

# **Central & Eastern Newfoundland Blueberry Industry:**

## **A Strategy for Development**

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# 1. Setting the Stage

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## **Purpose**

The purpose of this report is to put forward a framework for the Blueberry Development Corporation to develop a commercially viable blueberry industry in Central and Eastern Newfoundland. This will include presenting a brief summary of the evolution of Newfoundland and Labrador's blueberry industry and describing the conditions, methodology and required actions for establishing an industry in the region.

The purpose of this section of the Strategy is to summarise existing conditions in the blueberry industry and outline the context in which the proposed Strategy is set.

## **The Mandate**

In the autumn of 2000, the Blueberry Development Corporation commissioned the Project Team comprising Connections Research (Bauline, NF), Canning & Pitt, Associates (St. John's, NF), Central Consulting Services (Gander) and Dale McIsaac (Amherst, NS). This arose as a result of several regional development agencies coming together based on their belief that a substantial acreage of land within their respective jurisdictions have the potential to support blueberry harvests and the market demand and other conditions exist for a viable blueberry industry to be developed in the region.

Registered in 1999 as a non-profit corporation, the shareholders of the Blueberry Development Corporation are:

- Emerald Zone Corporation (Springdale)
- Exploits Valley Economic Development Corporation (Grand Falls-Windsor)
- Coast of Bays Corporation (St. Alban's)
- Kittiwake Economic Development Corporation (Gander)
- Discovery Regional Economic Development Board (Clareville)
- Schooner Regional Development Corporation (Marystown)
- Gambo-Indian Bay Development Association (Gambo), and
- Irish Loop Regional Economic Development Corporation (Trepassey).

The following agencies serve as ex-officio advisors to the Corporation:

- Newfoundland and Labrador Federation of Co-operatives (NLFC)
- Department of Industry, Trade and Rural Development (ITRD), formerly the Department of Development and Rural Renewal (DDRR), and
- National Research Council (NRC).

The Blueberry Development Corporation agreed early in its planning that it would take a co-operative approach to developing the blueberry industry of Central and Eastern Newfoundland. Embodied in this approach is the formation as soon as is practical of a producers Co-operative comprising growers who will be owning, operating or managing blueberry farms (which either currently exist or which will become established) encompassed by this Initiative.

The co-operative approach is believed to be the most appropriate for this kind of venture since it is believed the blueberry growing operations to be enhanced or established by the Corporation will have a greater chance of achieving long-term viability if they work together rather than in isolation or compete with one another. Therefore, once the a critical mass of blueberry farms in the region has been reached, the Corporation intends to transfer overall responsibility for growing and marketing blueberries to the Co-operative while retaining for itself some overseeing, policy and research and development functions.

The Project Team has carried out its research based on this fundamental principle of co-operative, collective action and on the assumption that existing or potential blueberry growers interested in participating in this Initiative must agree to adopt this approach and operate as a member of the proposed Co-operative.

The task of the Project Team has been to determine if the potential in Central and Eastern Newfoundland is sufficient to support a viable blueberry industry and, if so, to outline a strategy for achieving such. The Terms of Reference stipulate the primary task of the Project Team is to develop a Strategy, including a detailed business plan, to guide the development of the blueberry farm Initiative based on setting up a co-operative structure incorporating the geography covered by six zones in central and eastern Newfoundland.

Activities to be undertaken include:

- conduct extensive consultations on this Initiative and the development options being pursued;
- identify equipment and infrastructure requirements in relation to cost, effectiveness, efficiency and eventual viability;
- conduct on-farm site visits to Nova Scotia;
- recommend the most appropriate co-operative structure based on the needs of the industry within participating zones;
- outline funding requirements to ensure the smooth transition from the Corporation to a newly-formed Co-operative;

- prepare detailed business plans for the Co-operative identifying the optimal path for commercial viability;
- consult with participating zones and Department of Forest Resources & Agrifoods to identify issues regarding land leasing and land use conflicts; and
- outline any other issues or opportunities that become apparent.

These tasks will allow the Project Team to address the following issues:

1. How blueberry farms in the area can capitalise on commercial opportunities available.
2. The best route to establish viable blueberry farms which will increase overall production in the identified zones.
3. Overall capital requirements and where funding may be obtained.
4. The point at which the Steering Committee should be dissolved and the Co-operative assume responsibility.
5. Roles of the Advisory Committee.
6. Any skill deficiencies of farmers and where training expertise can be found.
7. The critical path to commercial development with appropriate benchmarks.

### **Methodology**

The methodology adopted by the Project Team in preparing this Strategy is quite straightforward. We have used the combined expertise of members of the Project Team, together with the views of numerous individuals and groups knowledgeable about the blueberry industry who we consulted, to:

1. Analyse in detail all components of the Newfoundland blueberry industry, set within the context of
  - the broader eastern North American blueberry industries
  - the local agrifoods and manufacturing sectors
  - the goals, objectives and aspirations of the Blueberry Development Corporation, the agencies comprising it and its partners, and
  - provincial and federal public policy, especially on agrifoods development, and business, technology and regional employment.

2. Determine the commercial viability of blueberry production within the six zones, and the associated costs involved, by developing a generic model for blueberry production which may guide the Corporation in
  - opening up new blueberry producing lands and
  - expanding or improving lands already in production.
3. Identify constraints on establishing an industry in the region and suggest appropriate solutions.
4. Outline the relative roles and responsibilities of the Blueberry Development Corporation and the proposed producers' Co-operative, specifying in particular when the Corporation should hand over the reins.
5. Develop a plan to be adopted by the Corporation (and subsequently by the Co-operative) for promoting the Initiative and especially for establishing partnerships with key groups and agencies in the agrifoods sector.

This Strategy comes as a result of extensive work undertaken by the Project Team, including:

1. Two full meetings with the Blueberry Development Corporation in
  - Gambo in November, and
  - St. John's in early January.
2. A mid-way progress report to the Corporation in Clarenville in February through presentation of a Discussion Paper which outlined key issues to be resolved.
3. Extensive consultations with agencies, businesses and individuals involved or associated with the blueberry industry in Newfoundland and Labrador and in neighbouring provinces, including:
  - the shareholders of the Blueberry Development Corporation, and its advisory bodies: NLFC, ITRD and NRC.
  - the Agrifoods Branch of the Department of Forest Resources and Agrifoods
  - the Atlantic Cold Climate Research Centre of Agriculture and Agri-Food Canada
  - the Market and Trade Development Branch of Agriculture and Agri-Food Canada
  - Newfoundland and Labrador Federation of Agriculture
  - Newfoundland and Labrador Horticulture Council
  - established blueberry growers in Newfoundland
  - Newfoundland blueberry processors
  - Crossroads Co-operative, Parrsboro', Nova Scotia
  - Wild Blueberry Association of Nova Scotia, Nova Scotia

- Wild Blueberry Association of North America, Maine
  - Dominion-Loblaw's in Mount Pearl
  - Markland Cottage Winery, Markland
  - Flynn's Winery, Shoal Harbour
  - Purity Factories of St. John's
  - Bidgoods Limited of the Goulds
  - Centre for Seafood and Aquaculture Development, Marine Institute, St. John's, and
  - Alliance of Manufacturers and Exporters, Newfoundland and Labrador
4. Review and analysis of materials and data on all facets of the blueberry industry in
- Newfoundland and Labrador
  - the Maritimes, and
  - other jurisdictions
5. The Project Team's two full meetings as a group to identify and resolve the principal issues associated with developing and integrating existing and potential blueberry producing lands
- in Truro, Nova Scotia in late January, and
  - in St. John's and Clarenville in early February.
6. Extensive research by individual members of the Project Team on key aspects of blueberry industry development, such as
- historical background to the current Initiative
  - land development issues
  - production, processing and marketing
  - a framework for blueberry land development
  - industry business planning
  - co-operative organisation, structure and operations, and
  - industry promotion.

### **Evolution of the Industry**

The sweet lowbush blueberry (*vaccinium augustifolium*) can be found in abundance in the wild in Central and Eastern Newfoundland. The blueberry barrens have developed over the decades largely as a result of numerous forest fires and heavy cutting of wood in these regions. The lowbush blueberry is one of the many plants forming a natural succession in the transition from open land to forest<sup>1</sup> and it is ideally suited to both the

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<sup>1</sup> For further information on this process, see Albert C. Badcock, "*The Blueberry Industry in Newfoundland*", Government Document, Newfoundland Department of Mines, Agriculture and Resources, 1965.

climatic and soil conditions of Newfoundland and Labrador - especially the central and eastern parts of the island portion of the province.

For years, blueberries have been the largest agricultural export commodity for Newfoundland and Labrador - a trade which developed during the great depression of the 1930s. This came about primarily for two reasons:

1. With increasingly high levels of unemployment, it was easy to accumulate the labour force required to harvest a blueberry crop and so many Newfoundlanders were attracted to the fields to pick berries for 10 cents a gallon.
2. It was during the 1930s that cold storage and freezing facilities were first adopted by Newfoundland fish processing companies thereby making it possible to store and ship blueberries from the island without risk of spoilage.

It was under these conditions that the pattern of production, harvesting, processing and marketing of blueberries was established in the province. Although over 70 years or so have passed, the same general structure and process still exist for the majority of blueberries harvested.

1. Fish processing companies make cash advances to their purchasing agents stipulating the price per pound they are willing to pay for product - the price is based principally on the going re-sale price of the crop on the market.
2. The agents purchase product from pickers who are paid the farm price, thereby leaving the agent with a margin to cover transportation costs and profit.
3. The processors clean, sort, freeze, prepare for shipment and transport the collected berries (mainly to mainland markets) and, in some cases, process the fruit into jams, jellies, fillings and other secondary products.
4. Newfoundland blueberries invariably enter the Canadian "commodity market" which is dominated by large mainland processors and brokers. Here the berries are indistinguishable from berries harvested in other provinces as they are marketed across the globe.

*Managed Farms vs. Wild-Pick Operations:* In addition to the wild-pick blueberry harvests, over the last 20 years, several farmers have set up "cultivated" lowbush blueberry operations - primarily in Conception Bay North, but there is a sizable farm in Central Newfoundland. Many of these operations were established as a direct result of an incentive programme offered in the 1978-84 Canada-Newfoundland Agricultural Development Subsidiary Agreement which provided funding for:

- new technological developments

- constructing blueberry access roads
- capital assistance to farmers, and
- blueberry land surveys.

While harvests from blueberry farms are still only a fraction of the total volume produced in the province, they hold considerable advantages over the wild-pick operations. These include:

- productivity (yield per acre) can be improved through continual and planned land development and weed control measures;
- farmers/operators have more direct control over picking operations and hired pickers, thereby improving the quality of harvests, product value and overall efficiency of operations, and
- as independent business-people, farmers/operators have considerable autonomy in marketing and sales to processors and other buyers.

Several of the farmed blueberry operations have targeted their product to the fresh fruit market which, while entailing considerable investment in equipment, packaging, presentation and marketing, has allowed them to command a significantly higher price for their product. Further, some farms have developed berries classed as “organic” or “wild organic”, meaning the fruit is grown with no or minimal chemical interventions. While commanding a high price, producers not using chemicals to treat weeds or encourage growth normally have to contend with lower per-acre productivity and higher costs because of intense labour requirements.

*Blueberry Processing:* On the processing side, there are three principal processing companies in the province - all of them coming out of the fishing industry:

- Indian Bay Frozen Foods (Centreville)
- Harbour International (Harbour Grace), and
- Brigus Frozen Foods (Brigus).

The technology for processing berries has improved in recent years and new automated and computerised equipment has been introduced by processors, but the process remains basically unchanged. Upon entering the plant (or preferably in the field), berries are run through a blower mechanism - a winnowing machine which forces moving air through the fruit to separate the ripe, heavier berries from the lighter, unripe ones, and it also removes unwanted particles of dust and leaves. The ripe berries are washed and leaves are removed. The berries are then shaken and blow dried to remove water.

