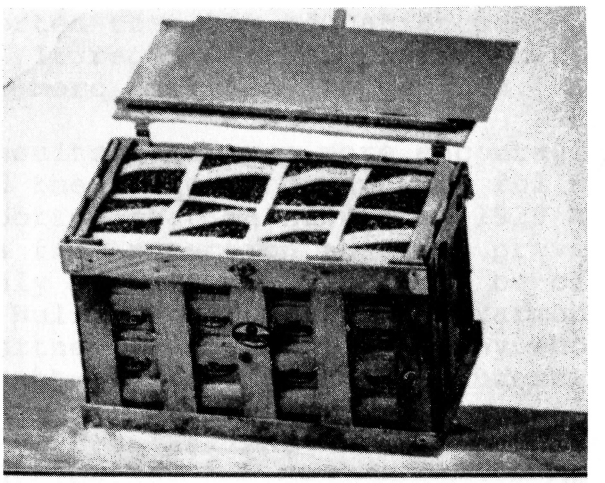
Showing cellophane film to be placed over the quart boxes, a frame to hold the film in place while the elastic band is being added. The "Nova Scotia Blues" paper strip is placed on top of the box.



A well-packed box ready for shipment.

It is reported that Mr. Henry Babine of Belleville invented the first frame.[37] The cellophane was obtained from R. H. Davis & Company, Yarmouth.[38]

Shortly afterwards, white or blue paper strips were placed diagonally over the berries before the cellophane was added. The paper strips often had various shipper's messages printed on them such as 'Nova Scotia Blues', etc. (See figure 9.)



Crate of Blueberries From Yarmouth Ready for the American Market

In 1926 the Canadian Horticultural Society filed their annual report in which they stated that they would be investigating blueberry packages. The report, however, has managed to disappear sometime in the last 50 years.[39]

In 1927 Mr. Mel Cumming was appointed Director of Marketing for the Nova Scotia Department of Agriculture. In that same year, Mr. Cumming toured the New England states evaluating their market potential for Nova Scotia products.

While on his tour Mr. Cumming noted that a large number of Nova Scotia blueberry crates he saw on the markets were of top quality. However, he also saw some poorly filled boxes and badly packed crates. He was greatly distressed by the large amount of money which had been lost by Nova Scotia producers because of their failure to put up the product to best meet market demands. He noted the Boston steamers were carrying boxes, many of which were poorly packed, and on which he was sure the sellers would net considerably more if they had put up the crates properly. Mr. Cumming stated that he was sure that if these Nova Scotian buyers had a chance to see their blueberries being disposed of at any of the United States markets they would quickly see the gains which they could make on their returns and would proceed at once to put up their packages just as well as the best.[40]

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37. Philomon Pottier, Belleville, Yarmouth County, N.S.
38. Arthur Crowell, Kemptville, Yarmouth County, N.S.
39. Nova Scotia Fruit Growers Association, Annual Report, 1926.
40. Truro Daily News, August 27, 1927.

With this in mind, Mr. Cumming advised Mr. Earle Spicer, the Agricultural Representative for Yarmouth, to secure the services of one of the best packers in the county. Together with the packer, Mr. Spicer visited as many blueberry sections in the South Shore as possible and demonstrated the proper way of filling boxes and packing crates. Mr. Spicer's services were also made available by phone. The results of this procedure were at once manifested in the higher prices received at the market. Boston dealers soon began to comment on the improved quality of the Nova Scotian pack.

In 1928 the Markets Division of the Nova Scotia Department of Agriculture reported that the education campaign had proved highly successful. It reported that there had been an immediate increase of four or more cents earned per box.

By 1929 the results were even more encouraging as the price of berries rose and the scale of production followed suit. The Yarmouth Herald reported that in August of 1929 a shipment of several hundred crates from a section that had previously sent poorly packed boxes had only 13 crates which could be classed as poorly packed. Mr. W. H. Hull, representative at Yarmouth for the Boston firm of York and Whitney, was one of the many who encouraged pack improvement. To further encourage the producers in taking greater care of their shipments, he offered a prize of $10 to the station along the line of the C.N. Railway which would send in the best looking crate of berries.[41]

That same year the annual picnic of the Yarmouth County Farmers Association at Lakeside Park in Yarmouth featured a display of freshly packed blueberries. Three prizes - $15, $10 and $5 - were offered for the best crates of berries and there were seven entries. The fruit was of exceptionally high quality. The judges in the contest were Mr. Mel Cumming, C. W. Cook from Central Chebogue and Alfred Hamilton of Tuskey Lakes. The prize winners were (1) Phillip Potter of Belleville, (2) H. B. McLeod of Raynardton, and (3) Harold Hamilton of Tusket Falls. In addition to the crates exhibited for prizes, there was a slackly packed crate, with berry boxes wrapped in paper, which was brought in order that any interested person might see the contrast and realize just why the berries neatly packed in clean crates with proper linings were sure to return a bigger price than the newspaper wrapped boxes. Mr. Cumming also gave the berry producers a very straight forward and practical talk on the care they should take in preparing their shipments. He explained just how and why the buyers in the United States would pay the higher price.[42]

As if to illustrate Mr. Cumming's point, the winning crate was shipped to Boston the evening of the picnic and the next day was sold by the Boston firm of Dave Winkeller and John B. Adams to Avery and Clerkard of Fanueil Hall Market for 75¢ per quart. It was the highest price that this firm had ever paid for any blueberries.[43]

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41. Yarmouth Herald, August 20, 1929.
42. Yarmouth Telegram, August 23, 1929.
43. Yarmouth Herald, August 27, 1929.

In 1931 the Nova Scotia Department of Agriculture conducted experiments with the use of cellophane on the boxes and discovered that it was indeed an improvement as the berries packed with cellophane sold for four cents more per box than without. After experimenting with various sorts of packs the Department came up with the following recommendations:

1) Have the pickers pick directly into the boxes.

2) The boxes must be well rounded so that a crate will weigh 72 pounds.

3) Good berries well packed with cellophane covering each box will be a considerable extra profit above the extra cost of material and labour.

4) The natural bloom of the berries must be retained by handling as little as possible. This is best obtained by an extra full box using cellophane.

5) See that no leaves or green berries are put in.

In 1932, in an attempt to spur the industry at a time of high unemployment and economic depression, the government sponsored a reduction in the price of berry crates.

Also in 1932 a new regulation was put in effect by the United States customs requiring that all blueberry crates, together with their individual boxes, must be marked 'Product of Canada' and must have their net weight on the outside of the crate. United States customs advised that ordinarily a box held 1½ pounds which would put the net weight of a crate at 48 pounds. Within a short time of receiving the order, American companies refused crates that were improperly marked. Boston firms soon began furnishing their pickers with boxes already bearing the correct notations.[44]

The quality of the pack was most important to the price of the fresh berries, but less important when the berries were to be processed. The berries picked for processing were usually dumped loosely into wooden crates and then taken to the plants where they would be sorted and cleaned.

As the markets in the United States and Central Canada grew through the course of the first part of this century, the quality of the pack gradually improved as competition and consumer demands necessitated the development of more efficient and safer methods of packing the berries.

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44. Yarmouth Telegram, August 5, 1932.

Processing

Canning and Preserving - The canning and large scale preserving of blueberries, a growing industry in Maine in the 1800's, was slower to develop in Nova Scotia and was never as popular. The fine quality of the fresh Nova Scotian berries made canning less attractive for the producers in the province.

The canning industry in Maine had gotten its start during the American Civil War when there had been an emormous demand for preserved foods. Within a short time, canning factories had become an important part of the Maine blueberry industry[45] and many Nova Scotians saw similar potential for their various fruits and vegetables.

In 1880 John E. Ritchey had shipped from Yarmouth to Boston several hundred cases of canned blueberries. A little later, A.C. Robbins shipped to Boston in barrels. Neither attempt was a financial success but it did foretell what was about to happen regarding further shipments.[46]

In 1881 a Mr. Nutt of Bridgetown opened a canning factory in which he planned to can several kinds of fruit and vegetables, including blueberries. Mr. Nutt said the "People from 'out south' will now only need to bring their berries to the door of the factory, deliver them and receive their cash on the spot".[47] The next year Mr. Nutt was reported to have put up 240,000 cans, most of which contained green corn.

In 1883 the Poole Brothers of Arcadia opened a canning factory and expected to be able to can about 50 bushels of blueberries per day.[48] In 1885 Captain Warren Doane Jr. of Barrington put up 2400 quarts of blueberries in earthenware jars, imported for that purpose, each jar holding five quarts. He found the results to be highly satisfactory. That same year several lobster canning factories in both Nova Scotia and New Brunswick took to canning berries at the height of the blueberry season and found it to be quite profitable.[49]

Despite the various experiments tried by Nova Scotian residents it was evident throughout the 19th century and indeed well up into the 20th century that the preferred method of exporting the local blueberries was as fresh produce.

During the first World War, some more attention was paid to methods of preserving and it was even suggested by a Yarmouth resident that drying should be done more extensively. Drying could be done by spreading the berries in the sun for several days on a cheesecloth-covered frame, and packing them away in a cool dry place. When required to use, the berries would be set into water for a few hours to rehydrate them. They could then be used for a number of purposes. This method, although possible in the individual household, was not particularly viable as a large scale enterprise.[50]

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45. Yarmouth Telegram, 1885.
46. Edgar A. Hilton, Nova Scotia Agricultural College, Truro,N.S.
47. Yarmouth Tribune, May 11, 1881.
48. Yarmouth Herald, July 19, 1883.

In the 1920's greater attention was paid to processing, a movement which seems to correspond with the growth of the blueberry industry in the northern part of the province. Unlike Yarmouth, Cumberland and Guysborough did not have the availability of a fast direct steamship line to the United States, and much of the transportation of the berries was by rail. Due to the comparative slowness of such movement, berry processing was more attractive to the northern producers. In 1924 an Amherst newspaper suggested that a fruit and vegetable canning factory which could can local products such as blueberries should be built in the town, although the article admitted that perhaps a survey could first be done of the market potential for such goods.[51] That same year the Department of Agriculture reported that the matter of small fruit processing was being studied.

The centre of the blueberry canning industry remained in Maine, despite urgings in 1928 by the Nova Scotia Department of Agriculture that there was a large potential market for the canned berries from Nova Scotia.

In 1931 the Department of Agriculture reported that the canning of fresh fruits and vegetables was becoming one of the most important of the smaller Nova Scotian industries. In 1930, 1,679 cases of blueberries were canned, four times the amount canned in 1929. In the Annapolis Valley area the following companies reported that blueberries were amongst the products canned that year:[52]

- Provincial Canners, Waterville, Kings County;
- Queens Canners, Caledonia, Queens County;
- L. H. Comeau, Meteghan, Digby County;
- United Fruit Company, Kentville, Kings County.

Despite the increased production of canned berries, the bulk of the berry exports were still fresh, so many being shipped southwards that a Massachusetts paper suggested that to deal with the surplus large scale preserving should be undertaken.[53]

In 1933 the Amherst News and Sentinel sheds some light on the comparative lack of enthusiasm for canning when they reported that in the opinion of many, canned berries were very watery and had little flavour. The article goes on to say that blueberry jam was preferable to the canned product.[54]

The price of tinned berries was listed in 1935 as being 10¢ a tin, considerably higher than the price paid for fresh berries.

Much credit for the development of the Tor Bay Cannery at Larry's River is to the excellent work of Father Charles Forest who was parish priest at Larry's River. The cannery was built in

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49. Yarmouth Times, September 10, 1885.
50. Yarmouth Telegram, August 30, 1918.
51. Amherst News and Sentinel, April 6, 1924.
52. Department of Agriculture Annual Reports, 1931.
53. Brockton Enterprise, Massachusetts, August 1931.
54. Amherst News and Sentinel, August 4, 1933.

1933 and on March 29, 1934, the Tor Bay Canning Company Ltd. was incorporated. The cannery began its co-operative business in 1934 when it produced canned blueberries and salt fish. In 1935 the Tor Bay Canning Company produced the following products for market: canned blueberries, foxberries, loganberries, July herring and boneless cod. The main product of the Tor Bay Canning Company soon became canned lobsters.[55]

Year	Sales of Blueberries
1936	---
1937	$ 3,953.75
1938	2,458.61
1939	925.20
1940	1,833.75
1941	3,631.12
1942	8,024.07
1943	18,258.23
1944	10,768.87
1945*	11,240.93
1946	20,514.03
1947	16,617.09
1948	10,143.33
1949	17,956.24
1950	12,729.22

* The 1945 crop was light and quality not up to that earlier anticipated. A frost in June followed by hot dry weather reduced the anticipated crop. (correspondence 4 Aug. 1945, Father C. J. Forest).

In an 18 Sept. 1945 letter from Chas. J. Forest to R. J. McSween, Superintendent of Co-operatives, Antigonish, N.S.:

"The blueberry industry is poor indeed. We have only 1400, about 50% of our 1944 pack. Now there is a terrible scarcity of berries. We are afraid we have to close up every day this week. Charles Cove group quality is 98% this year. We have some blueberries from New Harbor district but not as many as we should have. Most of the pickers at New Harbor are not fishermen and, therefore, not interested in the co-operative movement. At Larry's River and at Lundy we got at least 80% of the blueberries. Here we had terrible competition".[56]

Malagash Canners, Malagash, a family canning plant, started to process blueberries in 1932. Blueberries were canned in water or syrup in tin sizes of 15, 20 and 105 ounces. A blueberry pie fil was also made. The volume canned would vary with the crop. The largest volume canned was 30 tons, although the original contract was for 10 tons. Canned blueberries were mainly sold under the Malagash brand in Sydney and Newfoundland markets. Smaller sales were made in other Maritime markets.[57]

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55. Debra L. Murphy, The Failure of the Antigonish Movement In Larry's River, Nova Scotia, MA Thesis, Dalhousie University, Halifax, N.S., 1975.
56. Tor Bay Canning Company Annual Reports.
57. Herbert H. Large, Wentworth, N.S., interview and correspondence.

Freezing - By the mid 1930's processing of Nova Scotia blueberries was on the rise, but by this time it had taken an important shift, as more and more berry producers, especially in the northern part of the province, were turning to freezing. Many of the fresh berries shipped to the United States were frozen by U.S. manufacturers upon arrival and through the course of the 1930's Nova Scotian producers began to realize that if the berries were frozen in the province they would arrive in the United States in better condition.

In the county of Guysborough, there is some development in connection with frozen berries, and in 1933 three carloads of frozen blueberries were shipped to the United States.[58]

By the late thirties, approximately 65 per cent of the blueberries exported by Canada were frozen, peaking at 70 per cent in 1937. In 1940 Mr. Heaseman, the Canadian Trade Commissioner at Chicago, reported that the production of frozen berries could widen the markets for the Nova Scotian product to include the mid-western regions of the United States, which he claimed were heavy consumers of the frozen product.[59]

Canada Foods of Kentville,established in 1943, was one of the first companies to freeze berries on a large scale.[60] The berries were frozen in large containers, some in barrels and some in 30-50 pound enamel-lined cans. Lined fiberboard cartons were also used. Known as static freezing, the berries were first cleaned, washed and packaged. They were then put into a freezing chamber and held there at a low temperature until the centre temperature of the container was below zero. Berries were frozen both with and without sugar. Most of the berries frozen in this method were shipped to the markets in special climate-controlled rail cars, and were bought mainly by large bakeries.[61]

Individual Quick Freezing, producing a better product for retail, did not come into common use until later on in the century.

In 1941, of 368,000 pounds of blueberries shipped from Cumberland County, 288,000 were frozen (78 per cent).

The large scale production of frozen berries was to prove vitally important to the blueberry industry, helping the northern counties to become the leaders in blueberry exports. Canning and preserving, although established in a small way, were never to become more important then fresh production, whereas the introduction of freezing caused a shift in the industry from the large scale shipment of fresh berries, to the larger scale exportation of the frozen product.

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58. Family Herald and Weekly Star, January 22, 1936.
59. Truro Daily News, August 31, 1940.
60. Atlantic Advocate, 1943.
61. Nova Scotia Fruit Growers Association Annual Report, 1946.

Chapter 5

Shipping and Marketing

Shipping

Movement from fields to transfer points - The transportation of blueberries began at the fields, where the pickers sold their berries directly to the buyers who, in turn, moved them to their shipping points at the pier or railway station.

The first shipments were made in buckets, boxes, half-barrels - anything that would hold them. They were carried to town in springless carts, over rough roads and their condition on arrival can be imagined. Old shippers have told me that you could trace the course of a blueberry cart by the juice which had dripped out along the road, yet they sold at a figure to yield a good profit.[1]

In the early days in Yarmouth the blueberry crates were moved in wagons which were drawn by horse or oxen teams. Care was taken to see that berries were not damaged on the ride from the barrens. The wagon wheels were steel-rimmed and the wagons did not have springs. The trails through the barrens were rough, boulder-strewn and full of potholes; certainly not conducive to ensuring quality berries for the United States markets.

To cushion the trip from the barrens to the main dirt roads and often into Yarmouth, spruce boughs or meadow hay was placed on the floor of the wagon. The crates were placed upside down on this material. This helped to keep the top berries in position so they couldn't move to rub off their waxy-blue bloom. If the berries did move, it would be those on the bottom of the box. When the crates were delivered in Yarmouth they were tipped over to their normal position and the bottom berries, if they had sustained any damage, were not visible to the buyer.

It was a common sight on boat days to see 25 to 40 ox teams on the wharf with canvas-covered wagons loaded with blueberry crates, ca 1900-1913.[2]

Depending on the number of crates harvested, usually one or two trips weekly would be made from the Crown pastures. The packed crates would be assembled at a central location in the Kemptville area. The filled crates would be loaded onto horse-drawn wagons. These teams would travel all night in order to arrive in Yarmouth, approximately 25 miles away, the following morning so the crates could be loaded into the Boston boat. The teams would travel by way of Tusket rather than Carleton, as the road was usually better, and there weren't as many steep grades. A 'rest house' was located at Tusket so the teamsters and their horses could have a short rest.

From the wagons the blueberries were loaded directly onto the ships or trains. Later larger and smoother trucks were used to transport the berries from the fields to the transfer stations or the processing plants.

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1. The Busy East, 1917.
2. Family Herald and Weekly Star, January 22, 1936.

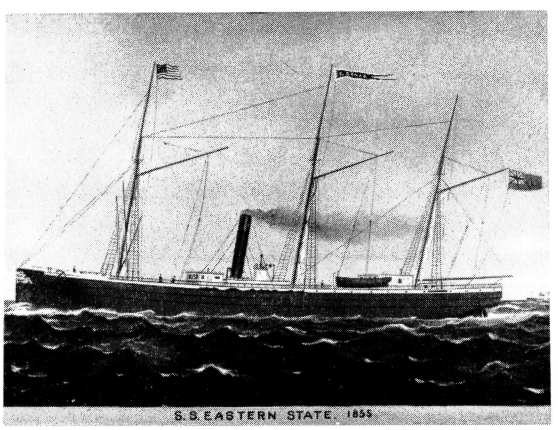
Efficient transportation of blueberries from the centres in Nova Scotia to the markets in the south and west was vital to both the initial and continuing development of the industry in the province.

Movement by sea - In the late 19th century, new and speedy modes of sea transport were instrumental in the first development of the industry in Yarmouth County. The age of the wooden ship was gone, and replacing it was the steamship which could travel faster, further and carry larger cargos.

The first market to open up to the Yarmouth blueberry producers was Boston, made easily accessible by the steamship services which linked the two places. These steamers were based largely in Yarmouth, being owned and piloted by many natives of the area.

The Yarmouth Steamship Company provided almost uninterrupted service for carrying Yarmouth blueberries to the Boston market. Later it also provided a transportation service to New York. E. J. Vickory has compiled a history of the steamship service to which can be added our knowledge of the blueberry shipments to gain a clear picture of the service's vital importance to the industry.

The first steamer to run between Boston and Yarmouth was the EASTERN STATE. She was purchased in Philadelphia in 1851, where she had been built for the Yarmouth Steam Navigation Company owned by well-known residents such as Thomas Killam, Thomas Allen, Stanley Brown, John Lovitt, W. H. Townsend and W. K. Dudman, as well as a number of others. Captain Bowman was her first master, and she made weekly trips beginning in June of 1855. In 1857 the EASTERN STATE was placed on the run from Boston to Halifax, making ten day trips and calling at Yarmouth each way. This lasted until 1861 when she was sold to the United States government. During this period she was skippered by George Killam, Benjamin Killam, Amos Crosby and Theodore Churchill, as well as her original master.

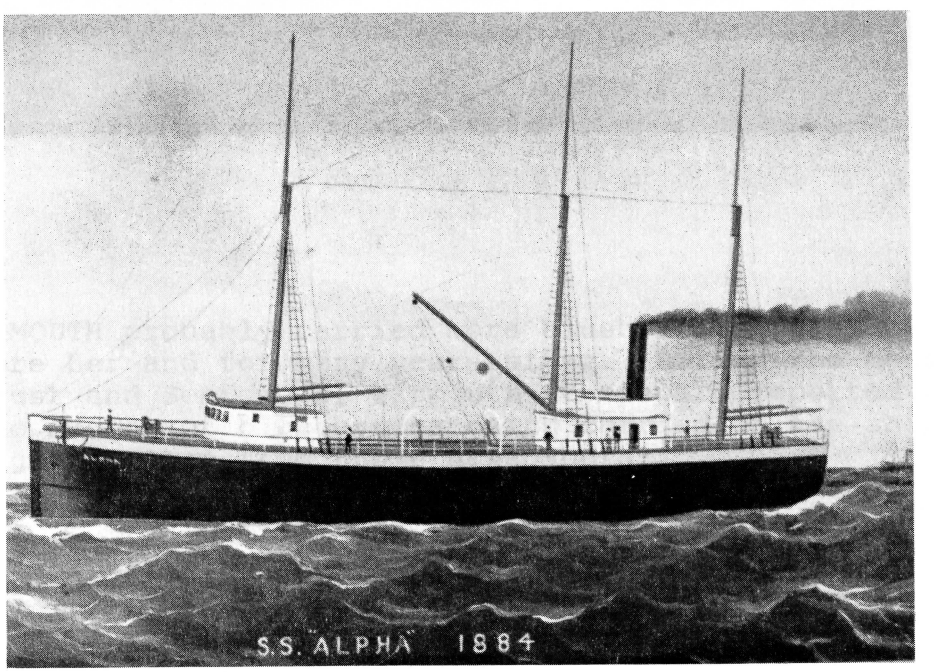


The next steamer to cover the run was the RELIEF, running between Boston, Yarmouth and Halifax beginning on July 31, 1862. How long this ship remained on the run is not recorded but it is known that the steamer SCOTIA sailed between Boston and Yarmouth starting on October 21, 1864, and continuing for the remainder of the season. She was commanded by Captain Theodore Churchill.

The lives of the next two ships on the run were very short. The steamer PALMYRA, under the command of Captain Watson, arrived from Boston on the morning of July 18, 1866 and proceeded on to St. John. On her second trip she struck Brier Island, was damaged, and after managing to reach Boston was not put on the run again. The PROMETHEUS, piloted by Captain Hoyt, resumed the run on Aug. 9, but made only four trips.

The wooden 500 ton steamer LINDA, commanded by Captain Oliver Hale, and owned by the Yarmouth and Boston Steamship Company, was the next one placed on the run to Boston. Beginning the run in August of 1866 the LINDA continued on the route until she ran aground on the High Head in Yarmouth County in 1871. She was floated the next year, brought to Yarmouth and repaired. Her name was changed to DOMINION and she resumed trips to Boston in April of 1873. For many years the DOMINION served as an important shipper of both people and products, including fresh blueberries being shipped to the Boston market. She was probably the first steamer to carry such a shipment. An indication of the importance of the steamships to the industry could be seen in 1885 when the DOMINION was temporarily disabled and the price of blueberries dropped drastically as the Yarmouth markets were flooded with berries intended for the eastern States.[3]

In 1882 the Nova Scotia Steamship Company was formed and the NEW BRUNSWICK was placed on the Boston-Yarmouth run; however, this company soon became disorganized. In 1885 the Hon. L. E. Baker purchased the DOMINION and in 1886 the side-wheeler ALPHA. The latter was a wooden ship built in Prince Edward Island as a freighter, and after only a few trips to Boston became stranded near Cape Island.



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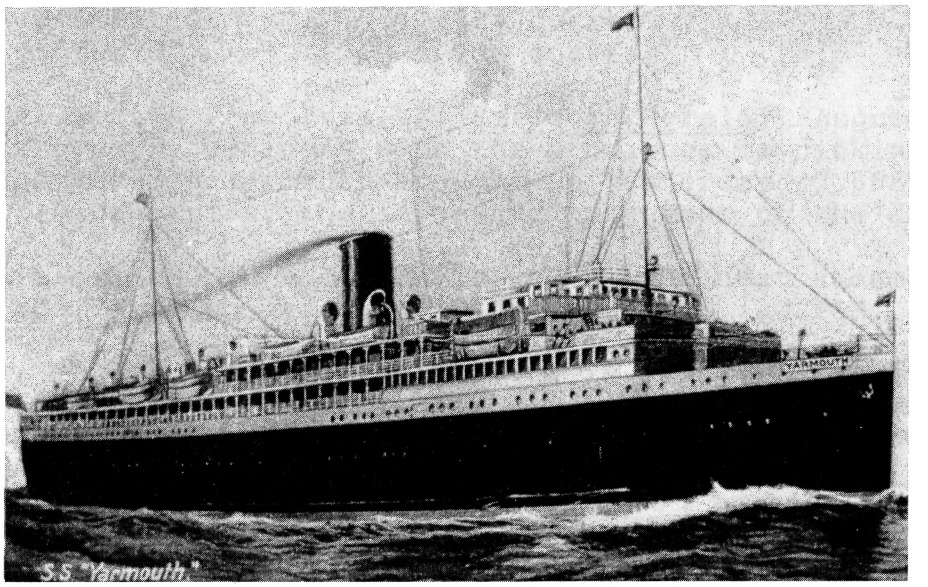
3. Yarmouth Herald, 1885.

Mr. Baker then organized the Yarmouth Steamship Company and arranged to have the steel steamer, the S.S. YARMOUTH, constructed in Glasgow by Messrs. Archibald, MacMillan & Son. She was 220 feet long, and had a gross tonnage of 1451 tons. She was constructed using a system of five water-tight compartments, assuring her safety in case of accidents, and had two bilge keels to obliviate heavy rolling in high seas. She had two steel boilers, used one ton of coal per hour and had an average speed of 14 knots per hour. The YARMOUTH's carrying capacity was 4000 tons and she was specially designed for the carrying of such fresh products as fish and lobsters.[4]

When brought to Nova Scotia in May of 1887 the YARMOUTH was immediately put on the Boston-Yarmouth run under the command of Captain Harvey Doane.



The YARMOUTH probably carried more blueberries than any single steamer before her and for many years after. During the months of July, August and September, Yarmouth newspapers reported twice weekly on the amount of blueberries being carried on the ship. The following are taken from those newspapers:

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4. Annapolis Spectator, May 13, 1887.

1888 Yarmouth Telegram, August 17
"Large quantities of blueberries are being shipped from here to Boston. The S.S. Yarmouth took 32,000 boxes within a week."

1889 Yarmouth Telegram, July 12
"The first blueberries of the season were shipped to Boston by the S.S. Yarmouth on Wednesday. This is the earliest shipment of the article ever made from this port."

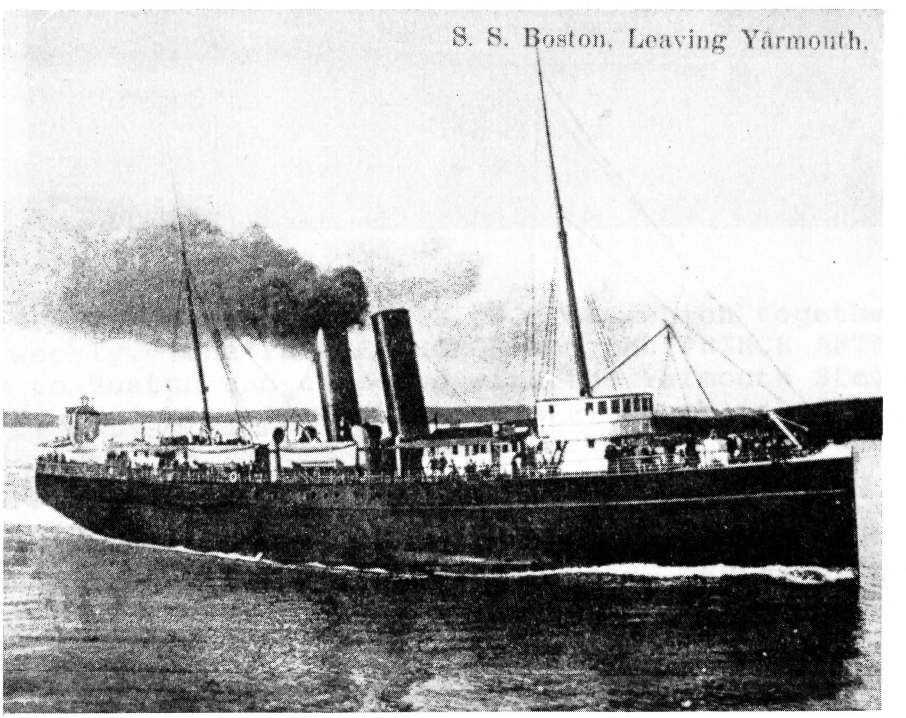
1893 Yarmouth Telegram and Herald
Shipments via the S.S. Yarmouth:

July 28	4000 quarts
August 1	5200 quarts
August 8	16,000 quarts
August 18	13,960 quarts
August 22	22,752 quarts
August 29	25,544 quarts
September 26	4384 quarts
October 3	736 quarts

1900 The Boston Post (via the Yarmouth Herald), August 3
"The berry business with the provinces is picking up. The steamer Yarmouth brought in yesterday 17,568 quarts of blueberries, the largest consignment of the season."

By 1895 the YARMOUTH had been joined by the next steamer to be added to the Yarmouth steamship fleet, the S.S. BOSTON.

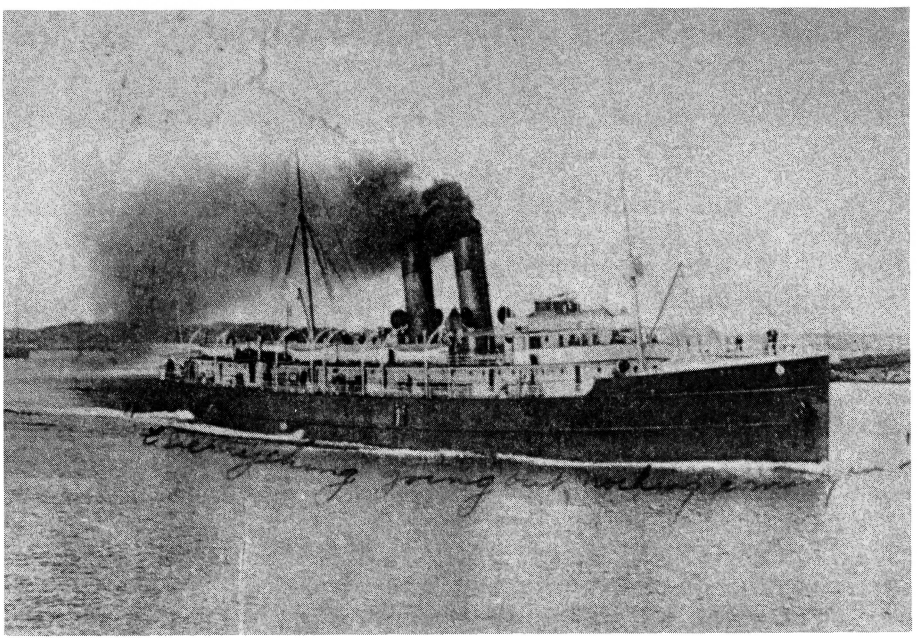
The S.S. BOSTON was built in Glasgow in 1890, with a gross tonnage of 1694 tons. She arrived in Yarmouth in 1890 and was rated as the fastest single-screw steamer of her dimensions in the world. The BOSTON had two masters, Captain Bob Stanwood and Alvin Simms.


S. S. Boston, Leaving Yarmouth.

Like the YARMOUTH the BOSTON carried numerous shipments of blueberries.