The berries are then passed under a magnet to remove any metal filings which may be present and then packed in boxes for freezing. Traditionally, the fruit was frozen in

block form and, as a result, they would have to be separated after the freezing process. A cluster breaker would be used to split the blocks of berries. This involves a revolving metal rod equipped with teeth which breaks the blocks into individual berries. The process is detrimental to the quality of the fruit as the teeth and ice break the skin of the berries. However, these days, processors mostly use the individual quick freeze (IQF) process for freezing.

The berries then proceed to a squirrel cage - essentially a cylindrical cage which is continually revolving. Here the tiny green stems at the end of the berries and remaining ice are removed. A final inspection detects any unripened berries and foreign particles left in the batch.

*The Current State of the Industry:* The Newfoundland and Labrador blueberry industry has been characterised by variable harvests caused primarily by uncontrollable weather conditions in any particular year or series of years, plant disease and also because of the method by which the fruit is harvested.

In the 1960s and 1970s, blueberry production fluctuated widely on an annual basis from a high of 3.2 million pounds in 1975 to a low of 0.6 million pounds the year before (1974)<sup>2</sup>. Similarly, in the 1980s, after a bumper harvest of 2.6 million pounds in 1979, the following years showed a dip to 0.43 million pounds in 1980 and 0.52 million pounds in 1981, before another high of 2.25 million pounds the following year (1981).

Newfoundland has not only been the second smallest producer of the five eastern provinces (next to Prince Edward Island), it has also had the widest fluctuations in annual harvests of any of these producing areas. More contemporary blueberry production data show:

- that Newfoundland and Labrador's blueberry harvests appear to be on the decline (notwithstanding a good harvest in 2000) whereas those for all other jurisdictions have risen and continue to do so, and
- Newfoundland is now the smallest producer in eastern Canada.

The reported harvests in 2000 for jurisdictions in Eastern Canada and the US is as follows:

Maine	110,600,000 pounds
NS	41,300,000
Que	19,000,000
NB-	13,000,000
PE	5,400,000
NF	3,420,000

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<sup>2</sup> Statistics from the Agrifoods Branch, Department of Forest Resources and Agrifoods.

The average/yr. production for the period 1996-2000 is:

Maine	75,320,000 pounds
NS	31,144,000
Que	22,820,000
NB	11,900,000
PE	3,500,000
NF	1,660,000

The average/yr. production for the period 1991-1995 is:

Maine	62,920,000 pounds
NS	29,729,000
Que	17,070,000
NB	8,884,000
PE	1,976,000
NF	1,632,000

The average/year production for the period 1986-1990 is:

Maine	45,604,000 pounds
NS	9,313,000
Que	13,797,000
NB	7,580,000
PE	1,152,000
NF	3,016,000

### **Past Perspectives on the Blueberry Industry**

The Newfoundland blueberry industry has been around for much of the last century. But as the above data indicate, it has remained relatively static in terms of production volumes, technological applications and diversification of activities. Only in the last two decades has there been movement away from the traditional industry, with such initiatives as managed blueberry farms, production for the fresh and organic berry markets, and the manufacture of blueberry wines and other specialty food products.

While the Project Team considers its research leading to the development of this Strategy to be all-encompassing and somewhat seminal, we stress that this is not the first attempt to rejuvenate or diversify the province's blueberry industry. Based on the premises that

- learning from mistakes can be the best form of learning;
- few things are ever truly "new" - there are usually forerunners to any initiative; and
- we should avoid "re-inventing the wheel" at all costs,

the following summary of past studies may prove helpful to the Corporation.

In 1976, John Clarke of MUN's Business School studied the feasibility of establishing a commercial blueberry farm in Newfoundland<sup>3</sup>. This was completed prior to several blueberry farms setting up in Conception Bay North during the 1980s and early 1990s.

Clarke focussed on problems facing the Newfoundland blueberry industry which he thought would continue until some positive action is taken by industry groups or government. He referenced in particular as structural constraints to the industry's development, the following issues:

- while blueberries are ideally suited to Newfoundland and they constitute the province's single-most valuable agricultural export commodity, they are harvested in the wild by untrained and poorly-paid pickers;
- blueberries are a sideline operation for processors who are all engaged in the fishing industry;
- quality control measures are not implemented to any degree, meaning Newfoundland blueberries command a low market price;
- people harvesting the crop often abuse the picking period by harvesting prior to the set dates;
- freezing berries in block form add to the low quality of the end product;
- Newfoundland exports only what it can freeze and store, not what it can produce;
- the lack of venture or risk capital for prospective blueberry entrepreneurs;
- land management policies, traditional land ownership and difficulties in obtaining plots of land large enough for commercial production; and
- lack of crop insurance programmes covering blueberries.

Clarke examined the economic feasibility of establishing a 200-acre blueberry farm where he assumed yields of between 1,000 - 2,000 pounds per acre could be achieved. After carrying out detailed financial computations, he concluded this could be a viable undertaking. However, he projected that because of the need to adopt a rotational burning scheme, yields in the order of 2,000 pounds per acre would probably be required to ensure the operation's success. Given this

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<sup>3</sup> John Clarke, *A Study of the Feasibility of Establishing a Commercial Blueberry Farm in Newfoundland*" (Monograph), School of Business Administration and Commerce, Memorial University of Newfoundland, March 1976.

*“it appears obvious that some system of sharing fixed costs and capital expenditures should be instituted to ensure the growth and future prosperity of the blueberry industry in Newfoundland.”* (p. 5)

Clarke recommended:

1. A syndicate type farming operation should be started. The essence of such a system would be an adequate number of interested farmers who would be willing to pool their resources and purchase common capital goods to be shared by members of the syndicate.
2. Upon implementation of the syndicate, its members, government or both should set out to promote the industry both locally and in the market place. Adequate communications should be established with would-be pickers informing them of the advantages of the new system.
3. Government should maintain its role in soil testing and mapping of suitable blueberry areas.
4. Government should extend the present crop insurance programme to include blueberry farmers so they will not run the risk of financial disaster in such a high-risk industry. (pp. 5 -6)

Clearly Clarke believed developing the blueberry industry should be a shared initiative between farmers and government. However, he appeared to be somewhat pessimistic over farmers' ability to convince government to play its part. As he noted in the report's executive summary:

*“It appears as if blueberries offer little glamour for politicians, hence the industry has not received much promotion from the government sector. There are some indications that this may be changing, but as yet the results have not been seen.”* (p. 3)

In 1978, a group from MUN's Department of Engineering investigated establishing a blueberry jam and wine-making industry in Newfoundland<sup>4</sup>. As part of the study, the group discussed the blueberry production sector and stressed many of the same constraints raised earlier by Clarke. It also echoed Clarke's view that developing the blueberry industry will depend on the policies and actions of government and it described a new initiative under the recently-signed Agricultural Development Subsidiary Agreement aimed at blueberry industry development. The group cited the

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<sup>4</sup> S. Richter, et al, *“An Investigation into the Possibility of Establishing a Blueberry Jam and Wine-Making Industry in Newfoundland”* (Monograph), Department of Engineering, Memorial University of Newfoundland, November 1978.

Agriculture Minister of the time, Hon Ed Maynard, who claimed the new agreement would “*lead to increased production, providing that all those in the industry work together.*” (p. 14)

The study concluded that a blueberry jam and wine-making industry was viable as there were adequate volumes of fruit available and the processed products could be sold in specialised niche markets. Interestingly, the group thought the jam making component would be quite lucrative, but it was less certain about wine-making. However, these industries would be endangered should the previously-referenced constraints on production not be resolved.

In 1983, Dieter Hajek undertook an inquiry into improving the export potential of Newfoundland blueberry products<sup>5</sup>. Hajek again referenced the same issues as the previous researchers, but he noted also that the present harvesting system based on traditional methods caused widespread fluctuations in production from year to year. Thus, considering that most commercially harvested blueberries are exported, Newfoundland’s position as a supplier is greatly impaired by the fluctuating nature of its harvest.

Hajek posed several key recommendations:

1. Newfoundland should adopt blueberry farming as an alternative to the traditional wild-pick harvesting system.
2. The Blueberry Farm Development Programme under the federal-provincial subsidiary agreement should be used to encourage blueberry farming.
3. Processors should reduce their dependency on the marketing efforts of other producing provinces and initiate a marketing programme of their own.
4. Since there is limited public awareness of the assistance available to improve the blueberry industry, it is incumbent on government to promote blueberry farming on a larger scale. (p. ii)

The main conclusion reached in this study was:

*“The reorganisation of the blueberry industry with emphasis on active marketing programmes and blueberry production as a farming operation will considerably enhance the value of agriculture in the Newfoundland economy. This reorganisation cannot be achieved without the support of*

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<sup>5</sup> Dieter Hajek, “*An Inquiry into Improving the Export Potential of Newfoundland Blueberry Products*” (Monograph), Faculty of Business, Memorial University of Newfoundland, August 1983

*government programmes such as the Blueberry Farm Development Programme and the Programme for Export Market Development.” (p. 34)*

The common thread among all of these reports, apart from climatic and physiographic constraints, is that development of a provincial blueberry industry will not take place until:

- there is a will on the part of governments to highlight the industry as a priority area for development and to back up this commitment with developmental resources and expertise, and
- government, farmers/potential farmers and other parties associated with the blueberry industry co-ordinate their efforts through collective action, partnerships and co-operation.

After reviewing past studies on the blueberry industry in Newfoundland, and considering the issues researched as part of this Strategy, the Project Team believes that the combination of factors cited above account for the lack of development of the blueberry industry - but only in part. Also to be taken into consideration is the fact that the development of blueberry-producing lands to commercial viability is a lengthy process. It can take 6 years or more to transform undeveloped land into productive blueberry units yielding 1,000 pounds per acre and between 10 and 20 years to attain yields of 2,000 to 3,000 pounds per acre. Normally this is a deterrent to potential farmers and government agencies which provide support since neither can wait that long to see returns on their investments.

It is important, therefore, in any strategy to develop the blueberry industry for a plan of action to be devised which balances off the long-term perspective - and patience - required to open up new producing lands with entrepreneurs' and investors' need to see concrete results at periodic intervals. This we have tried to do in the blueberry industry development model described in Section 4.

### **Public Policy Considerations**

The Corporation is not working in a policy vacuum: it has set its objectives based on the regional development and revenue generating benefits to be derived through investments in the blueberry industry, and within provincial public policy highlighting the overall potential for enhanced provincial blueberry production and its impacts on provincial and regional economies.

In its 1991 report, ***Towards the Next Century: Agriculture in Newfoundland and Labrador***, the Task Force on Agrifoods noted that most agricultural industries were under-developed and failing to realise their full potential (p. 13). In suggesting solutions to this short-coming, the Task Force devoted a sub-section to “Diversifying the Blueberry Industry” (pp. 249-251) at the end of which were two recommendations:

*17. governments and industry should work cooperatively to explore the full range of opportunities for acquiring secure marketing arrangements for Newfoundland blueberries, and*

*18. the full potential for diversifying the blueberry industry should be examined in a comprehensive manner.*

These recommendations were based on extensive consultations with producers, processors and the wholesale-retail trades which revealed:

- producers harvesting fruit from blueberry management units primarily in the Conception Bay North area and who were developing markets for fresh produce (including out-of-province markets) claimed that the market demand for their high quality berries would be far stronger than they could ever supply on the their land base;
- processors who relied largely on berries from the wilds which were harvested by pickers, sold to agents and who in turn sold to the processing plants realised the limitations of wild-picked berries in terms of quality and freshness and the difficulties associated with relying on untrained pickers; and
- buyers and manufacturers of blueberry-based products revealed they would purchase significantly higher volumes of blueberries from this province if
  - additional product was available
  - there were consistently abundant blueberry harvests year after year, and
  - berries were of a high quality - fresh, relatively pesticide-free and promoted as disease-free and “natural”.