In 1897 the Dominion Atlantic Railway (D.A.R.) had the twin-screw the S.S. PRINCE EDWARD built for them in Hull, England. Under Captain Arthur MacGray she ran from Boston to Yarmouth on her first trip on September 8, 1897. She was 268 feet long, had a gross tonnage of 1414 and a speed of 18.25 knots. The first trip was made in 23 hours. She was later sold to Denmark in 1910.[5]

In 1898 the D.A.R. had a new steamer, the S.S. PRINCE GEORGE, built in Hull, England. She arrived in Yarmouth in November and was put on the Boston run. Both Captain Arthur and Adelbert MacKinnon were her masters. Her length was 304 feet and she had a gross tonnage of 2041. In that same year a sister ship, the PRINCE ARTHUR, was built and put into service under the command of J. Ernest Kenney and Alvin Simms. She was 290 feet long. Both of the ships were twin-screw vessels and had speeds of up to 20 knots. They ran daily during the summer months while the S.S. PRINCE EDWARD was laid up for repairs. They ran in competition



with the S.S. YARMOUTH and the S.S. BOSTON, which together made four trips weekly. The PRINCE GEORGE and the PRINCE ARTHUR ran alternately to Boston and competed with the Yarmouth Steamship Company for blueberry freight. In 1900 the D.A.R. established a price of 5 cents per crate for the shipment of berries from Boston to Yarmouth.[6]

The Eastern Steamship Company operated the NORTHLAND under Captain Frank Crosby, and CALVIN AUSTEN under Captain Pike, and each made numerous trips to Yarmouth. The CALVIN was named after

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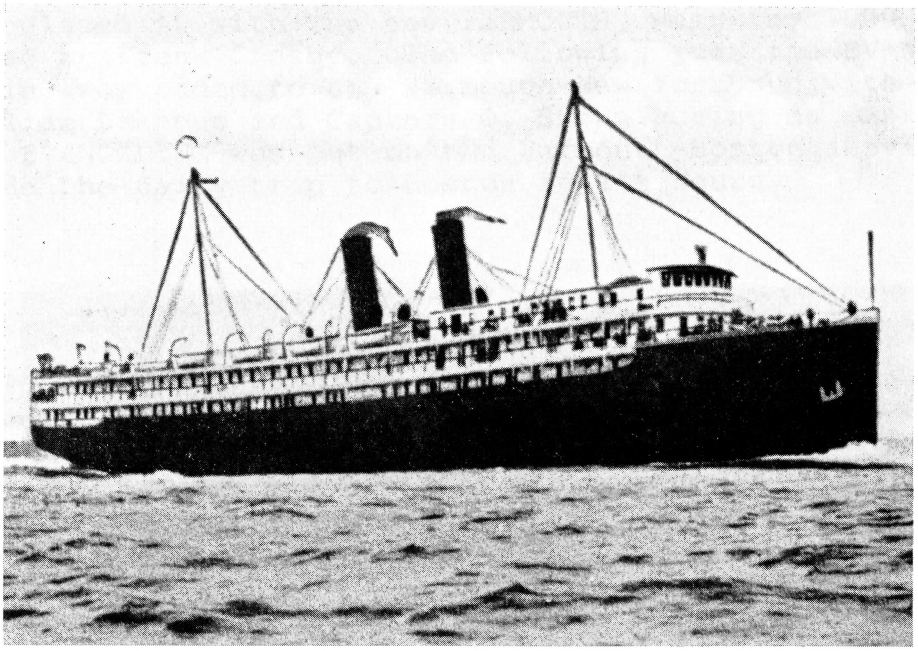
5. History of the Dominion Atlantic Railway, 1937.
6. Yarmouth Times, August 15, 1900.

the President of the company. This was the ship that brought relief from Boston to Halifax immediately following the explosion on December 16, 1917.



The steamship connections between Yarmouth and New York City are less clear. In 1877 the steamer FLAMBOROUGH made a few trips, calling at St. John, and was later succeeded by the S.S. ALHAMBRA. Records show that the steamer the CITY OF COLOMBIA, owned by the New York Steamship Company, also made the trip from New York to Yarmouth in 1891.

In 1901 the D.A.R. bought out the Yarmouth Steamship Company, thus giving it four ships - PRINCE GEORGE, PRINCE ARTHUR, BOSTON and the YARMOUTH - for the Boston run. The company recognized that two steamships could handle the service. In 1904 the PRINCE ARTHUR was put on the Boston-New York-Yarmouth run on a weekly basis. She had another weekly run between Yarmouth-Halifax-New York. It was during this period that the New York markets began to open up to the Yarmouth blueberry producers.

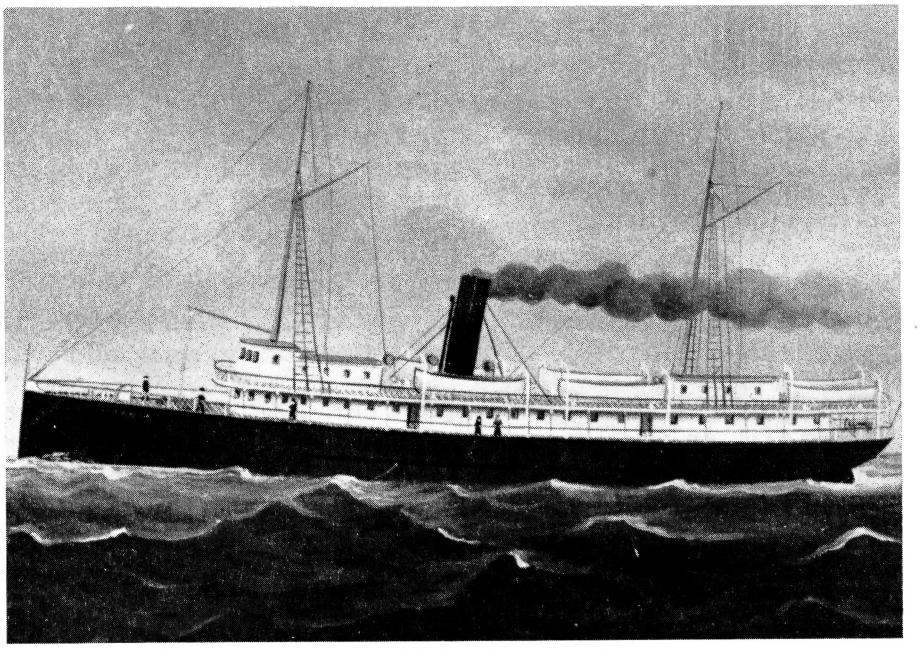
The D.A.R., on November 11, 1911, was leased to the Canadian Pacific Railway effective January 1, 1912. The C.P.R. sold its steamships PRINCE ARTHUR, PRINCE GEORGE and BOSTON to the Eastern Steamship Corporation on August 30, 1912. The ships were operated by its subsidiary, The Boston and Yarmouth Steamship Company.

The Eastern Steamship Corporation placed the NORTHLAND, under Captain Frank Crosby, on the Boston-Yarmouth run in March of 1919, and replaced her with the S.S. NORTHSTAR, under Captain Strout, on April 16 of that year. The NORTHSTAR made two trips per week. In June they added the GOVERNOR COBB to the run and increased the service to four trips a week. The COBB ran ashore on July 18 on Green Island but was pulled off successfully. On August 8 the NORTHSTAR ran ashore on the same island and was a total loss.

On September 24 the COBB was replaced by the NORTHLAND which remained on the run until June of 1920. The PRINCE GEORGE and the PRINCE ARTHUR took over the service in July and made daily trips.

In 1925 it was reported by the Yarmouth Telegram that the Boston and Yarmouth Steamship Company charged 40 cents per crate for the shipment of blueberries.

In 1927 the Eastern Steamship Company withdrew one of the PRINCE ships and replaced it with the new YARMOUTH, weighing 7000 tons and commanded by Frank Crosby. The following year the EVANGELINE, a sister ship, was added to the Yarmouth-New York run with both Captain William Lakeman and Captain O. Brown acting as masters. In 1932 the EVANGELINE was put on the Yarmouth-Boston service. These steamers made the daily trip to Boston in 14½ hours.



In 1929 the Boston and Yarmouth Steamship Company reported that berry shipments had exceeded previous years by mid-season. Their freight department released the following figures:[7]

	berries carried
1924	837,216 pounds
1925	654,624 pounds
1926	768,192 pounds
1927	724,216 pounds
1928	705,456 pounds
1929 - mid season	1,003,872 pounds

It is interesting to note that, in some cases, the company's figures exceed those released by the Nova Scotia government on total production, an indication that the steamship company was carrying virtually all of the berry exports from Yarmouth, as well as berries from other parts of the province, brought to Yarmouth by rail (see Chapter 6 for government figures). By the 1940's, however, much of the blueberry exports were being carried by rail freight.

In 1932 the S.S. ACADIA weighing 10,000 tons was put on the

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7. Amherst News and Sentinel, September 2, 1929.

run to New York and continued until 1940. It travelled twice a week and took 24 hours.

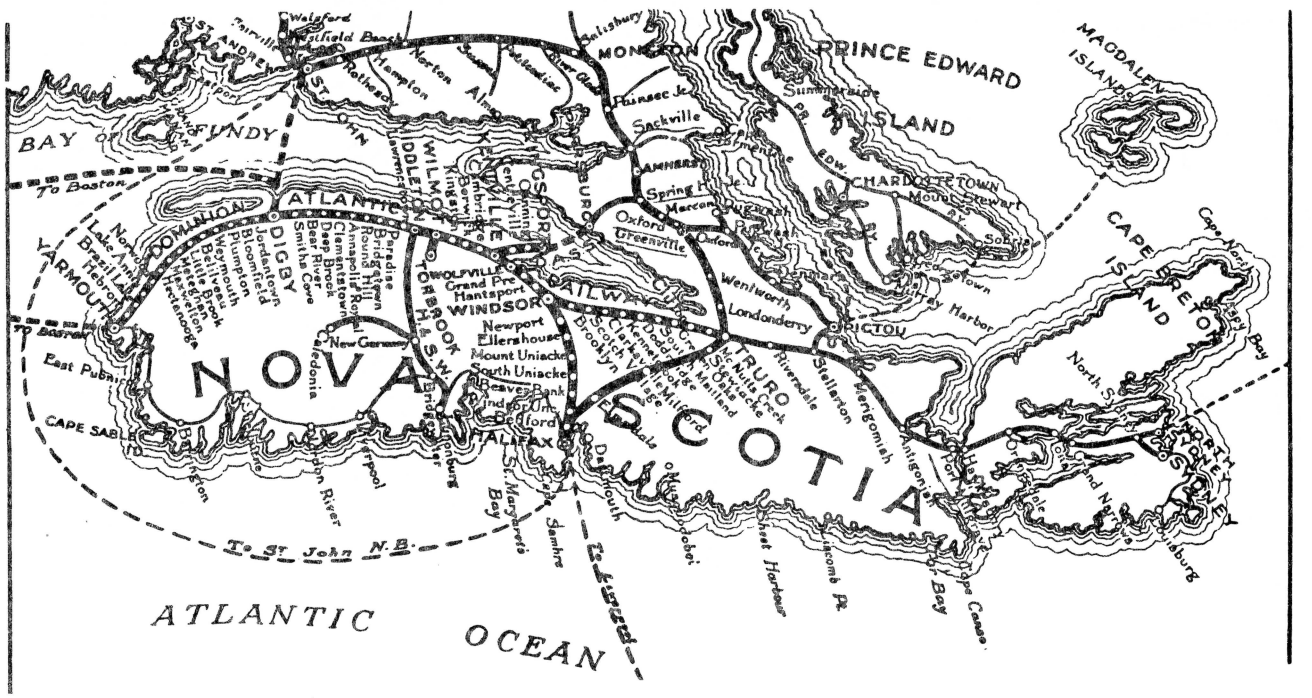
In 1943 the Yarmouth-Boston run was terminated and was not put on again until 1953, a run that lasted only one year. By this period, however, greater sophistication of berry packing and processing, as well as more advanced rail service, made the loss of the steamship line less harmful to the blueberry business than it would have been years earlier. By the time the Yarmouth-Boston line was discontinued, the blueberry industry in Yarmouth had declined significantly to a secondary position to Cumberland County where most of the blueberries were moved by land.

Movement by land - By the 1920's blueberries were moved from the northern counties of Cumberland. These berries were moved largely by land, and, initially, the most popular mode was by rail. Rail service in Nova Scotia had taken awhile to develop to a point where it was efficient but by the Twenties much of the province was serviced by the railroad.

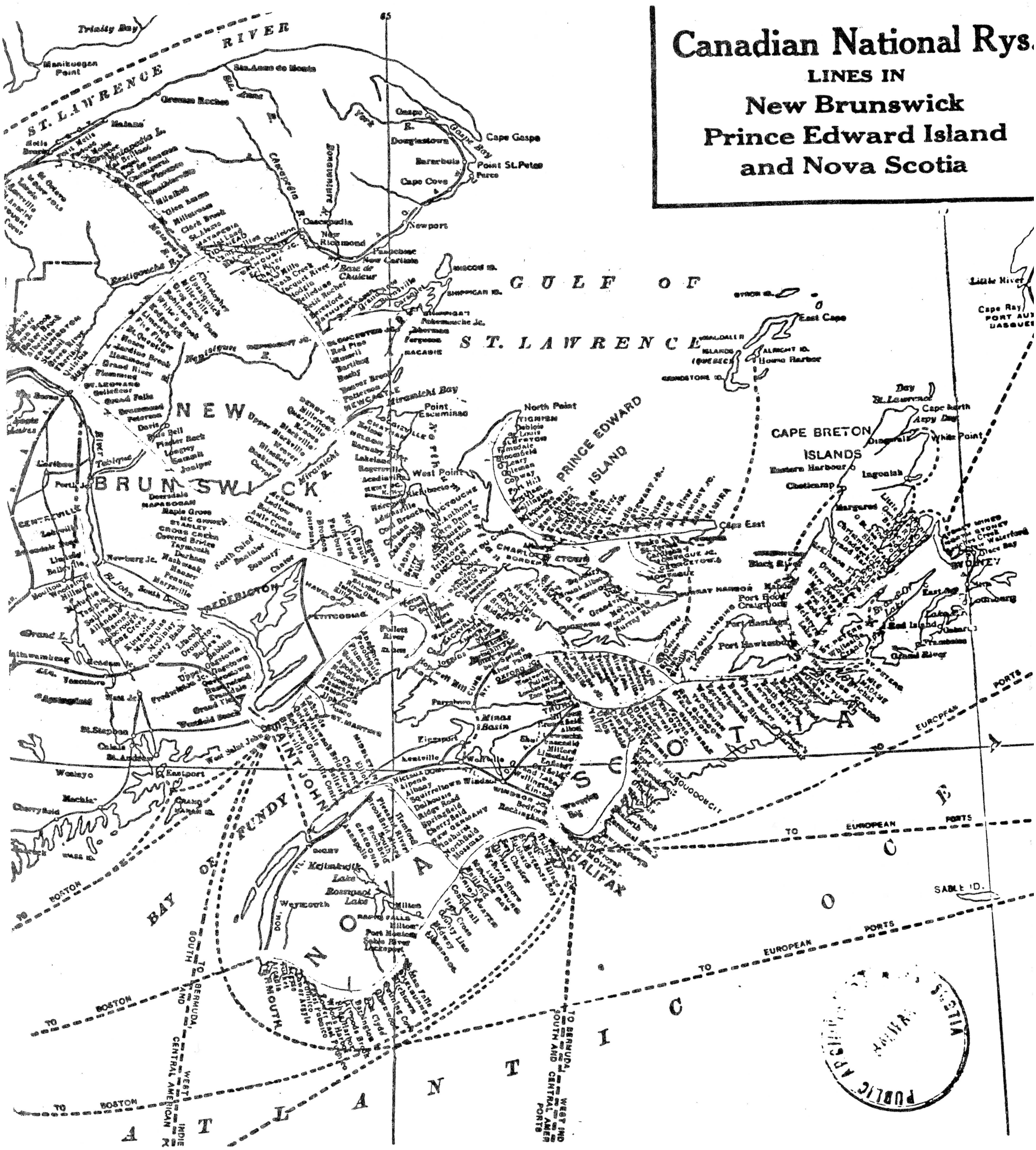
Before the completion of the Intercolonial Railway in the 1870's, the only route available between the Atlantic provinces and the west was by sea to Portland, Maine, and then rail inland. The Dominion Atlantic Railway connected the Annapolis Valley area to Halifax but was not completed to Yarmouth until 1894. In 1910 the D.A.R. was leased to the Canadian Pacific Corporation.

The more central provincial areas of Cumberland and Pictou were reliant upon the efficiency of the Intercolonial which was taken over by the newly formed Canadian National Railway in 1923.

The Canadian National Railway, together with the Canadian Pacific Corporation, served much of the province with railway lines which connected to points in central Canada, and to points where goods could be transferred to ships. These railways were as vital to the development of the blueberry industry in Cumberland as were the steamships to Yarmouth.



The Canadian Pacific Railway Lines (including the D.A.R.)


Canadian National Rys.
LINES IN
New Brunswick
Prince Edward Island
and Nova Scotia
ST. LAWRENCE RIVER
GULF OF ST. LAWRENCE
NEW BRUNSWICK
PRINCE EDWARD ISLAND
CAPE BRETON ISLANDS
NOVA SCOTIA
BAY OF FUNDY
ATLANTIC OCEAN
Cape Gaspe
Cape Ray
East Cape
North Point
Cape North
Cape East
SYDNEY
HALIFAX
FREDERICTON
MONCTON
SAINT JOHN
YARMOUTH
TRURO
SABLE ID.
TO BOSTON
TO EUROPEAN PORTS
TO BERMUDA, WEST INDIES AND CENTRAL AMERICAN PORTS

In Cumberland County Mr. Pettigrew and his son, Hedley, started to buy blueberries in 1920 and they paid $1.60 for a 32 quart crate. He had a one-horse express wagon which held 21 crates, that was used to gather the crates from the various farmers.

The first shipment from West Brook was made in 1919 on the Cumberland Railway and Coal Company railroad to Springhill Junction, then by CNR to Sydney and sold to R. P. Stevenson, Sydney. Mr. Pettigrew built up his business to the point that by 1923 he started to sell through Mr. W. C. Robinson, Sackville, New Brunswick, Dr. Copps' son-in-law. Mr. Robinson handled all of his sales from this date until Mr. Pettigrew retired from the blueberry business in 1945 or 1946.

By 1923-24, business had increased to the point where the express wagon was replaced by larger steel-springed lumber wagons. The wagon pole was set as far out as possible to lengthen the wagon. Long spruce "springy" boards were placed lengthwise on the wagon to soften the load. In addition, to soften the bumps on the roads, straw or hay was often placed on the planks and the crates placed on top of the material. The wagons were hauled by double horse teams.

Often three or four wagon loads of blueberries would be hauled from West Brook to Athol each day, a distance of 16 miles - a day's trip. Additional wagons were hired on occasion - usually for 50 cents per day. He used to haul berries from as far away as Advocate - 30 miles from West Brook.

The crates of blueberries were loaded at Athol in freight cars and sent to markets in Montreal and Boston. By 1927-28, railroad express car shipments were being made from Maccan.[8]

Billy Wells used a Ford half-ton to take his crates into Amherst and they were shipped by rail freight to market.[9]

As time went on, the introduction of cooled rail cars proved very valuable in the shipping of the fresh berries. They were moved from numerous stations along the lines in Cumberland, principally Maccan, Springhill, Oxford and Greenville, as well as Mulgrave in Guysborough and Monastery in Antigonish. Rail access to Parrsboro, an important blueberry producing area, was provided by the Cumberland railroad. The introduction of more efficient rail movement made shipping less attractive to the Yarmouth County growers, who in the 1930's sent an increasingly large amount of berries via rail.

Also in the 1930's many berries began to be transported by truck. Trucking movement was more efficient in terms of moving the berries from the fields to processing plants or transfer points. It provided easy access to picking areas. It was also soon discovered that berries moved in trucks sustained less damage than those

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8. Hedley Pettigrew, West Brook.
9. W. B. Wells, Amherst.

moved by rail which were thus affected by continuous shunting and slower travel times. Greater efficiency of cooling facilities in trucks added further advantage to moving the berries long distances by road. This was especially true in areas that did not have easy access to railway lines.

In 1931 the Nova Scotia Department of Agriculture issued the following statistics on the amount of blueberries being exported from the province and the mode of transport:

shipped via Yarmouth to Boston and New York (steamship)	18,630 crates
shipped by express to United States points	1,578 crates
shipped by express to Canadian points	5,874 crates
shipped by freight, Maccan to Montreal, 14 cars	4,100 crates
shipped by freight, New Glasgow to Montreal	333 crates
shipped by freight, Mulgrave to New Brunswick	500 crates

From these figures it can be seen that while most of the exports to the United States still moved by sea, many moved by rail and truck.

In 1932, the C.N.R., in an effort to encourage the Yarmouth growers to use the rail service, reduced their rates for the shipment of blueberries.[10]

old rates	price per 100 pounds
Lockeport to Port Clyde	85¢
Barrington to Yarmouth	65¢
minimum charge of 40¢, empties returned 6¢	

new rates (to Yarmouth)	
Lockeport, Jordan and Shelburne	65¢
Birchtown and Gunning Cove	60¢
Roseway, Greenwood and Port Saxon	55¢
Port Clyde, Barrington and Barrington Passage	50¢
Atwood Brook, Shag Harbour and Woods Harbour	45¢
Pubnico and D'Entremonts	40¢
Argyle	35¢
Belleville, Tusket, Pleasant Lake and Arcadia	30¢

In 1942, of the 5728 crates of blueberries shipped from Yarmouth to the United States, only 128 went by sea, an indication of the shift in the mode of transport being used by the industry.[11]

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10. Yarmouth Telegram, August 12, 1932.
11. Department of Agriculture Annual Report, 1942.

During World War II, Austin Grant, Gore, Hants County, operated a successful U-Pick business. Every harvest day there would be 150 to 200 pickers, and Mr. Grant found that it was becoming impossible to record the amount of berries each picker harvested.

In 1945, Roger Bacon, Nappan, Cumberland County, leased the Grant field for $1.00 per packed 32 quart crate. Roger, with his brother Leonard, their families, plus four or five young girls from the Nappan area, formed the nucleus of the picking team.

Roger went to the Indian Reserve, Shubenacadie, where he made arrangements with the band Chief to provide 40 rakers each day and the Chief was to act as their field boss. Transportation was provided by Roger.

Raking would start early in August and would last from 10 to 14 days. The raked berries were put through a portable field cleaner, with no pick-over belt, and then packed into waxed cardboard boxes with hinged cellophane tops. The boxes had the shipper's name and address printed on the tops. The boxes were manufactured in Sackville, New Brunswick. The filled boxes were placed into 32 quart wooden crates.

By mid afternoon, approximately 100 to 125 filled crates would be taken to the C.N. Shubenacadie railway station. They would be loaded into the express car, a process that would take 10 to 15 minutes; however, the train engineer would become very upset with what he thought was an unnecessary delay. The crates were consigned to Eastern Fruit Company, Montreal, Quebec, and they would arrive in Montreal the following morning.

The first four or five days the quarts always sold for excellent prices, approximately 50 to 55 cents per quart. Every year, after the shipping season had started for four or five days, the broker would send a telegram saying the berries arrived in a wet condition and there would be condensation on the underside of the cellophane cover. If the berries were picked on a warm day, then packed and the filled crates put into an unrefrigerated railway express car, the berries would sweat and some condensation would appear under the cellophane top. The broker would report that he was able to sell so many crates on the retail market at 50 to 55 cents per quart; however, the rest would be sold to jobbers for 25 to 28 cents per quart.[12]

The shift in emphasis from sea to land movement of both fresh and processed blueberries largely corresponds with the northward shift of the industry itself, away from the coastal areas to the inland counties. Coupled with the development of more efficient, safe and cheap methods of land transport it was inevitable that by the middle part of the 20th century most of the blueberries exported from Nova Scotia were carried by rail or road vehicle.

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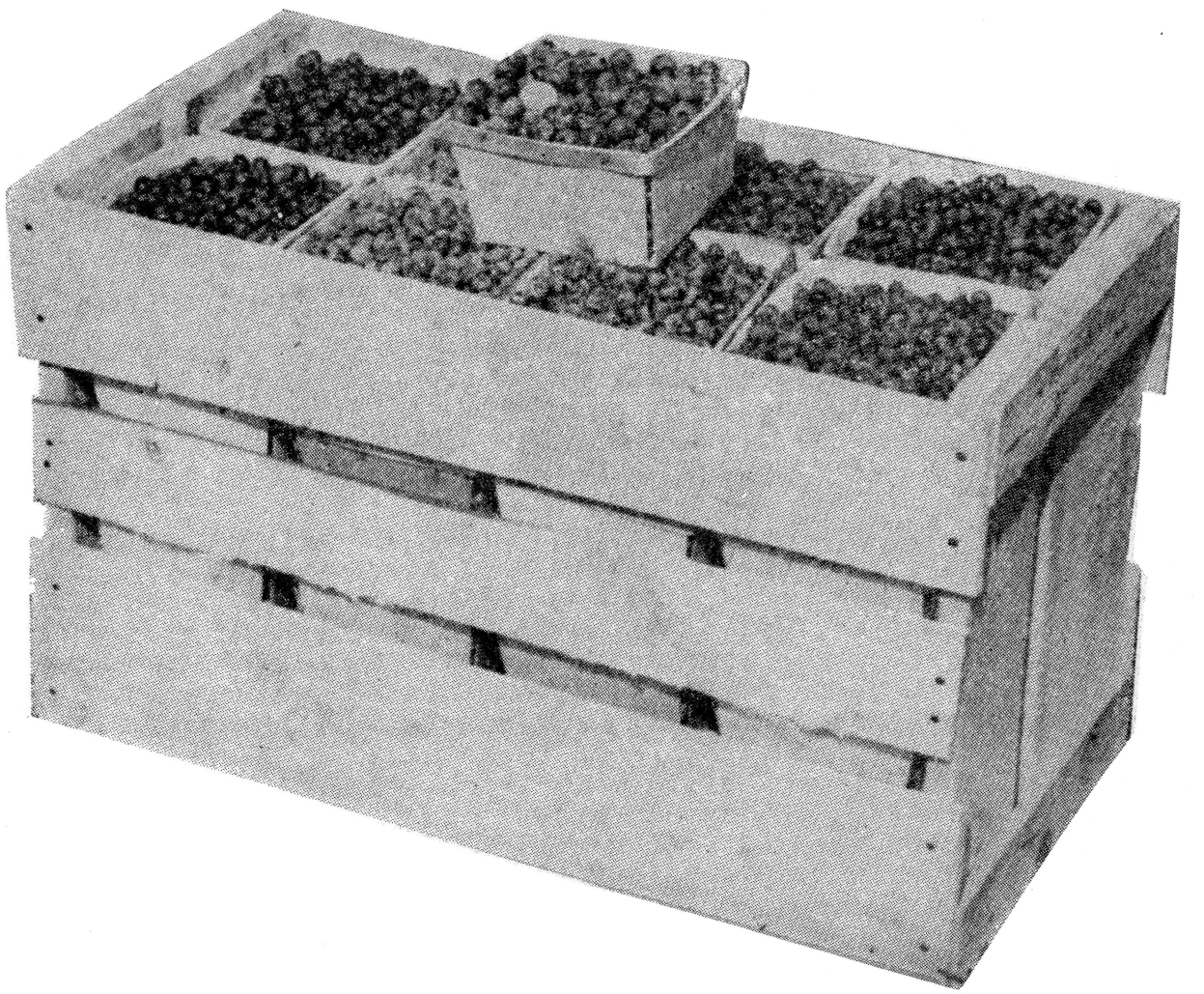
12. Roger Bacon, Nappan, N.S.



Marketing

Nova Scotia blueberries always set the quality standards on the Boston and New York markets. In the early period of the industry there was no specific grade standard, but nevertheless, the berries sent from the province were known to be superior to others seen on the American markets. This was largely due to the method of picking and packing referred to in previous chapters, which provided the markets with hand-picked rather than raked berries. Furthermore, in normal years, the Yarmouth berries were later than the United States berries and the berries from the northern part of the province were later still, thus avoiding a flood in the market.

Nova Scotia berries were so much preferred by the Americans, and gained such high prices, that as early as 1889, Maine berry producers were urging their government to impose a duty on blueberries from the Dominion which they claimed were undercutting the Maine product in the markets to the south.[13] It is interesting to note, however, that the new tariff bill passed in 1890 by the U.S. government dealing with almost all kinds of natural farm products, did not impose a tax upon foreign blueberries.[14]

As time passed the market to the south did not diminish. Indeed the Boston buyers could take whatever quantity of berries Yarmouth could produce. A realization of the continuity of this market brought a growing interest in larger scale production of the berry in Nova Scotia.

The prices were by no means stable but tended to fluctuate throughout the season and from year to year, depending on berry quality and quantity. In 1883 a light yield brought prices from 5 cents to 7 cents per quart,[15] while in 1884, a greater abundance of the berry lowered prices to 3 cents per quart.[16] In the 1890's the prices rose somewhat, although, in 1899, they dropped in Boston temporarily to only 4¢ per quart. This drop caused considerable discouragement as pickers expected 3 cents, shipment was 3 to 5 cents more, and transfer costs from field to ship added some again. That year many of the berries were not shipped, as an irate merchant wrote to the Daily News: "Yarmouth gets berries Boston would have got had she been prepared to pay for them. That is all!"[17]

The price rose again, however, and the industry continued to be a rather easy form of capital gain for many Yarmouth residents.

In the early part of the 20th century the price continued to rise. In 1925 blueberries were selling locally at 15 cents per quart.[18]

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13. Yarmouth Herald, August 21, 1889.
14. Yarmouth Herald, September 17, 1890.
15. Yarmouth Times, September 12, 1883.
16. Yarmouth Herald, September 3, 1884.
17. Yarmouth Daily News, August 9, 1899.
18. Truro Daily News, August 19, 1925.

By 1928 blueberries were selling at 32 cents on the foreign markets. The expenses on the crates were $2.18, leaving a profit of $8.06 per crate; out of the $8.06 the shipper paid about 90 cents per crate in addition to the cost of packing, leaving a healthy profit on each crate.

In 1928 blueberries from the counties of Kings, Queens, Digby, Shelburne, Lunenburg and Yarmouth were being shipped southwards while berries from Cumberland, Pictou, Colchester and Guysborough had begun to be moved in great quantities to the west and south.

Yarmouth had a great advantage in shipping berries to Boston and New York, as shipments by sea could be made in virtually any size load without any undue expense for freight. Conversely, Cumberland shipments by rail would not be lucrative unless freight cars were fairly full.

Yarmouth sea movement also had the advantage of reaching the market faster than rail service, explaining Cumberland's increasing reliance on processed rather than fresh berries. The quality of fresh berries was better when transported by sea than those moved long distances by rail. Railway cars were more suited to the shipment of canned or frozen berries which were not so easily damaged by excessive shunting or unpredictable delay, and which allowed for greater efficiency of freight car use.

The average price paid for a crate of blueberries in 1929 was 32 cents. In that same year, Dr. Mel Cumming of the N.S. Department of Agriculture expressed the opinion that the blueberry crop could come to be worth one million dollars to Nova Scotians. That year a record price of 85 cents was gained for a crate of Yarmouth blueberries on the Boston market.[19]

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19. Truro Daily News, August 11, 1929.

York & Whitney — buyer - W. H. Hull, Faneuil Hall Market

Hall & Cole — buyer - James Higby

A. H. Weeks, Faneuil Hall Market — buyer - Dave Marlin, Raynardton, Yarmouth Co.

E. H. Kingnan, 19 and 20 So. Side Faneuil Hall Market
John B. Adams
Conant and Bean
Winn & Ricker
Isaac Locke
A. Cavalloro Company, 13-14 North Market, Boston
Sawyer & Co. — buyer - Mr. D. Win Keller
Curtis and Co., 104-106 Faneuil Hall Market
Eaton and Eustis Co., 40 & 42 Commercial St., Boston 9, Mass.

By 1930 the market was taking a shift. On the American scene, New York was buying more berries than Boston. Large crops in Maine slightly undercut Yarmouth's position and caused a drop in price while Cumberland and Guysborough berries realized good prices in the expanding markets of central Canada.

In 1930 blueberry marketing was not too well organized. Blueberries did not come under the jurisdiction of the Fruit Act and there was no government supervision of their sale. Nevertheless, the industry continued to put cash into the hands of rural folk who received little money throughout the year.