Over the last decade, while all three segments of the industry (producers, processors and buyers/manufacturers) have continued to make the claim that the potential and the markets do exist for larger volumes of local blueberries:

- neither of the two recommendations proposed by the Task Force have been acted on in any comprehensive manner;
- the Province has embarked on an extensive strategy to develop a cranberry industry - almost from scratch - and it has dedicated staff to this activity, but it has not devoted anything like an equivalent level of effort to the blueberry industry; and
- it is argued that it will take a long time and considerable investment of resources and effort to bring the volumes of harvested cranberries to a level equal to blueberries.

Further justifying the Blueberry Development Corporation's objectives is the **Agrifoods Development Strategy** released in 1997 by the Agrifoods Branch which noted:

- that the commercialisation of agriculture in Newfoundland and Labrador is relatively recent, and so the industry is still in the early to mid-development stages, especially compared to major competitors in other parts of the country; and
- since horticultural producers are still establishing their basic farm infrastructure - such as clearing an adequate land base - suggested strategic actions include:
  - identify suitable agricultural production areas for future industry development, and
  - assist with the establishment of key industry facilities for the development of new opportunities, such as plant propagation for the commercialisation of selected new crops, cooperative storage, processing and/or marketing facilities by various agricultural commodities.

In terms of promoting cooperative actions among individual producers and enterprises, the Agrifoods Strategy listed among its priority strategic actions for marketing that government should assist in the further development of producer marketing organisations, joint ventures, marketing cooperatives and other entrepreneurial development mechanisms.

The Government of Newfoundland and Labrador's newly-released strategy on Jobs and Growth, entitled **Securing Our Future Together: A Renewal Strategy for Jobs and Growth** and released in March 2001, notes that in order to keep pace with the global economy "*we must reach out and secure the opportunities that are presently before us and look ahead to capture new opportunities that are emerging*". (p. 1) High on this Strategy's agenda are several commitments which are of direct relevance to the blueberry Initiative, namely:

- **Maintaining a strategic focus** by keying in on industries and areas in which we have, or can develop, a competitive advantage and by being strategic in our actions and investments to support new long term opportunities. (p. 5)
- **Supporting the enterprise spirit of the private sector as the engine of economic growth**, where government's role is to create an economic and social environment that allows private enterprise to be competitive and stimulate lasting economic growth. (p. 6)
- **Concentrating on sustainable economic development** by managing our natural resources and environmental conservation efforts with a view to achieving long term benefits for everyone. (p. 6), and

- ***Revitalising all regions of the province and our rural communities*** to ensure fairness in the distribution of wealth and economic opportunity. (p. 6)

On pages 11 to 13, ***Jobs and Growth*** references that a more competitive agrifoods industry has emerged over the past decade in terms of both traditional and new products. Not only are agrifoods a major source of economic activity in many rural communities, but they “offer significant potential to strengthen and diversify the rural economy.” (p. 11)

Priorities for Action for the agrifoods sector in the Strategy are set within the context of realising the industry’s full potential and include,

1. *Targeting areas where private sector strength is clearly evident and adopt a stronger market driven approach to development generally.* (p. 12)
2. *Supporting the implementation of industry driven action plans for growth and diversification through a comprehensive new Growth and Diversification Investment Initiative for Agrifoods.* (p. 12)
3. *Exploring means and options to facilitate a better flow of commercial capital to agrifoods enterprises to achieve growth and diversification objectives.* (p. 13)

Later in the document, under the section “Creating the Right Environment” for economic development, government commits to:

*“continue its efforts to cut red tape and ensure its regulations do not undermine the development of the economy, especially our small businesses. It will do so without sacrificing legitimate public policy imperatives.”* (p. 32)

## **2. Working the Land Base**

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### **Purpose**

The purpose of this Section is to summarise the key issues associated with the blueberry land base showing in particular the minimum requirements for commercial viability and environmental sustainability, and to identify and define management and productivity criteria for lands to become viable and sustainable over time.

### **Approach**

The Project Team began by trying to identify existing land tracts in Central and Eastern Newfoundland which are

- in commercial blueberry production, and
- have been assessed by the constituent components of the Corporation or the Agrifoods Branch.

Within the study area, there are approximately 700 acres of land which are currently in production or have been identified as having good potential for blueberry production. The Regional Economic Development Boards comprising the Corporation have identified additional lands, much of which is privately owned which could be available for blueberry production. The total land area available - approximately 1,500 acres - its locations, potential operators and tenure status, is summarised in Appendix 1. While this land has been identified, it is not known whether these acreages will support a viable blueberry industry.

The main questions to be asked are:

1. What potential do these lands have for commercial blueberry production?
2. How much more land is there?
3. Where is it?
4. How can it be obtained?

Each of the land parcels listed in Appendix 1 require a thorough evaluation and preparation of a site development plan which takes into consideration specific locational factors.

Through the course of conducting research for this report, it was found that there is little information or criteria readily available upon which even a preliminary assessment of land suitability for blueberry production under Newfoundland conditions could be undertaken. There is good information on how to identify and develop blueberry lands

in the Maritimes, but it is necessary to ask whether these criteria are valid for Newfoundland and Labrador.

Through consultation with soil surveyors, research scientists and departmental specialists, criteria to determine the suitability of lands for blueberries has been developed. Any evaluation of lands - whether abandoned farmlands or otherwise - can take place against these criteria. Where there are deficiencies in suitability, the costs/risks of overcoming them would have to be taken into account in any decision to move forward.

### **Land Potential Development Criteria**

The 4 criteria by which sites should be evaluated are - in order of priority:

1. *Land Cover*: the number of plants per acre. If plant density is below a certain percentage coverage of existing wild plants
  - the chances of success may be diminished, or
  - the time required to develop a field to an optimal density is increased.

The Department of Forest Resources and Agrifoods recommends that the minimum is around 30 per cent coverage. In the Maritime provinces it has been found that blueberries can be grown in areas where plants are not actually visible, as long as blueberry rhizomes are present in the soil. Once land has been cleared of competing vegetation the blueberry plants will emerge.

2. *Topography*: level to gently sloping lands are a pre-requisite for the use of specialised blueberry equipment, such as tractors, mowers, harvesters and burners. Rough terrain, without leveling, is dangerous for equipment and operators, and can result in more mechanical breakdowns and higher costs.
3. *Soil Conditions*: the organic layer (humus or “duff” layer) and underlying soils should be moderately well drained and of a sandy loam texture. Typically:
  - recently cut-over sites with a good growth of balsam fir indicate good conditions for blueberries;
  - the organic/humus layer should be greater than 40 centimetres;
  - the percentage of the surface area of the land covered by boulders and stones should be less than 15 per cent; and
  - bedrock outcrops should be less than 10 per cent.

In other jurisdictions - especially Maine and Nova Scotia, but also in other Eastern provinces - blueberry fields have been developed with little or no humus layer. Therefore, this may not be as limiting a factor as is currently thought.

4. *Climate*: this is an important but often overlooked issue. Important climatic factors are:
- frequency and strength of winds
  - number of frost free days, and
  - snow-cover.

In an 8-year research project on blueberries conducted by Agriculture and Agrifoods Canada on the Avalon peninsula, winter kill occurred in 4 of the 8 years. The risk of a late frost every other year may outweigh otherwise good growing conditions. Growers have to take such risk into consideration in their business planning.

With limited chemical inputs, commercial yields typically are in the order of 1,000 pounds per acre. If there is to be a significant increase in commercial blueberry production in the province, serious efforts must be made to increase yields to greater than 1,000 pounds per acre through the use of chemical interventions - herbicides and pruning/burning. Small plots with high yields will be more profitable than large acreages with low yields - even if input costs are lower on the larger areas. Note that this does not rule out developing some blueberry lands to be "certified organic" or "organic-wild" (with minimal chemical interventions). It merely implies that land management procedures, as well as yield expectations, will have to be formulated under a different set of conditions.

### **Future Site Assessments**

An extensive evaluation of lands' blueberry growing potential has not been undertaken since the 1970s. Given the knowledge that now exists about the growth and development of the wild blueberry, it is appropriate to conduct a comprehensive assessment for the entire province, and especially for lands in the target area of Central and Eastern Newfoundland.

Electronic databases are now available which indicate:

- soil conditions (through federal and provincial soil surveys)
- climate (there is ample climate data available across the province)
- forest cover type (from Department of Forest Resources and Agrifoods data), and
- land use information which could be used to identify lands which meet the criteria.

Other considerations, such as access and land use restrictions from, for instance, protected water supply areas and timber rights would further refine the analysis.

While such an assessment is beyond the scope of this project, it is recommended that the Corporation make representation to government to undertake this task without

delay - especially considering the somewhat surprising number of land parcels and total acreage being sought by farmers and potential farmers for blueberry development, as outlined in the zonal inventory in Appendix 1.

### **Development and Production Costs**

General land development and production cost principles to bear in mind include:

- the higher the yield, the lower the cost of production;
- based on the Nova Scotian experience, sites larger than 20 acres should be divided into two parcels so that there is a crop in each alternating year;
- it takes considerable time to develop blueberry lands - approximately 6 years to develop a field to minimum yield levels - and for the plants to become established and spread after clearing, leveling and weed control; and
- to be viable, target yields should be in the range of:
  - 3,000 lbs per acre with modern management practices
  - between 1,000 and 3,000 lbs per acre with less intensive management; and
- the length of time to bring a field into production depends primarily on the initial density of blueberry plants. With good management, the rate of spread can be increased, thereby shortening the time for development.

### **Production Techniques**

General production factors to be taken into consideration include:

- early spring or fall pruning is required through burning or mowing;
- spring herbicide treatment should be applied, followed by spot treatments;
- a herbicide applicator - either a back-pack version or mechanical spreader attached to a tractor - costs approximately \$2,000;
- burning costs - either propane or oil - are \$100 to \$150 per acre (this may be increasing continually with higher oil prices);
- mowing costs are about \$30 to \$40 per acre; and
- most blueberry land is developed on a 2-year cycle, but in some cases a 3-year management cycle - with pruning in the third year and 2 consecutive harvests - may be a preferred option.

### **Harvesting**

General points to bear in mind relating to harvesting include:

- using hand picking methods, between 500 to 1,000 lbs per day can be harvested;
- pickers are generally paid 10 - 25 cents per pound, but the key is pickers' ability to harvest high quality product. In this regard, buyers seeking only quality fruit are prepared to pay premium rates - some as much as 65 to 75 cents per pound;
- mechanical pickers require at least a 35 horse power tractor with driver and harvester operator;
- mechanical harvesters can harvest 2.5 to 3 acres per 10 hour day in an efficient manner and they represent 60 per cent of the cost of hand picking. (In Nova Scotia, an increasing proportion of the crop is harvested mechanically); and
- picking and transport to the processor should take place on the same day - preferably berries should be shipped as soon as they are picked - twice daily if possible. This means that in Newfoundland, the use of refrigerated trucks or long drives to the processor will be an important consideration.

### **Costs of Production**

In Nova Scotia, the cost of production following traditional practices is between 30 and 40 cents per pound.

Tables I - IV from the 1999 Nova Scotia Wild Blueberry Situation Report exhibited on the following two pages provide per-acre costs of production for harvesting and production. The question is, are these realistic costs which could be applied to Newfoundland? This issue is addressed further in Section 4.

### **Training Needs**

General areas on which skills development programmes for blueberry producers should focus include:

- land development and improvement
- pruning
- herbicide application, and
- harvesting - raking techniques, product handling, etc.

However, with the exception of the Pesticide Applicator's course offered by the Department of Environment, there are no set courses or training programmes available in Newfoundland and Labrador relevant to blueberry producers, and offerings are few and far between in neighbouring provinces. Indeed, most blueberry industry training in

the Maritime provinces is tailor-made to the needs of producers and is often conducted by small fruit specialists in co-operation with experienced producers.

There is no doubt that existing blueberry farmers in this province require skills upgrading, and new entrants to the industry need more extensive training in the basic elements of blueberry production. Therefore, consideration should be given to a three-pronged approach to training - and this process can commence as soon as the Corporation's Initiative is in progress. This training can best be given to small groups of producers who have roughly similar levels of knowledge and experience which will involve:

**Table 2-1 - Production & Harvesting Costs Using Burning & Hand Harvesting**

Production Costs Per Acre		Harvesting and Handling Costs	
Pruning	\$130	Harvesting & Supervision	15c to 20c/lb
Fertilisation	\$25	Equipment & Transportation	2c/lb
Insect Control	\$30		
Disease Control	\$30		
Weed Control	\$80		
Pollination (2 hives)	\$140		
Miscellaneous Costs	\$20		
<b>TOTAL</b>	<b>\$445</b>	<b>TOTAL</b>	<b>17c to 22c/lb</b>

**Table 2-2 - Variability of Total Production & Harvesting Costs Per Pound Due to Yield Variations (Based on Table 2.1 Cost Figures)**

Yield	Production Cost	Harvesting & Handling Costs*	Total Cost
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1,000 lbs/acre	44.5c/lb (\$445/acre)	22c/lb	66.5c/lb
1,250 lbs/acre	35.6c/lb (\$445/acre)	21c/lb	56.6c/lb
1,500 lbs/acre	29.7c/lb (\$445/acre)	20c/lb	49.7c/lb
1,750 lbs/acre	25.4c/lb (\$445/acre)	19c/lb	44.4c/lb
2,000 lbs/acre	22.3c/lb (\$445/acre)	18c/lb	40.3c/lb
2,250 lbs/acre	19.8c/lb (\$445/acre)	17c/lb	36.8c/lb
2,500 lbs/acre	17.8c/lb (\$445/acre)	17c/lb	34.8c/lb
2,750 lbs/acre	16.2c/lb (\$445/acre)	17c/lb	33.2c/lb
3,000 lbs/acre	14.8c/lb (\$445/acre)	17c/lb	31.8c/lb

\* Harvesting and handling costs have been varied between 22c and 17c to reflect the influence of good yields in lowering harvesting rates.

**Source:** Data in tables 2-1 to 2-4 come from the Nova Scotia Wild Blueberry Situation Report, 1999.

**Table 2-3 - Production & Harvesting Costs Using Flail & Mechanical Harvesting**

Production Costs Per Acre		Harvesting and Handling Costs	
Pruning	\$40		
Fertilisation	\$25		
Insect Control	\$25		
Disease Control	\$45		
Weed Control	\$80		
Pollination (2 hives)	\$140		
Miscellaneous Costs	\$20		
<b>TOTAL</b>	<b>\$375</b>	<b>TOTAL</b>	10c to 12c/lb

**Table 2-4 - Variability of Total Production & Harvesting Costs Per Pound Due to Yield Variations (Based on Table 2.3 Cost Figures)**

Yield	Production Cost	Harvesting & Handling Costs*	Total Cost
1,000 lbs/acre	37.5c/lb (\$445/acre)	12c/lb	49.5c/lb
1,250 lbs/acre	30.0c/lb (\$445/acre)	12c/lb	42.0c/lb
1,500 lbs/acre	25.0c/lb (\$445/acre)	11c/lb	36.0c/lb
1,750 lbs/acre	21.4c/lb (\$445/acre)	11c/lb	36.0c/lb
2,000 lbs/acre	18.8c/lb (\$445/acre)	10c/lb	28.8c/lb
2,250 lbs/acre	16.7c/lb (\$445/acre)	10c/lb	26.7c/lb
2,500 lbs/acre	15.0c/lb (\$445/acre)	10c/lb	25.0c/lb
2,750 lbs/acre	13.6c/lb (\$445/acre)	10c/lb	23.6c/lb
3,000 lbs/acre	12.5c/lb (\$445/acre)	10c/lb	22.5c/lb

\* Harvesting and handling costs have been varied between 12c and 10c to reflect the influence of good yields in lowering harvesting rates.

**Note:** Production costs vary considerably from grower to grower depending on the condition of the fields, location and the management programme. The harvesting and handling cost per pound for hand-raking varies with labour availability, yield per acre and field conditions. Mechanical harvesting costs may also vary depending on yield and field conditions. Growers with low-yielding or poorly managed fields must pay higher harvesting costs than those with weed-free, high-yielding fields. Because of the great variations between growers' costs, it is difficult to determine meaningful average production and harvesting costs for growing lowbush

blueberries. Each operation must be assessed on the basis of its production, location, yield, management plan and variable cost factors.

1. On-site visits to various blueberry operations in neighbouring provinces, hosted by producers in those provinces - to be undertaken in the autumn at the height of production and/or land treatment.
2. "Classroom" instruction on the theory and practice of blueberry production conducted by an experienced small fruit specialist and held during the winter - in the off-season.
2. This should be followed by tailor-made training carried out by a small fruit specialist, perhaps in concert with an experienced producer, to be conducted on selected farm sites in the province during the early summer months - June would be the ideal time.

In addition to training in areas of land management and blueberry production, producers should still be required to take any number of short courses and workshops on various aspects of farm business management, such as those sponsored by the provincial Agrifoods Branch and the Federation of Agriculture, in order that they can operate at the highest level of economic and financial efficiency.

With respect to farmers' overall training and skills upgrading, the Blueberry Development Corporation should work closely with the producers' Co-operative as soon as it is established to identify skills deficiencies among member growers and arrange for appropriate training sessions. Preferably the Corporation should start consulting as soon as possible with appropriate agencies in the province (like the Horticultural Council, Federation of Agriculture, the College of the North Atlantic, provincial and federal agrifoods departments, etc.) and elsewhere (such as the Nova Scotia Agriculture College, the Nova Scotia Blueberry Institute, etc.) to develop a comprehensive Training and Skills Development Plan for the blueberry industry.

### **Land Use Policy**

Land development costs should be considered as an additional cost separate from ongoing operation and production costs. Important considerations are:

1. The rate for leasing Crown lands in this province for agriculture is \$4 per hectare per year, plus the initial land survey. Current Crown land policy allows people to obtain a permit to occupy (now called permit to licence) in which there is no fee, but the end result is that land eventually comes under a lease.
2. The Federation of Agriculture has formed a committee to review the Crown land policy in general as it pertains to agriculture. The impetus stems from the Department's action last year in which it wrote to lessees of Crown land for blueberry production and advised that, unless there was some activity on those lands, leases would be cancelled. It is now an opportune time for the

Corporation to write to the Federation of Agriculture (or alternatively the provincial Director of Soil and Land Management Division) regarding Crown land policy and availability of land for blueberry production in order to identify leased lands which may soon become free.

3. Forest Resources and Agrifoods' policy on farm viability as it relates to Crown land was discussed with officials in the department. It is not the case that the Department only approves lands for agricultural use where it can be shown that the land is part of a commercially viable operation. Lands can be approved for agricultural use as a means of supplementing income - that is, a part-time farming operation. This should be an important part of the approach taken to foster the blueberry industry in the province since rarely will a blueberry farm be able to offer full-time employment and incomes.
4. A number of the timber licence lands are up for renewal over the next few years. It is now an opportune time to present the Department with the need to identify additional berry lands. It appears as if the Department may well be more receptive to this approach. However, even though existing and potential blueberry farmers see the restrictions on land under timber licences to be a constraint to the industry's development, it now appears there is land available - especially privately-owned land - which may have considerable potential for blueberry production. Therefore, while following a strategy to obtain lands currently held by the paper companies should still proceed, this should not be uppermost on the agenda of the Corporation at this point.
5. In the 1970's, research was undertaken to identify lands suitable for berry production. A number of "Blueberry Management Units" were established. These areas included lands which were considered good for blueberries and other small fruits, such as partridge berries. It should not be assumed that lands within an identified BMU will be necessarily be best suited for blueberry production.

### **Regulatory Requirements**

Development and use of lands for blueberry production must follow the requirements of a number of municipal, provincial and federal regulations and legislation. Some of these requirements include:

1. Where development is to occur within a municipality which has a Municipal Plan and Development Regulations in place, a development permit is required. This is necessary where new land is to be cleared and developed - including construction of access roads and new buildings.
2. Provincial legislation which is pertinent to development and operation of blueberry lands includes:

- *The Environment Act* - requires approval of any development involving alterations to bodies of water, including culvert and bridge installation, drainage, etc.
  - *The Pesticides Control Act* - requires a licence for the use and handling of commercial pesticide products.
  - *The Forestry Act* - requires a permit be obtained for all out-of-doors fires during the forest fire season. A permit is also required to cut timber on Crown Lands.
  - *The Lands Act* - sets out the procedures for obtaining title to Crown lands.
  - *The Storage and Handling of Gasoline and Associated Products Regulations* - requires a Certificate of Approval for the storage and handling of gasoline and associated products.
  - *Environmental Assessment Act* - may require registration under the Act where large tracts of land are proposed for clearing and development.
3. Federal legislation which may have an impact on the development of blueberry lands include:
- *The Fisheries Act* - a permit will be required if development has potential to discharge material into fish-bearing waters or affect fish habitat.

Other permits and approvals may be required depending on the specific location of the development.

### **3. Processing & Marketing**

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#### **Purpose**

The purpose of this Section is to provide a brief overview of the processing and marketing components of the Newfoundland blueberry industry in order to show how the proposed Initiative - which focuses principally on augmenting the province's land base - will benefit the industry as a whole and result in a substantial increase in the volume of annual blueberry production.

#### **Processors and Manufacturers**

As noted earlier, the export trade in blueberries in this province developed largely during the 1930s when

- unemployed Newfoundlanders could earn 10 cents/gallon picking wild blueberries from the barrens or old forest-fire cut-overs
- cold storage and freezing facilities were first installed by fish processing companies, and
- it became possible to store and ship berries from the province without spoilage.

What resulted was a pattern of blueberry production, harvesting, processing and marketing based on berries picked in the wild - lands supporting blueberries following extensive forest fires. Over 70 years later, this same general structure exists for much of the current industry.

The three main firms in Newfoundland and Labrador which process blueberries during harvest season acquire most of their berries through the picker-agent system. However, a small but increasing volume of berries is now supplied to processors by operators of blueberry farms. They can command a higher price because of the better quality fruit they offer, more consistent berries, less spoilage, etc.

In the last two decades, some secondary processing - hereinafter referred to as manufacturing - has been carried out using Newfoundland blueberries. These include:

- Indian Bay Frozen Foods, one of the traditional processors of blueberries, manufacturers blueberry jams under the Ackerman's label;
- Rodrigues-Markland Cottage Winery has since the 1980s been producing organic/kosher blueberry wines using an increasing volume of local certified

organic and organic-wild blueberries, with future plans to diversify production to a wide range of blueberry flavoured liqueurs, vermouths, juices and waters;

- The Flynn and Notre Dame Wineries in Shoal Harbour and Twillingate use about 5,000 pounds and 10,000 pounds respectively of blueberries annually to produce berry flavoured wines (the latter specialising in two basic wines - blueberry and rhubarb, while the latter has a more varied selection of fruit wines)
- Purity Factories of St. John's uses 6,000 pounds annually of individual quick frozen (IQF) blueberries from Indian Bay Frozen Foods to make its blueberry jam;
- Dark Tickle of Griquet on the Northern Peninsula buys several thousand pounds of local blueberries annually to manufacture a range of premium quality preserves, sauces and other foods for sale at home and abroad. The volume of blueberries procured annually by Dark Tickle varies since the company maintains a 2-year inventory in storage in order to be able to gear its production of fruit-based foods to the dictates of the market.
- Bidgoods in the Gould's purchases between 5,000 and 7,000 pounds of blueberries annually from experienced local pickers (who are paid as much as 75 cents/pound). Most of the berries are frozen and sold directly to customers; some are marketed as fresh product, while the remainder are used by Bidgoods in their jams, jellies, sauces, cakes and pastries; and
- Kit 'n Kibootle of St. John's, Garden Gifts of Carbonear, Labrador Preserves of Forteau on the Labrador Straits, and other food-producing cottage industries across the province use small amounts of locally-picked blueberries to make a full range of manufactured foods.