In 1930 the Markets Division of the Nova Scotia Department of Agriculture prepared a special report on the industry which was made available upon request. The quantity harvested in 1930 was very high but the surplus brought the inevitable sale price drop. In the same year the presence of the blueberry maggot, covered in detail in Chapter 7, was a setback to the industry in Yarmouth. Not only did it result in the return to the province of thousands of blueberries shipped south, but it severely weakened the American belief in the superiority of Nova Scotia berries.

In 1931 the third largest crop was harvested, and despite maggot problems, many berries, especially those from Yarmouth, continued to be sold on the New York and Boston markets. Freight costs rose to 60 cents per crate, quite a change from the 1901 price of 5 cents. Prices ranged from 10 to 35 cents per quart.

The quality of the pack was improving, new boxes were used with wire staples instead of tacks. The crates had been marked 'Product of Nova Scotia' but in the 1930's this seal was included on the quart boxes as well, catching the attention of the consumer as well as the merchant. All these moves were designed to improve the market value of the blueberries being sold fresh on the outside markets.

In 1932 the Imperial Economic Conference included discussions on the agricultural industry in Nova Scotia and slight attention was then brought to the fact that both processed and fresh blueberries were proving valuable exports for the province. That same year, however, a good crop in Maine badly hurt the sale of Nova Scotia berries in Boston and New York. Coupled with the continuing problem of the maggot, this caused the price of blueberries to be so low that picking became unprofitable and many berries rotted in the fields.

Blueberries were always shipped on consignment, usually by Nova Scotian buyers to be sold by commission houses at the markets. A few American buyers would come to the province during the season and purchase the berries at wharfside. There were numerous Boston commission houses which dealt with the sale of Nova Scotian berries, some of which are listed on the next page:

In New York, seven major companies dealt with most of the blueberry shipments:

David B. Rubin, 270 Washington St.
J. C. Lippman
Jill Brothers Inc.
P. J. Ryan, 289 Washington St.
C. J. Havener and Co. Inc., 308 Washington St.
C. J. & M. Dingfelder, 288-290 Washington St.
W. O. and H. W. Davis Co.

In the 1930's Yarmouth County had approximately 15 agents and about 150 growers. Some of the more well known agents are listed below:

Charlie Wyman, Beaver River
John Armstrong, Bell Neck
Fred Armstrong, Bell Neck
Philomon Pottier, Springhaven
Clarence Hamilton, Pubnico
David LeBlanc, Wedgeport
Ed Hines, Pubnico
D. & A. Pottier, Belleville

Agents usually received about 3 per cent commission on all sales. Commission houses would report berry sales by telegram. The price the berries sold for was in a code that had previously been arranged between buyer and commission house. Information would be relayed by the telegraph operator by telephone and as the buyers were on party lines, the coded messages kept the information secret.

Marketing in southwestern Nova Scotia was very competitive between the buyers. There was little co-operation between them as each ran his own show. When one of them got out of line, paying too much for berries, there might be some co-operation between other buyers to teach him a lesson. Pranks pulled would include seeing that the culprit got stuck with a lot of maggoty berries, providing inflated false price information, or seeing that he got a load of dirty or mushy berries. There were times when each buyer tried to buy their competitors filled crates from the pickers. There were times when the competitors pile of empty crates might 'accidentally' catch fire.

The profit margin on a single crate was not too high and due to the fickle nature of the market, the buyers and shippers were not always sure until they received their cheques, whether they had made or lost money.

Some of the buyers bought a field not yet picked, called stumpage, which they would try to check beforehand as to the maggot content of the berries. If they discovered later that they had made a bad decision in buying the field, they would try to load them off on some unsuspecting buyer.

Agents were often offered baskets of picked berries. This was considered risky as they couldn't be sure of the quality of the berries, or if there was a lot of trash in the baskets. They generally felt that they lost money on the first crates sold as they had to compete with Maine berries. At the end of the season, however, the price on the Boston market had usually risen between 10 and 15 cents per quart. Several buyers were storekeepers who used barter to get the berries. Filled crates were often used by pickers to pay grocery bills.

While Yarmouth continued to concentrate on the United States as their primary market for blueberries, Cumberland and Guysborough were showing a greater inclination towards the shipping of fresh berries to central Canada, and the processing of berries before leaving the province.

The Wells' berries were sold to Mr. Tom MacNair in 1922. Mr. MacNair, as a CNR telegraph operator in Amherst, had an opportunity to know of the prices being paid for blueberries as all prices from the wholesaler to the buyer were relayed by telegraph. He would send the berries to various markets by railroad express, usually Montreal and Toronto. He also bought blueberries from Mr. Bill MacCarthy, Amherst.

In 1923, Mr. Wells started to sell his berries. He usually purchased the berries on the field by paying stumpage. He would use his picking crew to harvest the fruit. He usually picked his berries in the Amherst area. He can remember many fields where his stumpage charges in the 1920's and 1930's would run around $1.00 per crate.

One of the first companies Mr. Wells sold to, in the early 1940's for five or seven years, was Eastern Fruit Company, c/o Mendel Gerszenovicz, Montreal. The berries were in 30 pound wooden boxes. The shooks were purchased from Tupper Warne, Digby. The Montreal Express train would leave Amherst around 9:00 a.m. (A.S.T.) and arrive in Montreal around 10:00 a.m. (E.S.T.). Berries shipped on Friday and Saturday were sold on Monday. Approximately one express carload of berries would be shipped per day during the height of the blueberry season. When the berries were sold the buyer would wire the price. One year Wells put so many berries into Montreal that the buyer requested him to start shipping in 32 quart crates.

During the mid Thirties, the Montreal market became "quite tight" as larger quantities of Quebec blueberries started coming on the market. Quebec berries did not have good quality. During the tight market period, berries would be shipped to Toronto, Ottawa, Boston and New York.

Mr. Wells shipped the majority of his berries through Amherst, although there were occasions when he would ship through Maccan.[20]

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20. W. B. Wells, Amherst.

In 1930, $30,000 worth of blueberries were shipped from the Maccan station.

As more and more buyers got into the business, the price of berries to the growers increased. In 1928, prices paid to growers were as high as $6.10 per crate.[21]

Mr. Edgar Fillmore, Tyndall Road, Cumberland County, and Mr. Osborne Trueman, Truemanville, started to buy blueberries around 1925. They handled blueberries together until the early 1940's when Mr. Trueman retired. Mr. Fillmore continued in the business until around 1945.

In the mid 1930's, prices on the market were very poor. There was a surplus of berries in Maine. Quebec's fledgling blueberry industry was just getting started and their berries would flood the Montreal and Toronto markets.

Dickinsons used to ship by rail to Montreal, Ottawa, Toronto, Boston and New York markets, depending upon price. Their commission house in New York was W. O. and H. W. Davis Co. In the mid 1930's, blueberry prices on all markets were very low. On one shipment, they received 76 cents payment for two crates and the express from Maccan to Montreal was $1.08 per crate.

When berries were shipped to New York from Maccan, it would be three days from the time of shipment before the shipper would learn by telegraph the price received. In the meantime two or more shipments would have been made. On a falling price market the outcome would be a financial disaster.[22]

In 1934 the prices for Cumberland berries were reported as being low, and that same year Yarmouth reported that prices dropped from 25 cents to 17 cents per quart. This price, however, was still higher than the Maine producers got for their berries.

When the centre of the blueberry industry began to shift northwards away from Yarmouth to Cumberland, greater attention was paid to the processing of the berries. After processing the berries were sent, canned or frozen, by rail to express truck to Boston, Toronto or Montreal. Operators poured more funds into the industry and gained handsome returns for their efforts.

In 1937 Nova Scotian berries were reported to sell at 15 cents per quart in Montreal and Toronto, while the Boston and New York price ranged from 20 to 22 cents. The wholesale price at Halifax was reported to be 10 cents per quart.

In that same year the Markets Division of the Nova Scotia Department of Agriculture called attention to the fact that the large amount of berries moving to the south and west was causing market congestion and as a result prices were lower than they should be. The Department was studying an idea which had been suggested by some packers as early as 1899.[23] It was hoped that a

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21. Hedley Pettigrew, Springhill.
22. Seymour Dickinson, West Brook.
23. Yarmouth Herald, May 16, 1899.

possible market could be opened up in the United Kingdom for canned, preserved or fresh blueberries. With a view to testing this market experimental shipments were made in the summer of 1936.

Dickinson Bros. started trial shipments to the United Kingdom. Buyers were J. and H. Goodwin, Manchester, England, and G. Costa and Co., Manchester. Mr. F. W. Walsh, Director of Marketing, Nova Scotia Department of Agriculture and Marketing had made the necessary arrangements. Ten crates were sent. Crates were trucked to Maccan, placed on a CNR express car for shipment to Halifax. They were held in the Harbor Cold Storage Plant for one week at 38°F. From there they would be loaded on the S.S. SCOTIA or S.S. NEWFOUNDLAND, which made sailings on a weekly basis. It took two weeks from the time the berries were picked until they were sold in Manchester. Shipping charges on the boat were 96 cents per crate. Regular shipments were made to Manchester in 1937 and 1938. On August 19, 1939, 50 crates were to be shipped to Manchester when World War II broke out and all shipments were curtailed.[24]

They were well selected and packed blueberries which moved forward under refrigeration temperatures of 33°F to 38°F. The experiment proved a success and during 1937 packers sent regular shipments. The Department expressed hopes that the British market for the berries would become a 'commercial proposition of some value'.[25]

In 1936, Dickinson's looked to local markets to help place their crop. Canadian Canners Ltd., Middleton, N.S., agreed to buy some of their crop. This company supplied from Maine rakes (nine inch) and a gasoline cleaner - probably the first authentic commercial blueberry rakes and cleaner used in Cumberland County.

In 1939, Dickinson Bros. turned to Canadian Canners to buy more of their berries. The boxed berries would be trucked from West Brook to the beach at Parrsboro. Mr. MacCormick and Jim George, both of Parrsboro, owned single-masted sailboats, each capable of handling four to five tons of berries and they agreed to make a trip to Kingsport or Pereaux, Kings County, for $10.00 . The boats were never loaded at the local wharf but would lie on the beach to be loaded. Boxes of berries were carried, one at a time, by hand up the gangplank. Trucks from Canadian Canners, Middleton, would meet the boats and take the unloaded berries to their canning plant. This method of transportation was used for four or five years.

Canadian Canners supplied the lidded wooden boxes. These were the same containers they used to ship their canned goods in. Sometimes they sent their wooden pea boxes. These boxes had hand holes on two sides which limited the amount of blueberries in each box. These boxes had four corner posts which protruded above the side by about one-half inch. This kept the boxes from resting directly on the fruit as well as providing some ventilation between the boxes. This design was incorporated in new field boxes used by Dickinson's.

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24. Seymour Dickinson, West Brook.
25. Department of Agriculture Annual Report, 1937.

Dickinson's sold to Canadian Canners until the processing plant was sold in 1959. The original order of 12 tons grew to 200 tons over the years.[26]

By the late Thirties, many berries were being sent to the markets by co-operative blueberry associations, assisted by the Nova Scotia Department of Agriculture. Their assistance would, over the years, result in higher prices on both the local and distant markets. By 1950 there were 20 such associations in the province and blueberrying had ceased to be the disorganized business it was as late as the 1930's. Assisted by the Department of Agriculture the blueberry industry, centered by this time in the northern part of mainland Nova Scotia, had become more organized, and the sale and marketing of the berries had become a big business in itself.

In 1949, Mr. Orff, Friendship, Maine, and Mr. Cushing, Cushing, Maine, came to Parrsboro. The first year they set up their cleaning and shipping plant in the curling rink, and the following year they built their plant in Parrsboro. They shipped to Maine in half bushel boxes, the standard container now in use. They brought the first power burner and 50-10-40 blueberry dust into Nova Scotia in 1950.

In 1949, Mr. Chris Gaklis, Somerville, Massachusetts, came to Parrsboro to buy blueberries. He sent blueberries to the Boston market in 32 quart crates. He operated his cleaning and packing plant in Harold Quinn's barn, Halfway River, in 1949 and 1950.

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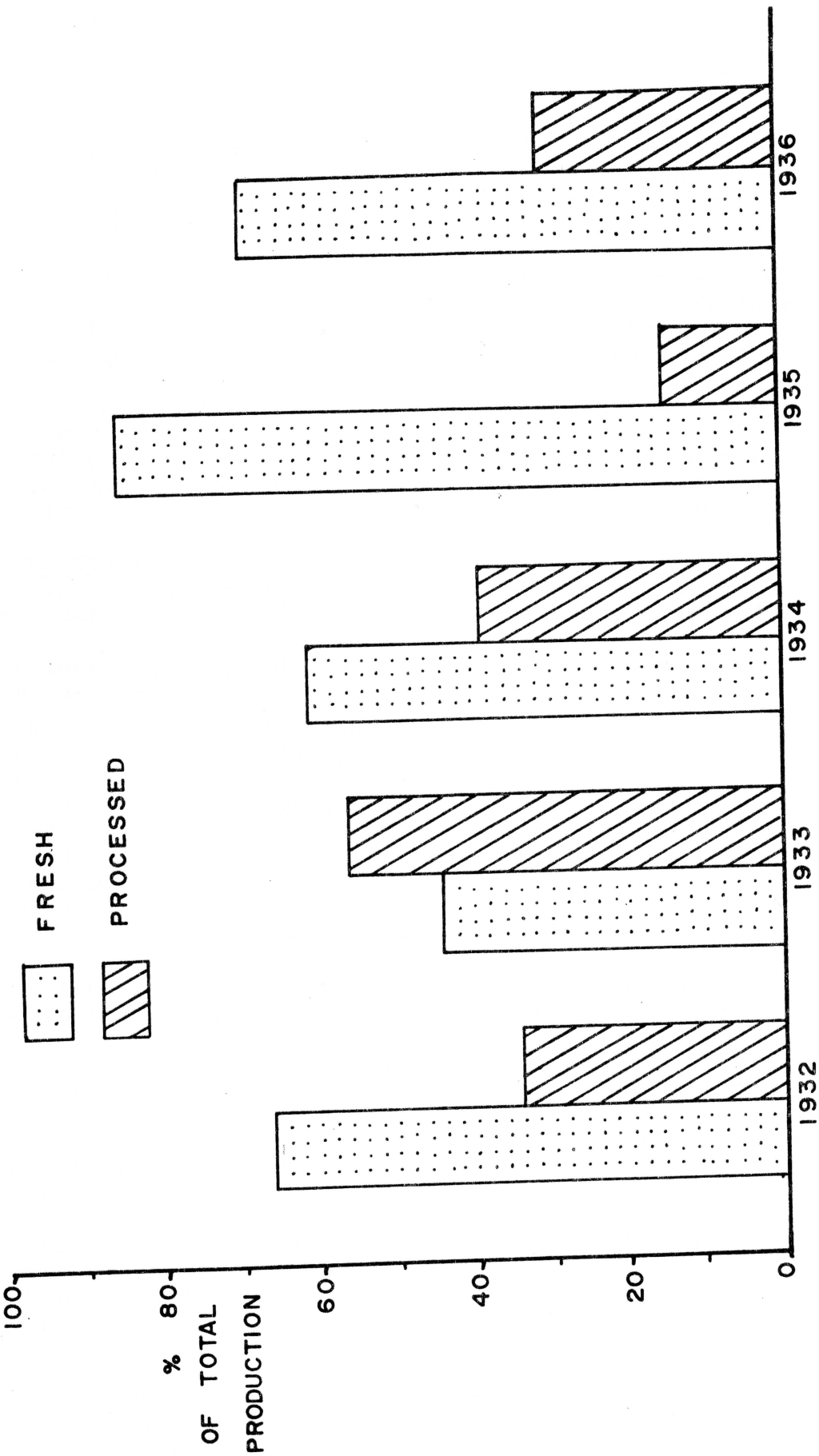
26. Karl and Seymour Dickinson, West Brook.


CUMBERLAND COUNTY BLUEBERRY PRODUCTION 1932 – 1936
FRESH
PROCESSED
% OF TOTAL PRODUCTION
100
80
60
40
20
0
1932
1933
1934
1935
1936

Chapter 6

The Blueberry Statistics

To gain accurate information on the blueberry exports and yields is a difficult task as little record was kept of overall movement. From the period after 1919 statistics for Yarmouth are fairly complete, but before this are very sketchy. In the 1880's and 1890's one can only rely on the periodic recording of the exports by the customs officials. Some of these figures were reproduced in the 1890's by the provincial government in their annual crop reports. Other than these reports there is little information on total yearly shipments. Scant information can be gained from the early newspapers as they reported on the cargos being carried by the Yarmouth steamers. Because the fruit was so widely gathered however, no complete record of local yields and sales were possible and any estimate based on commercial shipments prior to 1919 certainly represents only a mere fraction of the total crop harvested. Furthermore, the local papers often failed to report every shipment so the information, although interesting, is not useful in terms of yearly statistics. The following are examples of such reports:

1893 Yarmouth Telegram, July 28
"There is a large crop of blueberries this year and the steamer Yarmouth on Wednesday had nearly 4000 quarts."

- that same year the following statistic could be gained from the newspapers:

July 28	4,000 quarts
August 1	5,200 quarts
August 8	16,000 quarts
August 18	13,960 quarts
August 22	22,752 quarts
August 29	25,544 quarts
September 26	4,384 quarts
October 3	736 quarts
	92,576 quarts

These figures are by no means complete, as the collector of customs at Yarmouth that year reported that 204,160 quarts were shipped southwards.

Other sources can be equally as difficult to gain any conclusions from. For instance, the Boston and Yarmouth Steamship Company reported on its shipments from 1924 to 1928, but since this company was not the only one carrying the berries, total figures cannot be gained from their reports (see Chapter 5).

The figures for Cumberland, Guysborough and the rest of the province are sketchier still, as the only ones available come from the Nova Scotia Department of Agriculture and they can supply only a few years of complete records. There seems to be no other source of information for this part of the province.

The information gained from the provincial government can be seen in the next few tables and graphs. Most of the information comes from the Nova Scotia Department of Agriculture while the earlier figures come from the crop reports and newspapers.

Blueberry Shipments from Nova Scotia in Pounds

Year	Yarmouth	Cumberland	Guysborough	Rest of Province
1883	93,344	---	---	---
1892	606,000	---	---	---
1893	306,240	---	---	---
1895	754,944	---	---	---
1896	677,520	---	---	---
1897	820,000	---	---	---
1898	228,528	---	---	---
1919	927,504	---	---	---
1920	1,002,000	---	---	---
1921	1,037,136	---	---	---
1922	986,072	---	---	---
1923	417,888	---	---	---
1924	1,124,832	---	---	---
1925	666,000	---	---	---
1926	732,960	---	---	---
1927	605,088	200,000	---	---
1928*	525,500	---	---	---
1929	1,610,000	---	---	---
1930	1,615,800	150,000	---	50,000
1931	950,000	272,544	30,000	15,984
1932	639,750	504,000	30,000	---
1933	795,250	247,483	---	---
1934	988,100	111,224	83,770	---
1935	814,650	221,554	---	115,200
1936	1,015,650	292,914	31,200	---
1937**	---	---	---	---
1938	1,248,588	327,900	185,738	432,250
1939	588,000	712,500	169,500	243,000
1940	186,750	---	---	---
1941	325,750	368,000	---	---
1942	286,400	---	---	---
1943**	---	---	---	---
1944	215,750	---	---	---
1945	490,250	147,936(frozen)	---	---

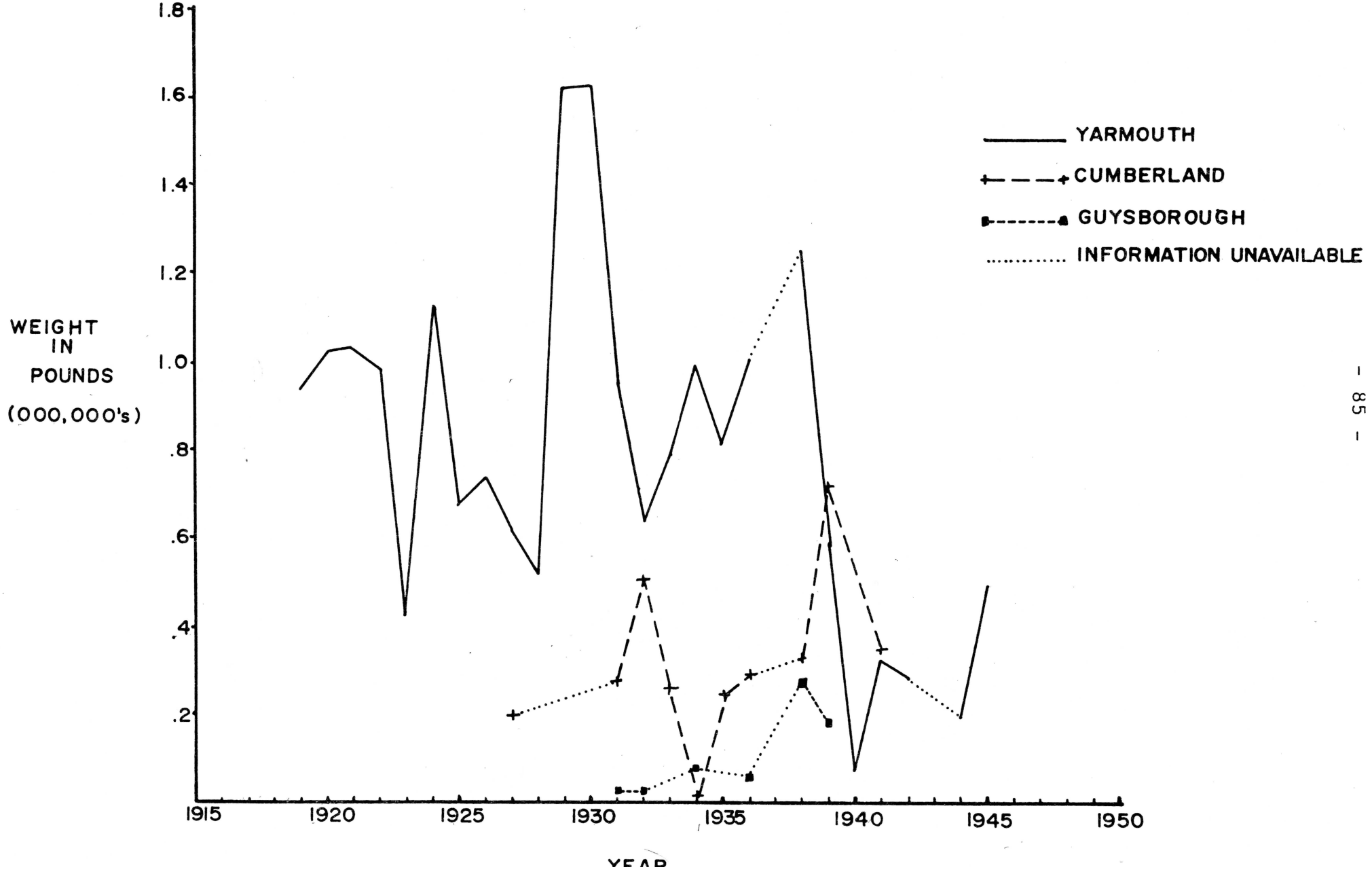
* includes shipments from Kings, Queens, Digby, Shelburne and Lunenburg counties

** no record

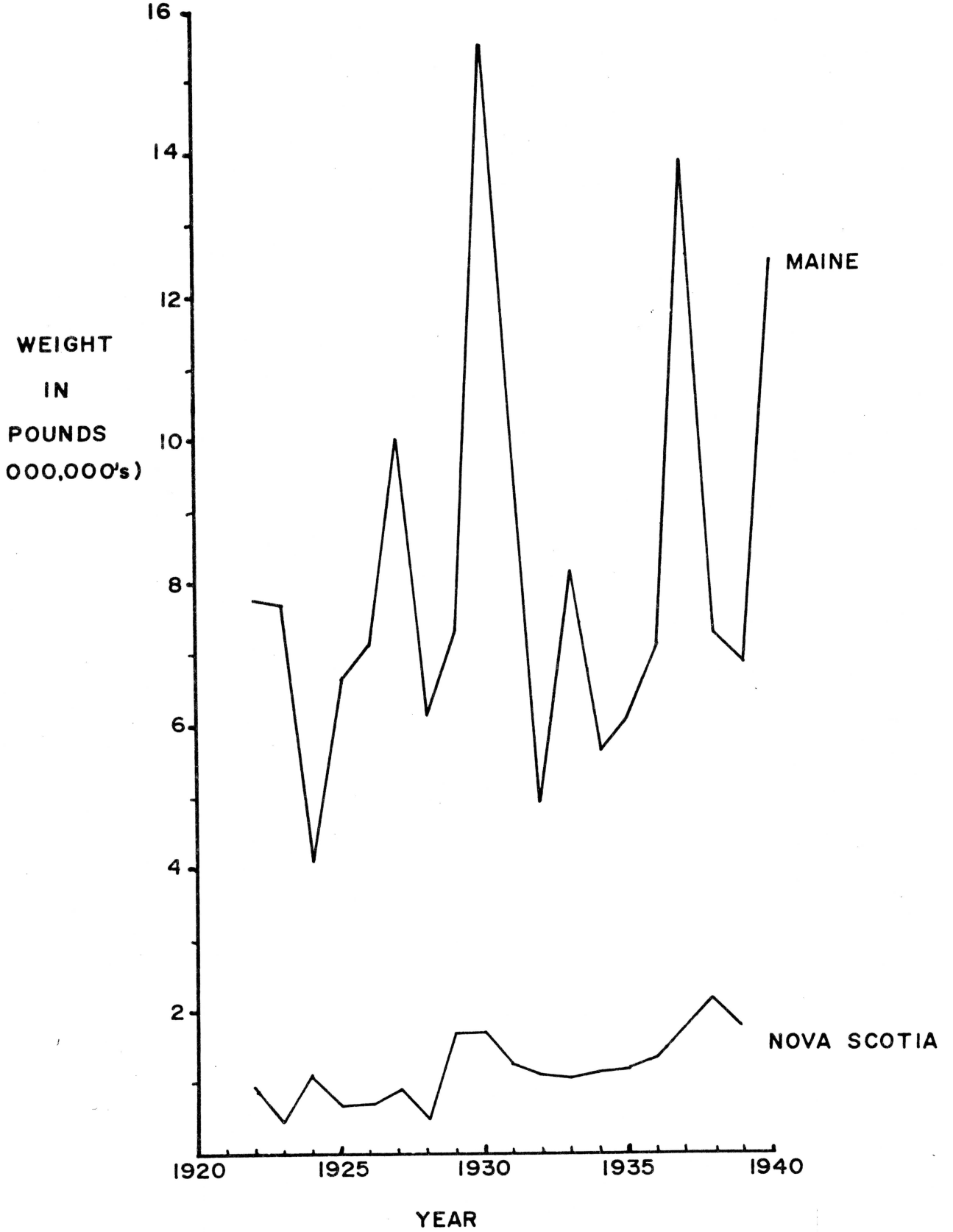
Maine Blueberry Production in Pounds

1922	7,728,000	1932	4,889,000
1923	7,000,000	1933	8,173,000
1924	4,136,000	1934	5,622,000
1925	6,605,000	1935	6,070,000
1926	7,104,000	1936	7,416,000
1927	10,066,000	1937	13,955,000
1928	6,096,000	1938	7,929,000
1929	7,344,000	1939	6,872,000
1930	15,496,000	1940	12,559,000
1931	9,878,000		

NOVA SCOTIA BLUEBERRY PRODUCTION 1919—1945



MAINE AND NOVA SCOTIA BLUEBERRY PRODUCTION
1922 – 1940



Yields

The state of the blueberry yield for a given year is not necessarily measurable only by figures. Often figures are inaccurate and incomplete. Another tool by which the state of the industry can be discussed is the use of newspaper and personal reports on the quality of the yield. This method is not precise, but can be of assistance when there is little information available.

The following are reports on the blueberry yields found in the various newspapers throughout the province.

Year	Yarmouth	Cumberland	Guysborough	Rest of Province
1884	good	---	---	---
1885	good	---	---	---
1886	plentiful	---	---	---
1888	poor	---	---	---
1890	abundant	---	---	---
1893	large crop	---	---	---
1896	scarce	---	---	---
1897	good	---	---	---
1918	plentiful	---	---	---
1922	good	---	---	---
1929	excellent	---	---	---
1930	excellent	---	---	excellent
1931	fair	---	---	---
1932	light	light	light	light
1933	---	light	light	---
1934	---	light	---	---
1935	light	light	light	light
1936	good	very good	good	good
1939	---	---	---	light
1940	light	good	light	light
1946	light	light	light	light
1948	average	---	poor	---

Prices

Like all other statistics the prices for which the berries were sold is often difficult to pinpoint, as they were highly susceptible to the powers of supply and demand. From various Nova Scotia papers and government reports the following figures can be gathered. These figures are averages of highs and lows for the various years.

Year	Price Per Quart	Price	Price Per Quart
1883	5¢	1927	25¢
1884	3¢	1928	18¢
1893	5¢	1929	25¢
1896	3.5¢	1931	22¢
1897	10¢	1934	22¢
1899	4¢	1936	15¢
1907	14¢	1938	18¢
1923	10¢	1941	18¢

Chapter 7 The Blueberry Maggot

Before the outbreak of problems with the blueberry maggot in 1929, little attention was paid to insects affecting the berry. In 1927 the Department of Crown Lands reported that several insects were known to destroy the plant and that experiments were being undertaken to find out what effect dusting and spraying would have on the enemies.

Despite the experiments of 1927, traces of blueberry maggot damage occurred in Yarmouth in 1929. Mr. A. Kelsall, officer-in-charge of the Canada Department of Agriculture entomology lab in Annapolis Royal, visited Yarmouth and assessed the damage.

During August of 1930, a serious situation occurred in the exportation of fresh blueberries from Yarmouth to Boston and New York, when crates were returned to the province on account of being infested by maggots.

The provincial Director of Marketing, Dr. Mel Cumming, invited Mr. L. S. McLaine of the Department of Agriculture in Ottawa; Mr. Kelsall; Mr. A. D. Pickett, the provincial entomologist; and Mr. Carl Spicer, the Yarmouth County agricultural representative, to meet with him as well as the Yarmouth shippers and growers to review the situation. A meeting was arranged for August 9, 1930.

The afternoon before the meeting the men inspected blueberries intended for export at the Yarmouth docks. Several crates were found to contain blueberries infested with maggots.