### **The Fresh & Specialty Berry Market**

Increasingly in recent years, blueberry farmers have sought out markets for premium blueberries. In particular

- several blueberry farms in Conception Bay North (such as those owned by Harris Pippy, Wallace Budden and Donnie Howell) invested in fresh blueberry packaging and presentation and have sought out lucrative markets in southern Ontario which pay a high rate for product and will procure more berries from these Newfoundland producers than can now be supplied;
- some of those farms have also gone through the rigours of organic production certification, such that one farm, for example, freezes its berries through IQF in

volumes that can supply the Rodrigues-Markland Cottage Winery with fruit which meets the requirements for organic and kosher wine production;

- individual blueberry farms service the needs of other small, niche markets, such as hospitality and commercial food establishments which buy mainly fresh product for sale to customers as fresh food entrees and desserts;
- Loblaw's has purchased local blueberries for fresh sale to consumers through its stores for several years, but only in the last few years have these been bulk purchases (although low volumes). In both 1999 and 2000, shipments of local farmed berries were sold out in no time in local Dominion stores. Loblaw's has come to recognise the local market demand for fresh blueberries and is considering
  - trying to procure sufficient volumes of local fresh berries during the harvest season to satisfy the total demand of stores in the province, as well as
  - bringing in fresh blueberries outside of the local harvest season from producing areas in both the Northern and Southern hemispheres;
- local fresh blueberry growers also sell to Sobey's and other supermarkets, but in lesser volumes. They report that Sobey's may well be looking for increased supplies of local product in the near future; and
- few of the major wholesale-retail chains in this province buy frozen blueberries from local sources. Frozen product primarily comes from mainland processors and is distributed through national or local food brokers, mainly because of the limited volumes available locally, the seasonality of the industry and cost efficiencies of dealing through the national food distribution system.

### Potential Forecast

While this Strategy focuses on the production and harvesting components of the blueberry industry in Central and Eastern Newfoundland, ***it is imperative that there be sufficient market potential for selling the volumes of additional blueberries that will be produced as a result of the Blueberry Development Corporation's initiative.***

In this regard

- ***the three main processors all appear to have excess, unused blueberry storage and processing capacity available,*** and they could accommodate a significant increase in annual processing volumes;
- even though overall production throughout Eastern Canada and the US is rising annually and the blueberry industries in these jurisdictions are larger, well

established and better organised, **mainland brokers to whom local processors sell their product for the commodity market will buy additional shipments of Newfoundland berries - primarily because of the time of the year Newfoundland berries become available;**

- local processors do not aggressively market the superior quality of Newfoundland berries, mainly because their shipment volumes are too small to be of interest to mainland or international brokers. But **increased volumes handled by Newfoundland processors may allow for more diverse and potentially lucrative marketing strategies which capitalise on the superior fruit produced in this province;**
- **there would appear to be significant potential in the commercial fresh blueberry market of mainland Canada** based on the premise of high quality, premium packaged and well presented product, as evidenced by the claims from major out-of-province brokers that they are prepared to buy additional volumes of fresh blueberries grown in Newfoundland;
- **the fresh-frozen market within the province appears to be limited in terms of growth** since small, local retailers and manufacturers like Purity Factories and Bidgoods expect no increased demand for their traditional products;
- alternatively, the recent experience of the Loblaw's wholesale-retail chain suggests **there is considerable potential for local blueberry suppliers to garner a sizeable share of the fresh market in the province.** However, there may be a very narrow window of opportunity for this to happen. If Loblaw's is to contract fresh blueberries from sources across the globe in order to supply the Newfoundland fresh berry market, local growers must be careful
  - to ensure they capture the entire market share for fresh product during the local harvest season, and
  - once Loblaw's becomes reliant on out-of-province sources for supplies of fresh blueberries, that this reliance does not continue into the two months or so of the year when fresh Newfoundland berries are available;
- **by 2002, the Markland Cottage Winery will probably require over 1 million pounds of blueberries for its diverse range of blueberry products** - and most, if not all, should be organically produced. This huge demand will be precipitated by the installation of a \$2 million dollar plus nutraceutical plant at the Winery by next year. While Rodrigues is committed to supporting Newfoundland growers, there is a very narrow window of opportunity for local producers to develop their land-base and orient their harvests to satisfy the

winery's total needs, and in the interim it will be forced to import berries from places like Russia to

- continue its product expansion plans, and
  - maintain the organic/kosher certification for its products - especially the range of blueberry-based nutraceutical products to be produced at Markland; and
- proponents of the fledgling nutraceuticals industry in this province (which is based on the exceptional medicinal properties of local blueberries and the rapidly-growing global demand for such products) suggest that **by the end of 2003, approximately 4 million pounds of blueberries will be required to satisfy the nutraceutical/biotechnology industry's requirements** - almost all of it at the Rodrigues' plant. By this time, the production level of blueberry beverages at Markland - while continuing to increase steadily - will represent only a small fraction of the total range and volume of blueberry-based products manufactured at that plant.

***The Project Team's overwhelming conclusion is that there is considerable market demand for any additional blueberries brought into production in future years.*** We believe this increased demand far exceeds the production potential for the local industry. However, as stressed later in Section 5, blueberry producers must be strategic in order to ensure their supply can match the requirements of this increased demand. It is simplistic to suggest that since the market demand for blueberries in Newfoundland and Labrador is anticipated to grow quite rapidly, product harvested from blueberry farms developed through the Corporation and as part of the Co-operative will automatically find buyers. ***The Corporation must start immediately to develop and implement a Market Development Strategy based on the principles and recommendations of this Report in order to ensure a there is a solid "match" in future years between increased blueberry harvests and market demand.***

We stress that the Corporation's and Co-operative's successes in marketing blueberries will depend in part on the relationships they establish, and in this regard the co-operative approach will provide them with significant advantages over the competitive model. Co-operative development, co-operative business planning and co-operative marketing and sales development are all closely inter-related and absolutely vital for this Initiative to succeed.

*Windows of Opportunity:* While it is difficult to predict market trends in any quantitative manner for more than a few years, we re-iterate that all of the signs point to the demand for blueberries continuing to rise dramatically for at least a decade. The one fly in the ointment, however, may be if the "windows of opportunity" outlined above close before Newfoundland producers have had a chance to affirm their dominance in the marketplace. This includes penetrating the local wholesale-retail fresh blueberry market

or meeting the specialised requirements of the burgeoning fruit wine and nutraceutical industries before those buyers establish supply arrangements from other sources.

Therefore, from a market perspective, the Initiative proposed by the Corporation and refined through this Strategy - supplemented by the proposed Market Development Strategy - may be critical for the industry to grow in a timely and organised fashion.

## **4. Framework for Action**

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### **Purpose**

The purpose of this Section is to outline the framework for developing and managing selected parcels of land which either produce blueberries or have been identified as having the potential for sustainable blueberry production - that is, to provide the framework for a Strategy for the Blueberry Development Corporation to grow the industry under its jurisdiction to commercial viability.

Taken into consideration in this Section are the experiences of neighbouring blueberry-producing provinces which may guide the development of Newfoundland's blueberry industry in general and the Corporation in particular.

### **Underlying Principles**

The basic tenets of the Initiative, some of which have been addressed previously, to guide the framework for development are summarised below.

1. Existing blueberry production in the province is relatively small, fragmented and uncoordinated with most of the total annual harvest coming from wild blueberry lands which are unmanaged to any degree, and where berries are collected by pickers and sold through agents to local processors.
2. Total annual blueberry production in Newfoundland and Labrador at about 4 million pounds (in 2000) is very small compared to our neighbours. Indeed, Newfoundland and Labrador's entire production could be handled easily by a single Maritimes processor like Oxford Frozen Foods in Nova Scotia which has a total annual throughput of over 40 million pounds.
3. Newfoundland and Labrador is the only jurisdiction in Eastern North America whose blueberry production is not increasing.
4. There is no reason why climatic, physiographic and other conditions in Newfoundland and Labrador cannot support a prosperous commercial blueberry industry producing greater volumes of quality fruit on lands with higher per-acre yields than is currently being achieved.

5. Constraints on increasing total blueberry production are related more to production than marketing since blueberry processors could handle, process and sell larger volumes of berries if greater volumes were available.
6. The few producers harvesting for the fresh fruit market also claim not only is there a demand for higher annual volumes, but there is room for overall productivity improvements on blueberry operations.

### **The Approach**

Within the area covered by the Blueberry Development Corporation, there are several parcels of land which are either in production, or have potential for producing blueberries on a commercial basis, as referenced previously and shown in Appendix 1.

In formulating the framework for this Strategy we are strongly recommending that blueberry land development not occur on an *ad hoc* or piece-meal basis. What is needed is to develop blueberry lands in an orderly and planned fashion in order to prove that commercial viability is possible.

In demonstrating viability, the Initiative will identify, test and demonstrate the criteria required for turning potential blueberry lands into commercially productive lands. What makes this Initiative especially exciting is the willingness of the agencies comprising the Corporation to work together to stimulate blueberry production in their respective areas. Similarly, initial discussions with existing blueberry producers and individuals interested in entering the blueberry industry also indicate a willingness to co-operate with one another under the umbrella of the Corporation, and to work through a producer Co-operative.

This Strategy proposes that the Corporation focus on a selected number of land parcels - beginning with those currently in production, or those with promising potential - in order to show how commercial viability can be achieved over set periods of time through a pre-determined process focussing on land improvement, land management and efficient production and harvesting techniques.

Even recognising that there is no single recipe for growing blueberry lands to their full potential, the criteria for developing commercially viable blueberry lands should become the basis for developing all lands identified as having potential to support blueberry harvests - a blueprint or model which governments and industry may adapt and apply anywhere in the province. This is a process similar to that developed a few years ago for the aquaculture industry, and which is currently being used for assessing all new entrants to that business.

*Other Jurisdictions as Models:* While the successful and growing blueberry industries in neighbouring Maritime provinces, Quebec and Maine evolved under circumstances different from those existing now in Newfoundland and Labrador, to varying degrees

their experiences can serve as models to this Initiative. But, it is not recommended that the paths followed by our neighbours be taken and simply applied to Newfoundland without consideration of local circumstances. Indeed, a Newfoundland model may well require a different or even unique approach.

It should be remembered that the blueberry industries of the Maritime provinces, Maine and Quebec are

- ahead of this province
- well established
- still growing, and
- geared primarily towards serving the commodity market, nationally and internationally.

These points, together with the apparent future market demand in this province for specialty production - for example, for certified organic, wild and fresh berries - may suggest this province should not try to play “catch up”, but rather develop along its own lines based on what it can do best and where the most lucrative, long-term developmental opportunities lie.

*Managed vs. Wild-Picked Operations:* The approach we propose is to illustrate how yields can be improved on specific blueberry lands and how new lands can be developed commercially. Further, these examples can be used as models to stimulate a significant increase in total annual blueberry production throughout the region in the coming years. Our approach is to focus on increasing production on managed blueberry lands and demonstrating how a range of management techniques can be applied to different situations, such as intensity of management, market demands and physical conditions.

We do not altogether rule out the benefits to be accrued from expanding the wild-pick component of the blueberry industry - especially to serve an increased projected demand in future for wild-organic berries for the production of organic beverages. However, we do not include developments on wild-pick lands in the model at this stage except where we propose selected land parcels - once harvested by pickers - become managed blueberry operations.

The above point notwithstanding, producing higher quality berries through better land management and controlled harvests (especially through more modern and increased mechanisation) will command a higher field price than the wild berries which in turn may lead to improvements in the quality of fruit picked in the wild.

### **The Framework**

The following reflects the approach we have taken in developing the Strategy and the model described in this section.

1. The model is based on sound economic, business and horticultural principles.
2. The Initiative should not become a drain on the public purse.
3. The Initiative should introduce no direct competition or threat to existing producers or processors.
4. The Initiative considers all types of blueberry production and presentations of blueberry products.
5. Significant emphasis is placed on adding value to blueberry production (even though the Corporation does not contemplate involving itself with blueberry processing), but also on the advantages of fresh and specialty berry production.
6. The Initiative looks beyond the traditional “commodity” market for blueberries. Indeed, it should lead to the enhancement of all components of the blueberry industry.
7. The model focuses on developing managed blueberry lands/farms and should not intrude on the wild-pick industry.
8. The ultimate goal for land treatment and harvesting is to facilitate mechanisation, but not necessarily in the short-term for any given land parcel.
9. The Initiative will help co-ordinate the current fragmented industry ostensibly through promoting collective action.
10. The initiative, as embodied in this Strategy, is not meant to be a blueberry strategy for Newfoundland and Labrador. But, the proposed framework could provide the basis for updating existing provincial strategies or formulating new ones.

### **Model For Blueberry Production**

As has been the case in the Maritimes, a developing blueberry industry needs lots of time and patience. In the past, efforts to encourage growth of the industry have been short-term, both for assistance offered and in terms of expectations. Any strategy designed to encourage the industry, must be based upon reasonable time-lines. Other provinces which are developing their blueberry industries, such as Prince Edward Island, have come to realise that programmes intended to yield significant results in a 3 to 5 year period are unrealistic.

The proposed model assumes the Corporation will become directly involved in the development and operation of some blueberry lands, as well as provide resources to

assist the operations of individuals who have acquired lands for blueberry production - at least until the proposed producers' Co-operative is operational.

Through the Corporation, funds will be accessed to purchase equipment and expertise to bring about a model of a managed blueberry operation that will enable the production of blueberries to reach maximum potential and supply identified markets. The clear objective of the model is to show that blueberry farm operations can be profitable, and as a result, should entice investment by individuals interested in continuing or entering the industry. The outcome will be a group of individuals (with varying sizes of land-holdings) forming or joining a blueberry co-operative which will co-ordinate future growth and development of this industry.

The model is based on the following principles:

1. Begin with what is currently available - for lands, human resources and expertise.
2. Select projects which can demonstrate a variety of developmental challenges and approaches.
3. Assume that sound and established horticultural practices will be utilised.
4. The long term aim is to generate profits which can be used to support further industry development.
5. Begin with a reasonable scale for the project and set reasonable expectations.

### **A Model for Establishing a Viable Blueberry Farm**

Table 4-1 on the following pages shows in detail a 20-year model for transforming an undeveloped 50-acre parcel of land into a productive blueberry operation. While 20 years is a long time to develop an industry, we re-iterate that the essence of creating a commercially viable and productive blueberry industry is "patience" - not rushing to achieve results or cutting corners in terms of land treatments.

This model is designed to enable the Corporation to assist new or existing farmers establish a blueberry operation by highlighting the requirements of time and investment. The Corporation has the template for the application of this model for specific farm sites.

The model has the following characteristics:

- the acreage is split to allow for land cultivation (50 per cent) and harvesting (50 per cent) in alternate years;

- the per-acreage cost is based on contracted-out services and information gathered from established blueberry operations in the Maritimes. This model is designed so that the acreage costs can be modified to be site specific;

table 4-1 - 1

table 4-1, 2

table 4-1, 3

table 4-1, 4

- the model is also designed to be applied to specific site features - per acre costs, number of acres, etc.;
- in the initial stages of development, it is assumed that government investment (in the form of financial assistance) will be available for land clearing and weed control, and also in the final land clearing phase of stump and rock removal in years 6 and 7;
- to facilitate an understanding of the terminology and required activities, a section on terminology and activity description follows;
- the model is broken out into 6 year increments and shows the “Break-Even Point” in year 13;
- the model assumes a conservative crop yield as follows:
  - Year 6 - 1,000 lbs per acre
  - Year 8 - 1,500 lbs per acre
  - Year 10 - 2,000 lbs per acre
  - Year 12 - 2,500 lbs per acre
  - Year 16 - 2,750 lbs per acre
  - Year 18 - 3,000 lbs per acre; and
- the per-pound price is provided with inflation factors taken into consideration;

The model clearly shows blueberry farming to be a long-term and not a short-term venture. It does show, however, that beyond the “Break-Even Point” the operations are lucrative by providing 40-50 per cent of revenue after farming costs as net income.

### **Production Practices**

**Clearing** refers to the cutting of trees and bushes, the piling of brush and either the removal or burning of brush piles.

**Weed wiping** is the selective application of herbicides to weeds to control them. This is an especially important practice in the development of new land since many of the hardwood trees and bushes that are cut will re-grow very rapidly if not controlled. Weed wiping is accomplished either by hand with the aid of a side-swipe (or hockey stick) applicator or by a tractor-mounted sponge or wick type applicator.

**Pruning** is the practice of mowing or burning (or a combination) the blueberry growth off every 2nd or 3rd year. The new growth that results is more vigorous and better yielding. When the land is smooth enough, Flail mowers are used to cut the plants off at a height of about 2 inches. Burning is used in some cases where land is rough or if the incidence of insects or diseases needs to be reduced. However, burning is expensive.

**Velpar** is a broadcast herbicide that is applied pre-emergent in the spring of the vegetative year. Velpar is the most widely used herbicide in the blueberry industry as it controls many weed species.

**Fungicides** are used to control diseases in blueberry fields. The most common and most troublesome disease in lowbush blueberries is *Monilinia* (mummyberry) blight.

**Insecticides** are used to control insects such as the blueberry spanworm or blueberry fruitfly. The need to apply a control, and the timing is determined using a crop scouting or monitoring programme.

**Pollination:** Blueberry blossoms need to be insect pollinated (and cross pollinated). Many growers rely solely on native insects such as bumblebees to pollinate the crop or are bringing in managed pollinators such as honeybees or alfalfa leaf-cutting bees to aid in the pollination process.

A standard recommendation for honeybee density is 2 hives per acre of producing land however in actual practice 1 hive per acre is often used.

**Harvesting** is accomplished either by hand raking crews or by machines. If the land is smooth and level enough, machines are used because they will pick a field for about 60 per cent of the cost of a hand raking crew. In some areas, it is difficult to find enough hand rakers.

If blueberry land is rough, somewhat rocky and has stumps remaining from the clearing process, the land can be improved. Excavators have been used over the past 20 years in blueberry fields to improve land. The cost of production on smooth land is considerably less than on rough land.

### **Per-Acre Farm Costs**

The following Table 4-2 shows the per-acre costs - labour, materials and equipment operations - of developing a blueberry farm under the model conditions described above.

Note that some of the activities listed in this table may take place more than once so the figures in the Per Acre Cost column cannot be added to derive a cumulative total.

**TABLE 4-2 - PER ACRE COSTS**

ACTIVITY	PER ACRE COST	LABOUR %	MATERIALS %	EQUIPME N T OP. %
Land Clearing	\$750	25		75
Weed Wiping	\$110	20	30	50
Seppi/Mow	\$75	25		75
Prune (Burn)	\$200	10	70	20
Velpar	\$85	5	85	10
Weed Wiping - 1 time	\$55	20	30	50
Fertiliser	\$30	7	78	15
Fungicide - estimate more than 1 application	\$35	15	40	45
Pollination - rental of hives	\$75		100	
Insecticide - perhaps more than 1 application	\$45	8	65	27
Harvest	\$300	25		75
Mow	\$75	25		75
Stump, rock removal & Levelling	\$1,000	15		85

### A Longitudinal Perspective

The graph on the following page, *20 Year Model*, depicts the model running for a full 20 year period - from Year 1 representing land parcels which are entirely undeveloped. The first few years reflect initial land clearing and improvements. The principal benchmarks in the model are:

- Year 6 when production reaches 1,000 pounds per acre, and
- Year 13 when the break-even point is reached - that is, revenues equal costs.

It can be seen from the Anticipated Revenue line (yellow) that for entirely undeveloped land, production (generating revenues) will start at Year 6 - the point at which 1,000 pounds per acre are harvested. From Year 6 onwards, with a programme of gradual and planned land improvements in place, revenues increase steadily.

The 50 per cent Government Investment line (red) suggests as outlined in the description above that public investment for blueberry land development is expected to be front-end loaded - that is, it is concentrated in the early stages where costs will be higher. We anticipate assistance for land development to fall into three phases:

1. Initial land clearing in the early years of development.

2. Weed treatment for a 2-year period after initial land clearing.
3. Advanced land development, such as the levelling of land.

Graph here

The total amount of government funding required on an annual basis and indeed for the entire development programme is not excessive. For the 50 acre parcel of land used in the model, a total of \$55,500 would be required from government sources over the 20-year period. These funds would all be used in Years 1 - 7 to cover initial land clearing, weed treatments and some advanced land levelling and de-stumping. Thereafter, except in exceptional circumstances, the cost of further land development and treatment would be covered by the producer from revenues generated by increased blueberry production.

The Net Revenue line (light blue) shows gross revenues minus costs, and it is not until Year 8 that net revenues become positive. However, the Total Cost line (dark blue) - including both government assistance and producer costs - shows that the greatest development costs occur in Years 6 - 8, which correspond to significant investments in advanced land treatments such as land levelling. Also shown by this line is a decrease in overall costs after the initial two years of land clearing (Years 1 and 2) and immediately prior to the 1,000 pounds per acres production benchmark.

The Break-Even line (purple) is cumulative thereby reflecting the overall financial position of lands encompassed by the model. It takes into account both investments and revenues. It represents total costs, minus government assistance and less anticipated revenues. To illustrate, for an undeveloped land parcel starting in at Year 1, the first 7 years show a cumulative net loss overall, with the turning point being Year 7 when these cumulative losses start to decrease. Decreases continue until the break-even point is reached in Year 13.

What is startling about the Break-Even line, is how sharply it rises once the break-even point is reached. This suggests that once the initial few years of overall investment have passed, a parcel of land opened up for blueberry development as per the model outlined could turn out to be a highly viable enterprise. This is because beyond this Break-Even point:

- there are no more land development costs (although there will be routine maintenance and land treatment expenses); and
- yields will be rising annually from the 1,000 pounds per acre (at Year 6) through to the targets of 3,000+ pounds per acre in the later years of the model.

Because of the need for those promoting blueberry industry development to see some concrete results from their efforts within a reasonable time period - who can wait the full 20 years or even 13 years to the break-even point - the model is designed to allow land parcels that have already been developed to "cut into" the longitudinal process at appropriate stages. Thus, land that has already been cleared and is supporting a blueberry harvest - albeit, perhaps, with low per-acre yields - can be designated to start

at, say, Year 4. In such a case, planning for land improvements will start at Year 5 on the graph, meaning that the operator can expect:

- some revenue to be accrued immediately
- the 1,000 pound per acre benchmark to be reached in one year (Year 6)
- net revenues to start accruing within three years (at Year 8), and
- the break-even point to be reached within 8 years (at Year 13).

### **Project Cost Budget for Blueberry Industry Development**

In order to advance the Newfoundland blueberry industry, it is necessary to have a good database and knowledge transfer for all kinds of blueberry operations. This budget takes into consideration 5 selected parcels of land which are representative of the industry in the area.

**Parcel A:** 100 acres of subleased land that was previously worked.

**Parcel B:** 20 acres of land worked for more than 3 years.

**Parcel C:** 20 acres of land worked for more than 3 years for organic production.

**Parcel D:** 20 acres of newly identified uncleared land.

**Parcel E:** 25 acres of existing advanced land leveling applied.

The budget is presented in three sections:

1. Farm Development Costs
2. Equipment Costs
3. Operating Costs

The total costs of the model are outlined in Table 4-3, *Project Cost Budget for Blueberry Industry Initiative*, on the next two pages.

### **Funding Sources**

Funding is expected to be available from a variety of sources, including

- the Atlantic Canada Opportunities Agency (ACOA) - as the lead federal department for stimulating economic and business development in the province and the Atlantic region;
- Human Resources Development Canada (HRDC), and other federal agencies, such as the National Research Council (NRC), Industry Canada (IC) and both the market development and research branches of Agriculture and Agri-Food Canada (AAFC);
- business development and seed capital funds offered by the Department of Industry, Trade and Rural Development (ITRD); and

- provincial agrifoods development programmes provided by the Department of Forest Resources and Agrifoods (DFRA).