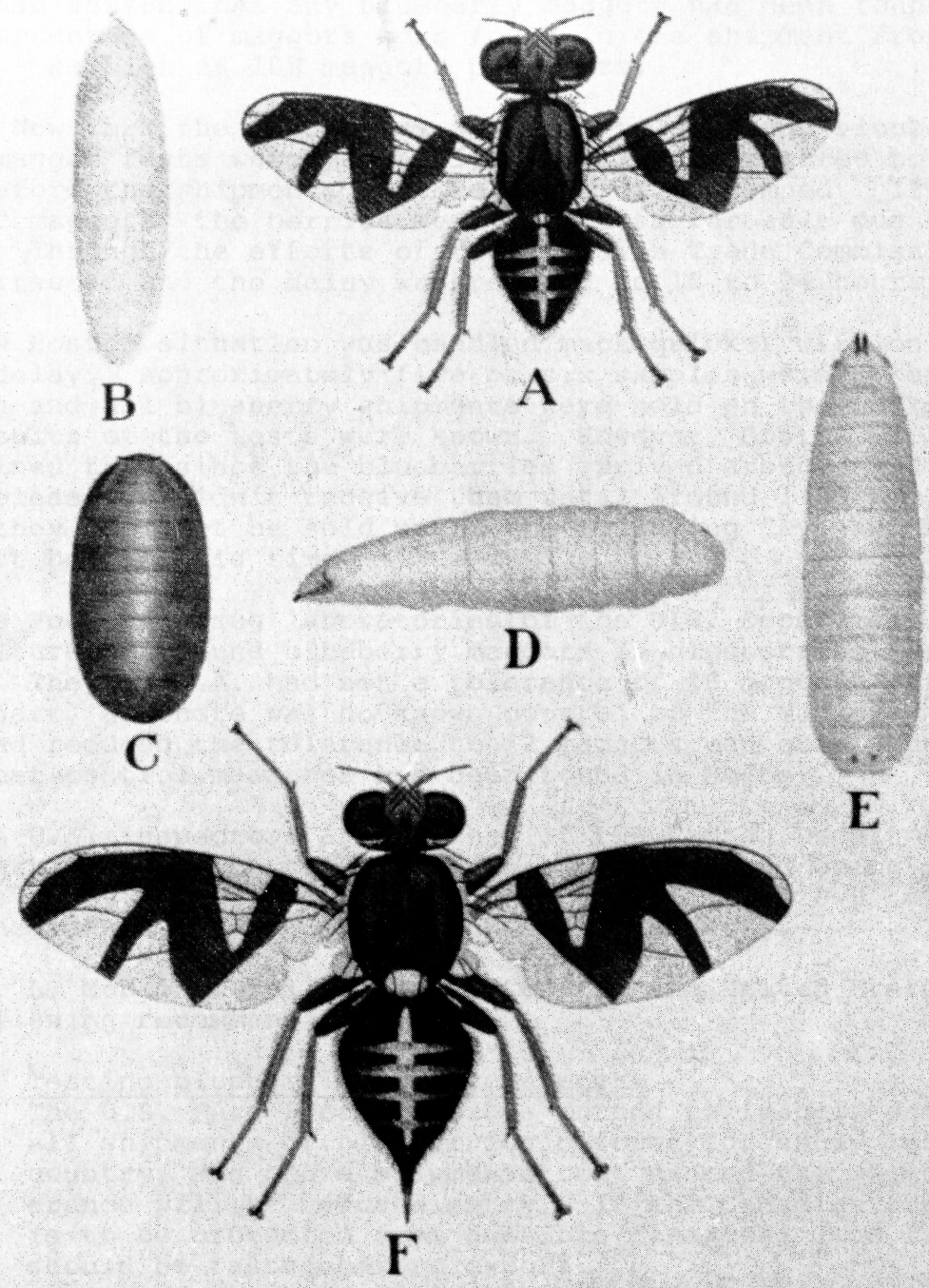
During the evening meeting of the government officials, blueberry pickers and shippers at Tusket, a representative from a New York firm explained the situation in the United States. He told those assembled that blueberries from the state of Maine had been examined for a number of years for maggots. A tolerance of 12 maggots per quart of fresh blueberries was allowed. If the number of maggots exceeded this, the shipment was not certified by state officials.

It was thought that this was the first season Yarmouth blueberries had been inspected by the American authorities. It was also felt this inspection had come about because there was an unusually large crop both in the United States and Canada. Furthermore, the Nova Scotia season was a bit earlier than normal. This meant that the market in the U.S. was being flooded by blueberries and an effort was being made to keep the blueberries out.

Many believed that the U.S. inspectors were only examining poorly packed blueberries, but this impression was corrected by one experienced shipper who put up a good pack, when he informed the meeting that some of his shipment had been returned.

A resolution was passed during the meeting stressing the necessity of government officials to investigate the situation to find out what action was being taken by the U.S. inspectors, and if it would be necessary to organize some method of inspection to take care of the crop for the balance of the year, or in following years.

THE BLUEBERRY MAGGOT



A. Male maggot fly. B. Egg. C. Pupa. D. Maggot—side view.
E. Maggot—dorsal view. F. Female maggot fly.
All figures much enlarged.

Mr. McLaine received permission from his superiors to go to the United States to learn firsthand the situation there and to make a report. Mr. McLaine visited Canadian Trade Commissioners in New York and Boston on the August 25 and 26. He also visited importers, dealers in fresh and frozen blueberries in Boston, Maine, as well as the U.S. Pure Food Authorities.[1] He learned Nova Scotia blueberries had been under observation for the past six years by the Pure Food authorities in Boston, but this was the first season that any blueberry maggots had been found. A high percentage of maggots were found in one shipment from Nova Scotia - as high as 105 maggots per quart.

In New York the inspectors wouldn't release any blueberries until maggot tests were made, often a delay from three to four days before the shipments were released or condemned. If found free of maggots, the berries were worthless for sale due to the delay. Through the efforts of the Canadian Trade Commission, this was corrected and the delay was reduced to 18 to 24 hours.

The Boston situation was handled much quicker with only a few hours delay. Approximately five or six samples were taken for testing and all blueberry shipments were held on the docks before the results of the tests were known. However, Boston wholesalers complained that since the blueberries arrived around 8:30 a.m., the wholesalers didn't receive them until around 1:00 p.m., which meant they couldn't be sold until the following day, as the buyers had left before this time.

The Food and Drug laboratories of the U.S. Department of Agriculture had found blueberry maggots in blueberries for several years. The U.S.D.A. had set a tolerance of 18 maggots per No. 2 can (quart) as there was no known control of the maggot. By 1930, they had reduced the tolerance to 12 maggots per quart due to the fact that control measures had been found in Maine.

The U.S. inspectors agreed that if the Canada Department of Agriculture should certify Canadian blueberries as being free of maggots the U.S. authorities would honour it. The U.S. officials said they would also do spot checking for maggots.

Mr. L. McLaine, following his tour in the United States, made the following recommendations:

"1. Testing blueberries before export:
The U.S. Pure Food officials intend to inspect and test all shipments of blueberries offered for entry into the country; and those shipments that exceed the maggot tolerance will be refused entry. If the Canadian shipper is to be protected from possible financial loss, shipments should be tested before export.

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1. L. S. McLaine Report.

2. Marketing
Extension educational work needs to be carried on to instruct the Canadian picker how to pack properly. Standard containers to meet the U.S. requirements should be adopted. The picker should be instructed to mark his containers in accordance with the U.S. law. The use of secondhand containers should be discouraged. The use of rakes for picking should be discouraged. (It is understood that it had been introduced into certain areas of New Brunswick.) The question of transportation needs investigation, particularly as it applies to shipments of fresh berries from Yarmouth to New York.

3. Entomological features:
(a) A survey of the commercial growing districts needs to be carried out to determine the distribution of the apple maggot on blueberries.

(b) The life history of the insect under Canadian conditions by cultural methods, etc., should be carried on.

(c) Investigations on the control of the insect under Canadian conditions by cultural methods, etc., should be carried on.

(d) In order to avoid the danger of exceeding the arsenical residue tolerance on blueberries for either the fresh fruit or frozen trade, investigation needs to be carried out with sprays and dusts.

(e) The possible danger of distributing the apple maggot by shipping old packing and picking boxes into Canada from the heavily infested districts of Maine should be investigated.

4. Conference of officials:
In view of the unorganized condition of the industry, it is suggested that a conference be called of federal officials directly connected with the problem and similar officials from those provisions which now produce blueberries in commercial quantities, for a roundtable discussion of the entire problem.

5. A survey of the industry:
Owing to the limited amount of data available on the problem at the present time, that a general survey of the industry be made."

Mr. McLaine gave a full report to a special growers meeting held that fall. Mr. M. Cumming, A. Kelsall, A. D. Pickett, and C. Spicer were invited as well. Mr. McLaine also demonstrated how the blueberries were being tested for blueberry maggot by the U.S. authorities.

The discussion during this meeting was long, and at times, bitter.[2] The Yarmouth growers told the "government men" that blueberries had been growing in Yarmouth County from time immemorial and no one had seen or heard anything about blueberry maggot until "they came along".

The growers had had a very frustrating year as a great many of their berries had been held by U.S. authorities and then returned when they were like mush. Another point of contention was a new publication on blueberry maggot that had been published - "which was nothing but a kind of advertisement to the buyers and let the whole world know that there were blueberry maggots in Yarmouth County". The growers told the "government men" that when they needed their advice they would ask for it.[3]

Nova Scotia blueberries had been under observation since 1924 by the U.S. Pure Food Authorities in Boston. From the information obtained it was learned that a number of shipments of berries have been returned from various points in Nova Scotia, particularly in Shelburne and Yarmouth counties, also a carload from Maccan which was imported into the Buffalo area for freezing. Twelve samples from as many boxes in the car were tested. Five of them exceeded the maggot tolerance of 12 per quart.

Owing to the fact that the blueberry maggots are pretty well distributed over the areas in which blueberries are grown and the fact that up until 1927 or 1928 there was no known method of handling infested berries, it was necessary to establish a so called tolerance; that is, to permit a certain number of maggots to a quart.

The first tolerance allowed was 18 maggots to a quart of fresh berries or a No. 2 can of cooked or canned berries. This tolerance was gradually reduced until in 1930 up to 12 maggots to a quart or 60 to a No. 10 can were allowed.

In 1929, Dr. Mel Cumming, L. S. McLaine and A.D. Pickett went to Cumberland County to check for blueberry maggot. Because of the wide outbreak of maggot in Yarmouth and Shelburne counties, they wanted to know what was the maggot situation in Cumberland County. A check was made at Dickinson Brothers and several other producers in the area. They were burning regularly, cutting brush and had good, clean looking fields. Blueberry samples were checked for maggot and none were found.[4]

In 1932, it is reported that 8,286 crates of berries were shipped out of Cumberland County and very little blueberry maggot was found.

In 1931 the Yarmouth County Farmers Association called a meeting to discuss the state of the blueberry industry. The meeting focused attention upon the problems with the blueberry maggot as the topic of discussion was "The Blueberry Industry and the Methods to be Employed to Keep at its High Standard."[5]

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2. Dr. A. D. Pickett, Deepbrook, N.S.
3. Dr. A. D. Pickett, Deepbrook, N.S.
4. Dr. A. D. Pickett, Deepbrook, N.S.
5. Yarmouth Times, July 10, 1931.

IMPORTANT MEETING

— OF THE —

Yarmouth County Farmers' Association

will be held in the COMMUNITY HALL,
TUSKET

Thursday. July 16th.

at 8 p.m.

The subject of the meeting is to discuss the BLUEBERRY INDUSTRY and all interested are requested to attend.

SPEAKERS

LEONARD S. McLAINE, Chief of the Division of Pest Suppression, Dominion Dept. of Agriculture.
DR. M. CUMMING, Director of Marketing, N.S. Department of Agriculture and others.

A.M GATES, President GORDON LEWIS, Secretary

That same year the Yarmouth Herald reported that the situation had improved as out of the 4265 crates of berries sent to Boston so far that year, only 32 had been returned to Yarmouth because of maggot infestation.[6]

Blueberry maggot investigations were started by Canada Department of Agriculture officials in 1931, 1932 and 1933. Maggot plots were established in the fields of T.C. Hall and C.O. Nichols in Morristown, Kings County. These fields had a history of maggot infestation. In these isolated fields experimental plants were used and tests were taken to ascertain the most effective method of controlling the insect. The Department was specifically looking for a method which would not prove harmful to humans. Various materials such as dusts, attractants and poisoned bait sprays were used but the results were unsatisfactory. Observations were also made into the life history and habits of the blueberry maggot.

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6. Yarmouth Herald, August 11, 1931.

Nearly 10 years passed before the Yarmouth growers asked the government for help. During the intervening years there was little trouble from the blueberry maggot.

In 1939 the blueberry maggot problem became serious again in Yarmouth County, resulting in great losses to the Yarmouth shippers. Mr. A. D. Pickett and Dr. McBain Cameron, the provincial entomologist, went to Yarmouth to survey the situation. Mr. Herb Churchill, the agricultural representative for Yarmouth County, joined them, and together they met with most of the major shippers as well as inspecting blueberry fields for maggots.

As the shipping season was fairly well along, the growers were told that there wasn't much that could be done that year except to take samples from the fields before harvesting and test them for maggots. The degree of infestation had been discovered too late to take remedial measures.

During the winter of 1939-40, a series of meetings were held in Yarmouth and a Blueberry Association was formed. Dr. Cameron and Mr. Pickett had visited blueberry areas in Maine toward the end of the 1939 season. They had an opportunity to talk to entomologists, horticulturalists, growers and processors about the bleuberry maggot.

Mr. Frank Lord, an entomologist with Canada Department of Agriculture, and Mr. Bedford Duncanson, an entomologist with the Nova Scotia Department of Agriculture, were sent to Yarmouth early in the summers of 1940 and 1941. They established a base camp in the Tusket area. From there the entomologists worked within a 20 mile radius in Pubnico, Argyle, Kempt and Chebogue. Blueberry maggot was never found in Chebogue.[7] At that time there hadn't been any hand dusters in the county and a small supply (Peerless Mkg.) was brought in in the summer of 1940.

The entomologists made a study of the prevalent insects in the fields. They found that blueberry maggots, chain-spotted geometers, weevils and thrips were quite common. The entomologists studied rates of dusting, timing, insect life cycles and the biology of the plant. At that time there weren't any blueberry pest calendars, in fact, very little was known about blueberry insects.

The insect dusting program was established based on Maine's research results. Calcium arsenate, at rates recommended in Maine, was used. It was soon found out that the additional dew and fog in Yarmouth, when using calcium arsenate, caused severe foliage burn. Lord and Duncanson well remember defoliating a 90-acre blueberry barren using straight calcium arsenate.

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7. Fred Armstrong, Yarmouth, N.S.

They found they couldn't follow Maine's recommendation so they switched to using lead arsenate dust. At that time five ppm (parts per million) residue was allowed. Dusting would commence around 4:30 a.m. and would continue as long as the foliage remained damp. The lead arsenate proved effective, but more expensive, but one application seemed to do a fairly good job, whereas Maine researchers recommended two applications of calcium arsenate.

Although burning had been practiced for many years, the growers didn't realize that good clean burning over a large area was one method of maggot control, because the maggot flies would have no place to oviposit (lay eggs) in the year of the burn, therefore, the first crop following the burn would be relatively free from maggots. Greater emphasis was placed on proper burning techniques and to see that no islands (unburned areas) remained.

Another method planned to prevent the shipments of maggot berries was the proposed pre-picking and pre-shipment plan. Eastern Steamship Line, Yarmouth, provided a room in a building on their wharf with washing facilities, electricity, etc., in order for the inspectors to do proper maggot tests. The buyers and shippers were to gather samples from the fields and if the maggot tests showed high levels, the field wasn't to be picked. In 1940, a total of 199 samples of berries were tested. Of these, one contained 161 maggots per count of berries, but only five had counts over 10 maggots. In 1941, field testing continued. Five samples tested had more than 40 maggots per quart, the highest being 143 maggots. It was agreed that the shippers were to bring their crates to the wharf in the morning so as to allow the inspectors time to take berry samples. These samples would be checked for maggots and if the samples showed substantial infestation, the crates were not to be shipped. A goodly number of field samples were received for testing but no shipper asked for crates to be checked before they were placed on the boat.

The Canada Department of Agriculture Fruit Branch agreed to co-operate in the inspection. Grades for import were agreed on but were never used.

Excellent co-operation was received from Mr. Vincent Pottier, MP. He took a personal interest in the industry and made a trip to Boston in the summer of 1940 to study the U.S. inspection and distribution methods. He often spoke at grower-shipper meetings and told them "straight-out" that if they wanted to keep the American market they would have to meet the market requirements which, to him, seemed reasonable enough. He also told them that he did not feel they were being discriminated against by the Americans.

Blueberry extension and research work was discontinued in 1942. The growers and shippers in Yarmouth were learning how to handle the problem. They knew where the badly infested fields and areas were. They were doing a better job of burning and many were following a three-year burn (burn one year and then pick the following two years). Many growers had dusters and were following a good dusting program.

Federal and provincial funds were becoming tight and there was less money for this type of work. The U.S. had already entered the war and little more was heard about maggots until after the war. Furthermore, as the war effort increased, the economics situation became less difficult in the county and there was less importance placed on this industry.

During the maggot years 1930, 1931, 1939 and 1940, the U.S. authorities started to return the maggot crates. The shippers made very enthusiastic studies of how the U.S. inspections were being made and how the shippers might employ methods to get around the inspection.

There were many methods used, and most proved very successful in evading the U.S. inspections. Some of the many methods used were:

- If a crate was returned, a new label was put on it and it would be shipped back on the same boat. Some crates made several trips this way before they evaded inspection.

- A shipper might have seven or eight fields and about an equal number of children, so he would use one of his children's names on the one crate, another name on another crate, and so on. This would confuse the U.S. inspectors.

- In some cases, a fictitious name would be placed on the shipping tag. The shipper always had to keep very detailed records of the crates and names on them.

- The U.S. inspectors found it was impossible to check each crate, so they would take a random sample from the day's arrivals. If they found what they considered too many maggots, they might return the whole day's shipments.

- In order to stop the reshipping of the same crate two or three times, the U.S. inspectors would often paint or spray a purple dye on the crate so they could identify it if it came back again. The shipper would be responsible for the freight costs both ways.