Table 4-3, 1

table 4-3, 2

**A. Farm Development Costs**

The 5 sites identified represent various stages of development of the blueberry industry in Newfoundland that could benefit from experienced knowledge gathered through “best farming” practices. The Corporation will assume full control of Parcel A and apply best farming techniques to gain knowledge of blueberry production which in turn will be passed along to existing and new entrants to the blueberry industry.

The previous Table 4-3 shows overall Farm Development Costs for the five sites.

***Parcel A – 100 acres of subleased land previously worked***

This section was chosen in order to demonstrate a commercial size operation using an existing parcel of land that has been worked previously. The rationale for this selection is to determine viability and generate information to be transferred to other sites. Since this land is to be subleased to the Corporation, all of the revenues will belong to the Corporation and used to fund its financial operating needs beyond year 6.

The total cost of this work will be borne by the Corporation and the land, when the sublease period expires, will revert to the existing farmer. This is shown in Table 4-4.

Parcels of Land B - E will not be subleased to the Corporation, but rather will be operated by the existing farmers in concert with the Corporation. The Corporation will share the developmental costs on a 50-50 basis, and it will take 25 per cent of revenues produced. Again, all development costs are based on per-acre costs calculated on a year-by-year basis.

**Parcel B - 20 acres of existing land worked for more than 3 years**

This selection was made in order to demonstrate the application of a prescribed programme of farming techniques. The Corporation will work side by side with an established farmer on a specific section of the farm and, through a combined effort, adhere to a 6-year plan to increase productivity. The cost will be shared 50-50 between the Corporation and the farmer, with the farmer’s input in part to be labour and other in-kind contributions.

The revenue generated from this parcel of land is to be allocated on the basis of 75 per cent to the farmer and 25 per cent to the Corporation. Again the 25 per cent attributed to the Corporation will be used for funding ongoing operating needs beyond year 6.

The financial data for parcel B are shown in Table 4-5.

**Parcel C - 20 acres of existing farm land worked more than 3 years for organic production**

This selection was made to implement a programme specifically for organically grown blueberries. The Corporation will work side by side with an established farmer on a

specific section of the farm and, through a combined effort, will introduce a 6-year plan to increase productivity. The cost will be shared 50-50 between the Corporation and the farmer, with the farmer's input in part to be labour and other in-kind contributions.

The revenue generated from this parcel of land is to be shared 75 per cent by the farmer and 25 per cent by the Corporation. Again the 25 per cent attributed to the Corporation will be used for funding ongoing operating needs beyond year 6.

The financial data for parcel C are shown in Table 4-6.

#### **Parcel D - 30 acres of new identified uncleared land**

This selection was made in order to develop a programme to be used by new entrants and existing farmers developing new lands.

This will require a programme which assumes an initial parcel of land is identified and a prescribed programme undertaken to determine if the land is properly cleared and prepared for mowing as well as advanced land leveling and de-stumping. The Corporation will work side by side with an established farmer on a specific section of the farm and through a combined effort will implement a 6-year plan to increase productivity. The cost will be shared 50-50 between the Corporation and the farmer, with the farmer's input in part to be labour and other in-kind contributions.

The revenue generated from this parcel of land is intended to be shared 75 per cent by the farmer and 25 per cent by the Corporation. Again the 25 per cent attributed to the Corporation will be used for funding ongoing operating needs beyond year 6.

The financial data for parcel D are shown in Table 4-7.

#### **Parcel E - 25 acres of blueberry land with advanced land levelling applied**

This selection was made in order to develop a programme and apply techniques to existing farms where advanced land improvements have already taken place. The Corporation will work side by side with an established farmer on a specific section of the farm and through, a combined effort, will work a 6-year plan to increase productivity.

The cost will be shared 50-50 between the Corporation and the farmer, with the farmer's input in part to be labour and other in-kind contributions.

The revenue generated from this parcel of land is intended to be allocated on the basis of 75 per cent to the farmer and 25 per cent to the Corporation. Again the 25 per cent attributed to the Corporation will be used for funding ongoing operating needs beyond year 6.

The financial data for parcel E are shown in Table 4-8.

Table 4-4

table 4-5

table 4-6

table 4-7

table 4-8

**B. Equipment Costs**

This section specifies equipment needed to develop parcels land A - E (a description of each piece of equipment is provided below). All pieces of equipment will become the property of the Corporation and will be transferred to the Co-operative at the appropriate time<sup>6</sup>. Use of equipment will be scheduled to assist farmers as needed.

The financial data for Equipment Costs are shown previously in Table 4-3, *Project Cost Budget for Blueberry Industry Initiative*.

The following are descriptions of the equipment required by the Corporation to carry out activities outlined in the model. Photographs of the equipment are in Appendix 2.

**1. Flail mower (i.e. Omar)**

A heavy flail mower, with heavy flails or hammers, is useful when developing lowbush blueberry land. Because of the heavy weeds and small bushes, the terrain would be very hard on a typical blueberry mower, such as a Bragg flail mower.

**2. Flail mower (i.e. Bragg)**

These flail mowers have lighter flails (hammers) and do an excellent job of pruning blueberry plants at the recommended height of 2 inches. The Bragg mower was developed primarily for mowing blueberry fields. One type can be mounted beside the tractor in place of the harvester picking head. The second and most common type is pulled behind a large tractor and is made up of three mowers in a gang. This type follows the contours of the land well.

**3. Burner**

Blueberry burners are usually either oil or propane burners. By far the most common is the three stack oil burner. Burning is important in the early development of a field. Burning is also critical in organic or low input production since some diseases, insects and weeds are reduced using proper burning techniques. Some growers burn their fields with straw if the fields are too rough and rocky for tractors and machines, and if weed free straw is available.

**4. Boom sprayer**

A good boom sprayer is a must for a lowbush blueberry production unit, especially for applying broadcast herbicides such as Velpar. Further, the application of insecticides is sometimes necessary using a boom sprayer. Boom sprayers used in blueberry fields

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<sup>6</sup> It is anticipated that the Corporation will only own equipment acquired prior to the formation of the Co-operative. Once the Co-operative is operational, it should be responsible for owning equipment. All equipment purchased by the Corporation, therefore, should be subsequently transferred to the Co-operative at the appropriate time.

usually have a spraying width of 20-35 feet.

#### **5. *Weed wiper***

The wiping of herbicides such as Roundup on weeds as a control measure is a technique used years ago, but is coming back into prominence again. Weed wipers can be mounted on, or pulled behind, tractors or ATVs. Also available are sideswipes which use the same principle, but are made for manual application. Weed wipers use sponge or wick material for the actual application of product.

#### **6. *Micro mist blower***

Blower or cannon sprayers are very common in the blueberry industry. They blow spray material across blueberry fields (50-75 feet). They are very important in the control of diseases and insects since timing of control is so very important and mist blowers will cover land much quicker than a boom sprayer. Micro mist blowers are usually attached to the 3-point hitch of a tractor.

#### **7. *Harvester***

Mechanical harvesters came into prominence in the lowbush blueberry industry in the mid-1980s. By far the most common type is the Bragg harvester developed and manufactured by Doug Bragg Enterprises in Nova Scotia. The Bragg harvester uses a picking 3-foot head with rows of teeth to rake the berries off the plants. The berries empty into a conveyor, which takes the berries to the rear of the tractor and are emptied into plastic totes. A blower partially cleans the berries before they go into the totes. An operator plus a worker on the back platform are required to operate this equipment.

#### **8. *Fertiliser applicator***

Once fields are developed and weeds well under control, lowbush blueberries are fertilised. This is accomplished with a hopper type fertiliser spreader attached to the 3-point hitch of a tractor. The most common type used in blueberry fields is the Vicon fertiliser spreader.

#### **9. *Tractors***

For most blueberry operations, at least 2 tractors are necessary. A larger 4-wheel drive tractor with 65 or more horsepower is required to operate flail mowers and some other pieces of equipment. A smaller tractor in the 50-60 horsepower range can be used for spraying, fertiliser spreading etc.

#### **10. *Trailer***

A trailer to attach to a tractor will be useful. When burning blueberries, a tank of water must be close by to control fires. Also, when spraying, it is convenient to have a tank of water in the field for re-filling the sprayer and when developing land, it is convenient to have a trailer to throw on sticks, brush and rocks which can be hauled from the field.

The trailer probably should be able to dump it's own cargo.

### **C. Operating Costs**

The cost data for Operations are shown previously in Table 4-3, *Project Cost Budget for Blueberry Industry Initiative*.

#### **1. Salaries and Merc**

This includes the salary and benefits to hire the manager of the Initiative. We have allocated a salary of \$39,200 for this position as outlined in the financial tables which is based on comparable positions in other industries.

#### **2. Office Space**

This should cover the rental costs of appropriate office space for the Corporation.

#### **3. Internet**

This covers the installation and operation of an Internet connection in the Corporation's office.

#### **4. Computers/Software**

This is a one-time expense to purchase the computer hardware and operating software necessary to run the operation.

#### **5. Phone/Cell**

These expenses refer to the cost of a telephone system for the Corporation's office and cell phone to enable remote contact when away from the office.

#### **6. Travel and Vehicle Operations**

This item is to cover all travel related costs associated with the on-going business of the Corporation, as well as the operations of a pick-up truck for farming activities and monitoring.

#### **7. Meeting Costs**

These cover travel and other related expenses of the Board of Directors to attend scheduled board meetings and other related business.

#### **8. Office Supplies/Postage**

This item covers consumables required in running the office.

#### **9. Storage Building Lease**

A building will be leased to store and maintain the Corporation's equipment and machinery.

**10. Consulting - Blueberry Specialist**

This budget item is included in the event the Province does not have a blueberry specialist on staff, or the manager does not possess the skills required by the Corporation.

**11. Co-operative Development and Incorporation**

There will be costs incurred to develop the Co-operative (including preparing and implementing by-laws, constitution, etc.) and to have the Co-operative registered as a legal entity.

**12. Fee for Service - 5 per cent**

This is a standard fee to be paid to development associates (for example, to Gambo-Indian Bay Development Association) to recover expenses in carrying out background and on-going developmental work associated with the Blueberry Initiative.

**Placing the Land Parcels on the Longitudinal Model**

The “benchmark” points identified in the longitudinal model were taken into account in selecting the five parcels of land to be used for demonstration or pilot projects as described above. While these land parcels are actual lands and each have been targeted for development, they do represent various stages of development. They will each “cut into” the longitudinal model at different points as illustrated below and the main benchmark for determining their start-off point in the model is the time it will take for them to reach 1,000 pounds per acre of production - that is Year 6 on the *20 Year Model* graph. Unfortunately, there are no producers in the region harvesting that amount annually, so all of the five parcels of land would enter the model between Years 1 and 5.

1. Parcel A, subleased land that has been harvested and which has been assessed as quite rocky and not particularly productive, starts in on the model at about Year 2, since it will take 4 years to reach the 1,000 pounds per acre benchmark.
2. Parcel B, land which has been worked for more than 3 years and has reached a harvest of over 500 lbs/acre, would start on the model at about Year 3, since it will take 3 years to reach the 1,000 pounds per acre benchmark.
3. Parcel C, land which has been worked for more than 3 years for organic production would start at about Year 2 in the process since it would be expected to take 4 years to reach the 1,000 pounds per acre benchmark under normal circumstances. However, because of
  - the imperatives of producing organically-grown blueberries through labour intensive methods
  - the different land treatments involved, and
  - the longer period of time it may take to improve yields compared to lands

which are treated chemically  
this particular land parcel must be considered a special case and would not normally follow the process outlined by the model

4. Parcel D, newly identified uncleared land, would start at Year 1 since it will take 5 years to reach the 1,000 pounds per acre benchmark.
5. Parcel E, existing productive land which requires advanced levelling, would start at about Year 3 since it will take 3 years to reach the 1,000 pounds per acre benchmark.