- One shipper found out the U.S. inspectors would only take samples from the top tier of the crate. It was a fairly simple method then to ensure all the boxes in the top tiers in the crates had a low maggot tolerance.

The shippers, before they bought berries, soon learned it was to their advantage to know what the maggot count was. If it was too high, they wouldn't buy them. This information was kept secret as some other unsuspecting shipper might buy the berries and get "caught" with them.

The Canadian inspectors at the Eastern Steamship Wharf had to be very careful that they did not release any sample maggot count figures to shippers. They would do the sample as requested but were told to keep quiet as to the results.[8]

The blueberry maggot problem was one of the many factors which helped to bring about the decline of the blueberry industry in Yarmouth County. The American markets, formerly sure of the quality of the fresh berries from the province, lost faith, and paid more attention to the import of processed berries, which were cleaned before being canned or frozen. In this, Cumberland County had the edge, and coupled with the fact that Cumberland was not troubled with the blueberry maggot, it was inevitable that the northward shift of the blueberry industry should take place.

Dickinson Brothers bought a duster and blueberry maggot dust from Cole Bridges, Calais, Maine, in 1947 or 1948.[9]

Wells knew there were blueberry maggots in some of his shipments but they hadn't hurt any of his business.[10]

Pettigrew reported that any "bad berries - squished, small or maggoty" were always sent to a Montreal canner.[11]

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8. Frank Lord, Kentville, N.S.
9. Karl and Seymour Dickinson, West Brook, N.S.
10. W. B. Wells, Amherst, N.S.
11. Unless otherwise indicated, all the information in this chapter came from the annual reports of the Nova Scotia Department of Agriculture.

Chapter 8 Blueberry Odds and Ends

This chapter presents a few pieces of interesting but not altogether pertinent examples of blueberry culture and folklore. They are taken from various sources around the province.

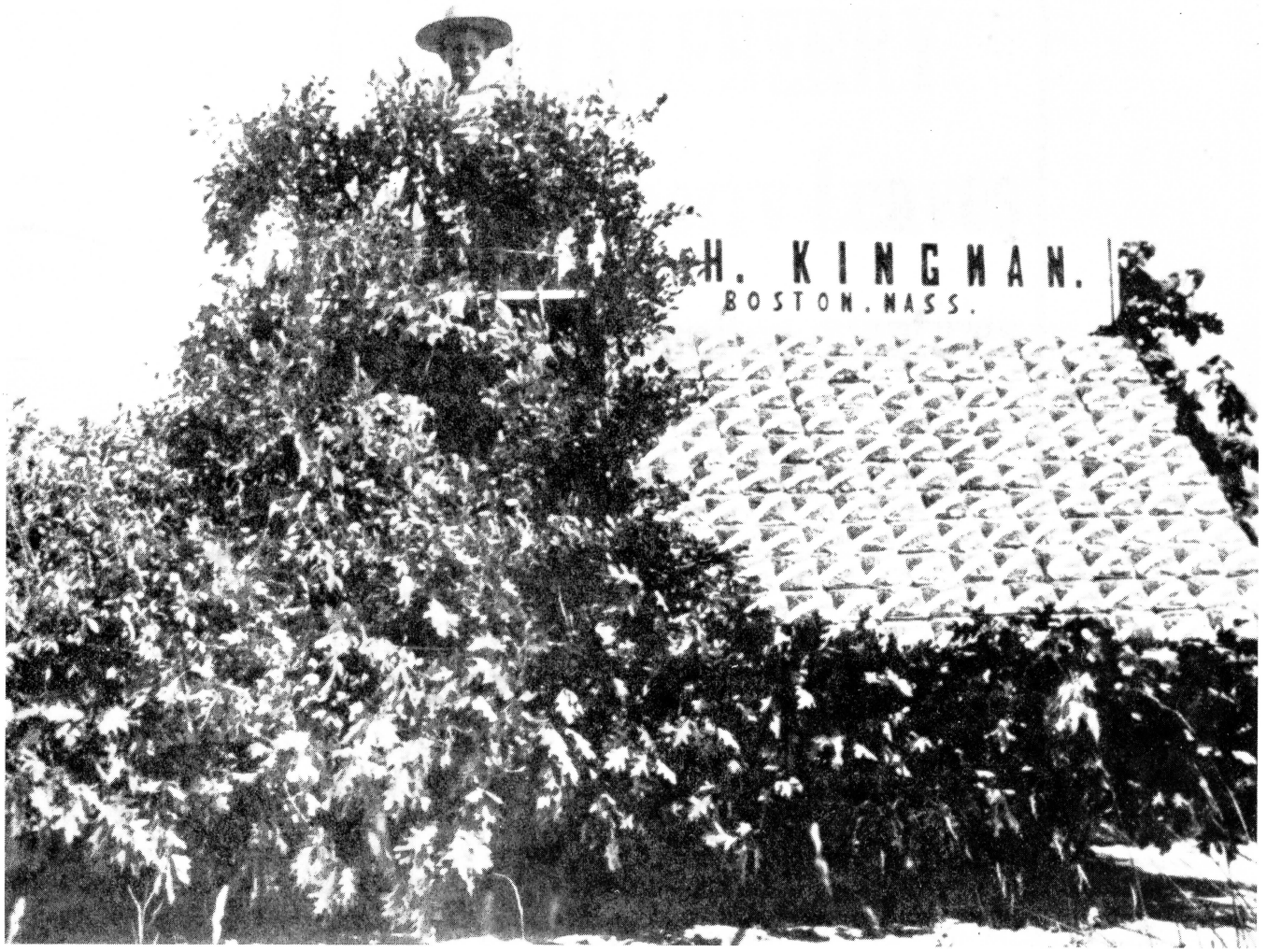
1888 Yarmouth Herald, September 5
On the thirteenth of September a blueberry festival was scheduled to take place near the Methodist Church in Rockingham. Tickets were listed as being 'the usual price'.

In 1891 a citizen wrote to the Yarmouth Times asking whether or not blueberry wine was intoxicating. The answer was so amusing that I have chosen to reproduce it in full.

1891 Yarmouth Times, April 22
A correspondent asks if blueberry wine is intoxicating. As far as we can learn it is not a general favorite with those who go on fishing excursions. However, an intoxicating drink would certainly be made with blueberry juice as well as with grape juice. If it is not intoxicating it will probably make you sick and if it is intoxicating it will possibly make you drunk. Better not tamper with it, because if you really want to be sick, a short sea voyage, or one of Hon. J. W. Longley's published orations will do the deadly work, and if you want to get drunk, a quart of Jamaica Rum, or a little carriage varnish and essence of peppermint would be more certain to get you locked up.

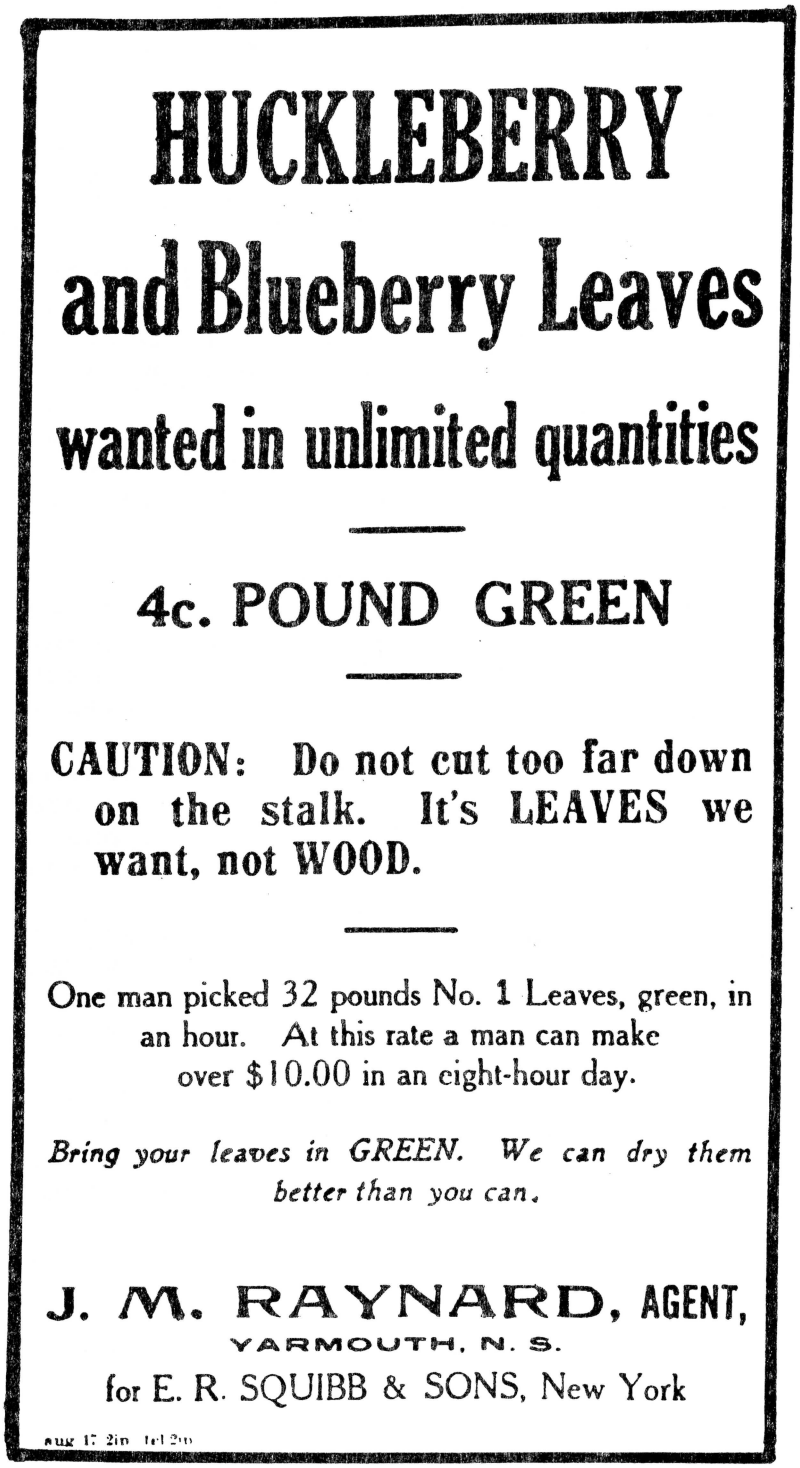
1897 Yarmouth Daily News, August 25
"One of the blueberry wagons that are so conspicuous at the Yarmouth Steamship Company's wharf, broke down on Water Street this morning while heavily laden with fruit, which was quickly strewn about the street. The load was transferred to another wagon but not before the small boys had succeeded in having a glorious feast."

The buyers and shippers were so proud of their blueberries that one year in the 1920's Mr. Phil Pottier of Belleville built a blueberry float for a parade in Yarmouth. E. H. Kingman, a Boston commission agent, paid Mr. Pottier for constructing the float. There were two young people on the float - Ann Burke and Carl Pottier of Tusket.



E. H. Kingman sponsored this blueberry float in Yarmouth's Natal Day Parade.

In 1926 the following ad appeared in the Yarmouth Telegram; however, it is unclear as to what exactly dried blueberry leaves were used for.



HUCKLEBERRY and Blueberry Leaves

wanted in unlimited quantities

4c. POUND GREEN

CAUTION: Do not cut too far down on the stalk. It's LEAVES we want, not WOOD.

One man picked 32 pounds No. 1 Leaves, green, in an hour. At this rate a man can make over $10.00 in an eight-hour day.

Bring your leaves in GREEN. We can dry them better than you can.

J. M. RAYNARD, AGENT,
YARMOUTH, N. S.
for E. R. SQUIBB & SONS, New York

aug 17 2in tel 2in

1928 Truro Daily News, April 15
The North Colchester blueberry pickers were hampered by the presence of a large bear on the barrens and picking had to be slowed for a while.

1920's Railroading in Westchester
The Westchester Express brought in bees in hives for the extensive blueberry barrens in the district.

In 1934 there was a report of a woman who was lost in the woods at Sheet Harbour, Halifax County, for nine days and who lived on blueberries and raspberries, losing only six pounds and sustaining no adverse side effects (Amherst News and Sentinel, August 7).

Debert Military Camp was built during World War II for $7,000,000 on land once existing as blueberry barrens. After the war the camp was dismantled and by 1950 was once again reverting to blueberry fields (Halifax Chronicle-Herald, July 27, 1950).

Blueberries so inspired the good people of Nova Scotia that two of them were even driven to poetry. The following poem appeared in the Yarmouth Telegram in August of 1926.

Blueberries

I'm sorry, blueberries, that I must leave you,
Vacation comrades of a summer hour,
Gay little children of the upland pastures,
Lovely as any flower!

I met you on a ramble that first morning,
Inside the pasture bars.
Your blue frocks and blue jackets trim and dainty,
Your eyes like stars.

Such pleasures as that pasture held abundant -
Sweetfern, shy paths, roses and veery's nest!
But blueberries that lay beyond the balsams -
Of all the treasures you were the first and best.

You did not fear me when I took you from it,
But tumbled from your places in a trice;
And when I ate you - like some green ogre -
Still others ripened for the sacrifice.

Good-by blue sky, blue hills, blue spattered pasture,
Good-by to you, blue everlasting sea!
The city calls. Should I be late next summer,
Blueberry bushes, watch and wait for me!

Frances Crosby Hamlet

Blueberries

Up on the hill where the birches are black
And the shouts of the bluejays keep coming back,
And the skirts of the blueberry pickers sail
Over the gems in the blueberry pail,
Away up there like bowls of sky.
The bushes dry their fruits like rain
And nothing lives upon the earth
Can duplicate the stain.
Not the blue of the gentian sunk
Low in the wood by the alders trunk,
Nor the blue of the chicory fresh and wild
And gaudy in its spindle stile;
Not the blue of the dawn or even
The bluebird's wings that leap at heaven,
Nothing can copy the blueberry colour
Soft on the bush and lush as water.
And there's the smell in the blueberry glade
Warm and sweet as if the sun
Dipped its arms in the blueberry roots
And rose to grow as one.
And there's the pleasure without word,
The thrill of the heart no word can fit,
When the mouth takes in a blueberry pearl
And the tongue can copy the stain of it.

Elizabeth Jane Astly

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New Glasgow Eastern Chronicle 1919-1950
Pictou Advocate 1924-1950
Truro Daily News 1925-1950
Busy East
Family Herald and Weekly Star
Yarmouth County Historical Museum

People

Fred Armstrong, Yarmouth, N.S.
Bob Brooks, Yarmouth, N.S.
Ken Canning, Parrsboro, N.S.
Arthur Crowell, Kemptville, N.S.
Lucy Crowell, Kemptville, N.S.
Hartley Cunningham, Truro, N.S.
Emmerson Davis, Sackville, N.B.
Benoit d'Entremont, Pubnico, N.S.
Karl Dickinson, West Brook, N.S.
Seymour Dickinson, West Brook, N.S.
E. L. Eaton, Kentville, N.S.
Bill Flemming, Truro, N.S.
Lloyd Floyd, Yarmouth, N.S.
Lovitt Frizzell, Yarmouth, N.S.
Harry Grant, Truro, N.S.
Dr. Ivan Hall, Kentville, N.S.
Otis Hamilton, Carleton, N.S.
Lloyd Hawboldt, Halifax, N.S.
Gerry Hines, Kentville, N.S.
Mrs. C. P. Holden, Liverpool, N.S.
R. Horton, Yarmouth, N.S.
Dr. A. Ismail, Orono, ME
Mrs. Drew Kelly, Riverview, N.B.
Dr. Arthur Kelsall, Annapolis Royal, N.S.
Herbert H. Large, Wentworth, N.S.
William Lent, Yarmouth, N.S.
Clarence Logan, Parrsboro, N.S.
Frank Lord, Kentville, N.S.
Dr. Albert MacPhee, Kentville, N.S.
W. J. MacLeod, Halifax, N.S.
Dr. Alan Marble, Halifax, N.S.
Geo. Martin, Sr., Boston, MA
James Nickerson, Carleton, N.S.
Dr. A. D. Pickett, Deep Brook, N.S.
Hedley Pettigrew, Springhill, N.S.
Philomon Pottier, Belleville, N.S.
Harold Quinn, Halfway River, N.S.
Mrs. Alice Richardson, Carleton, N.S.
J. Douglas Trefry, Yarmouth, N.S.
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