### **From Corporation to Co-operative**

As referenced earlier and discussed again in detail in the following section, the Blueberry Development Corporation will hand over the responsibility for developing and managing blueberry farms to a Co-operative comprising blueberry growers in the region. At an appropriate time, the Corporation will divest its assets (primarily equipment and machinery) to the Co-operative. In the development model described above, we have targeted this divestiture to take place at Year 6.

The following Table 4-9, *Sustainability Schedule*, shows how the Corporation will maintain itself over the 13 years up to the Break-Even point and especially after Year 6 when assets are scheduled to be transferred to the Co-operative. Following Year 6, the Corporation will require only the \$60,000 salary unit to be carried over in its budget as Operating Costs. For the Corporation to continue its prescribed function, however, (if indeed the Co-operative so requires it), we suggest the industry pay User and Consultation Fees to the Corporation of \$10,000 annually beyond Year 6. This will be possible considering the Co-operative will be generating revenue by that time.

### **Getting Down to Business**

The essence of these recommendations is to work with several parcels of lands which are either commercially-proven blueberry producing lands, or have been assessed as having significant potential for commercial production, in order to demonstrate the proper approach and processes for putting new blueberry lands into production. At the same time, these "pilot projects" will allow for verification and refinement of the set of production and harvesting criteria which are being developed to guide future land management initiatives.

We see our model as having application to all or most land-type scenarios and, indeed, the Corporation is encouraged to select parcels of land under different stages of development so as to be able to illustrate and verify the model.

The five land parcels included in the model are actual lands within the jurisdiction of the Corporation. We have purposely not identified where those parcels of land are located,

nor any particular individual interested in farming them, since the Corporation has not yet finalised any partnership or participation arrangements with the people concerned. But initial discussions have been held with existing blueberry farmers and individuals interested in becoming blueberry producers, and it is expected that detailed individual land management plans for the parcels of land outlined can be drawn up once the Corporation proceeds to implement the Initiative.

Table 4-9, 1

table 4-9, 2

## 5. Relationships & Partnerships

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### **Purpose**

The purpose of this Section is to outline how the Corporation may address a range of business development issues associated with its Initiative. This covers the transition of activities from the Corporation to the producers' Co-operative and the roles of the Corporation, the Co-operative and associated bodies. It stresses the need to develop a comprehensive market development plan as soon as possible, and outlines a promotions strategy suggesting a number of crucial steps the Corporation should take and various partnering arrangements that should be secured to ensure the Strategy has maximum credibility.

### **Creating the Co-operative**

In the context of the pan-zonal initiative being sponsored by *The Blueberry Development Corporation*, this co-operative is proposed as the legal entity to oversee the common business activities of individual farm operations. As registered under the *Co-operatives Act (1998)* of Newfoundland and Labrador, it would be subject to the rules and practices described therein.

The co-operative registration is recommended at this time as it seems to be the more appropriate corporate structure for the Initiative since it:

- provides protection to the members from undue outside influences;
- focuses on providing important business services to members; and
- respects various sizes of member operations through strict democratic control.

The Co-operative would be owned by *bona fide* commercial blueberry farms within the region. A set of membership criteria would be developed with and by the founding members that would describe the necessary qualifications for membership. Members would all be required to subscribe to an equal, specified number of shares in the co-operative. These shares would be assigned a par value that would remain constant for the life of the co-operative. The membership would, from time to time, allow for an increase in the number of required shares, should they deem it necessary. Other forms of investment, such as loan capital and preferred shares are also available as options for raising the necessary starting capital.

Each member of the Co-operative would have one vote in the governance and direction of the co-operative. As determined by the membership, the Co-operative would be directed by a Board elected exclusively from its members. Ex-officio, non-voting

positions are acceptable.

The Board will appoint Committees, where appropriate, to attend to specialised aspects of the Co-operative.

Where and when appropriate, the Co-operative will employ a manager and staff accountable to the membership through the Board of Directors. The general governance and organizational structure would look as in Diagram 1 on the next page.

The Co-operative will be governed by a set of By-Laws, developed with and by the founding members in accordance with the Act. These By-Laws describe the general rules by which the Co-operative will govern itself. Typical sections of a co-operative's By-Laws would include:

- Membership
- Investment
- Financing
- Distribution of Surpluses
- Fiscal Year
- Election of Officers
- Duties of Officers
- General Rules of Meetings
- Responsibilities of Management, etc.

A basic, generic sample of minimum typical co-operative By-Laws is attached as Appendix 3.

Further to the By-Laws, the Co-operative will develop a Policies and Procedures Manual, which would lay out the day-to-day rules of operation. These would include such things as:

- Employment Policies
- Safety Standards
- Quality Control Procedures
- Standard Sales Contracts and Procedures
- Business standards, etc.

The Co-operative is designed to provide its members with a range of services to help make each individual farming operation as efficient and profitable as possible. It should have the capacity to provide services on a collective basis, which would be either practically difficult or financially prohibitive for any individual farm to acquire on its own. Such services could include, but not be limited to those shown in Diagram 2 on the next page. Some of these are summarised below.

#### *Purchase of Farm Supplies*

On the assumption that most farm inputs such as fertilisers and chemicals can be purchased more cheaply in bulk, the Co-operative will co-ordinate the ordering and

distribution of these materials. Savings would also be realised in the group purchase of farm equipment, where numbers warrant.

Diagrams 1 and 2

*Specialised Equipment*

As special equipment needed to develop and maintain productive blueberry fields is a heavy financial burden for individual farmers, it is envisaged that the groups of farmers in particular geographical areas could avail of collectively owned equipment. The ownership, financing and maintenance of such equipment could be more effectively provided through the Co-operative. As well, it is likely that the Co-operative could much more effectively access various financial support programmes to assist in the purchase of such equipment.

*Market Related Services*

This is likely the most valuable service to be provided by the Co-operative.

*Product Identity*

The Co-operative can, if useful, market the members' products under a single brand name which would identify the product to the public or to processors as one of consistent high quality, etc.

*Quality Standards*

By marketing collectively, important quality control standards can be implemented by the membership and compliance is far more easily achieved, thereby providing a competitive advantage.

*Co-ordination and Consistency of Supply*

Along with quality, one of the most important factors in developing a productive relationship between producer and processor or retailer of food products is providing for consistency of supply. By co-ordinating sales relationships on a collective basis, the Co-operative can greatly enhance the long term stability of the industry and help secure a stable future for its members. By negotiating sales relationships on behalf of its members, the co-operative will help maintain a stable and reasonable price across the season.

*Quality Storage and Distribution*

Maintaining some control of the supply side of the equation will require the provision of quality storage and distribution for the raw product. This may be most efficiently achieved through the Co-operative operating these facilities as part of its marketing services.

*Market Development*

No market environment remains static, especially in the food industries. In order to insure a stable, long term future for its members, the Co-operative should continuously be looking for new markets for its products and opportunities to enhance the economic well-being of its farm members.

### *Research and Development Services*

This Initiative has focused considerable resources on ensuring that appropriate technologies are developed for cultivating blueberry crops to highest yields under Newfoundland conditions. This effort should be continued over the long term through the Co-operative for the general benefit of its members. The Co-operative is more likely to acquire financial and technical supports for research and development than individual farmers.

### **The Co-operative Approach**

The creation of a co-operative business entity to hold and represent the collective interests of blueberry farmers associated with the Initiative has been an overall vision of the Blueberry Development Corporation from its inception. This approach provides a number of important advantages to the overall Initiative and to the potential success of the individual farms involved.

Primarily, the formation of a co-operative will make available a number of economies of scale important to the viability of the individual farm. Background research for this project has indicated that one of the inhibiting factors to the evolution of commercial blueberry farming in this province has been the cost of purchasing specialised equipment, such as burners, mowers and chemical applicators. In other provinces this equipment infrastructure is normally provided by the companies that buy and process berries. They are more able to handle the initial investment by financing and subsequently recovering costs by leasing the equipment to growers. In this province, the processing sector has not seen any advantage to this approach. The formation of a producers' Co-operative will address this barrier through collective ownership of such equipment.

Equally, collective approaches through a producers' Co-operative can reduce input costs at the farm level through large bulk purchase of fertilisers and weed control materials. The costs associated with collection, storage and distribution of the raw product can be kept at a minimum through a co-ordinated, collective approach among the farmers involved.

On the market side, the small number of agrifoods producers in this province have continually fallen victim to intense local competition which lowers prices and negatively affects quality. The same has been observed within the blueberry sector. People who rush to get their product into the market place first often sacrificed quality and income. While, on the surface, the buyer may be seen to benefit from the competition, poor quality of product can offset any price benefit.

A co-ordinated, co-operative approach to the marketing of members' berries is the only way to ensure a stable, rational development of the industry. With a farmer-owned Co-operative to negotiate sales relationships on behalf of all members, the individual

farmer can concentrate on running a productive farm.

### **A Development Process**

As this initiative moves forward with the development of model farms and creating a base of berry producers in the various zones, it will also need to focus effort and resources on ensuring these farms have a proper co-operative 'home'. As this is central to the vision created by the Corporation partners, it is recommended that part of the negotiated agreement with emerging farms will be an acceptance of the collective approach and a willingness to participate in the formation of the Co-operative.

Once this is accomplished, the Corporation should arrange with the Newfoundland and Labrador Federation of Co-operatives to begin building the various components of the co-operative jointly with the initial farmers. This would commence by orienting the founding members to:

- the principles and practices of operating a co-op;
- incorporation and legislative aspects; and
- looking at other similar co-operatives elsewhere.

Once the farmers are familiar with how co-operatives are organised and operate, the process of building this particular Co-operative should begin. There are three primary elements of the process:

1. Organization and Registration
2. Member Development
3. Business Development.

These issues would need to be addressed concurrently rather than sequentially. A strategic plan should be prepared to ensure that the various business aspects of the Co-operative are in place when they are needed by the emerging farms.

As the overall process of this Initiative proceeds, the Corporation should begin to reduce its direct involvement and the Co-operative will become more active until the latter is fully operational. It is important that this transition process occur smoothly and ultimately result in the farmer/members being in full control of a functioning Co-operative. Further, the transition should proceed as soon as there are a sufficient number of producers willing and interested in becoming part of a collective body. To form a co-operative, three parties are required. Therefore, as soon as three producers agree to form a Co-operative, the Corporation should commence working out the details and especially how the Corporation and Co-operative relate to one another.

The Newfoundland and Labrador Federation of Co-operatives should be engaged, along with a source of business development expertise, to design the details and guide the co-operative business development process.

**Roles & Responsibilities**

Once the transition from Corporation to Co-operative has taken place, it is expected that the Co-operative will assume responsibility for most if not all of the activities of its members, including decisions and actions relating to blueberry production, marketing, business organisation, promotions, etc. The Corporation will continue to exist beyond the transition. Indeed, it will be an important guiding force and support agency for the Co-operative, but its role should be focused more on overall industry direction and policy matters, rather than on the day to day running of blueberry operations.

*The Transition Process:* The transition process must involve the defining of the relationship between the Corporation and the Co-operative and especially their respective roles and responsibilities. This will have to be done carefully so as to avoid confusion and overlap. Although we have made suggestions regarding the activities of both bodies, we do not believe we should make any further recommendations in this regard. It is important that the balance between the Corporation's and Co-operative's mandate and activities be determined by their respective members and within the context of circumstances existing at the time of transition. We do suggest, however, that the Corporation discuss this matter in detail before the Co-operative is formed so that it can assist actively in setting up the Co-operative and be prepared for devolving itself of certain powers and assets.

*Advisory Committee:* Representatives of the NLFC, ITRD and NRC currently serve in an ex-officio advisory capacity to the Corporation. As the Initiative progresses and the Corporation starts to deal actively with the multifarious issues associated with developing a blueberry industry, it will be even more important to have input from a number of key agencies and individuals.

We propose that a formal Advisory Committee be created - sooner rather than later - which should represent a broad spectrum of knowledge and expertise associated with the blueberry industry and business development. Initially, the Advisory Committee would serve the Corporation, but as the Co-operative becomes established, the Committee may focus most of its efforts on Co-operative activities with a corresponding reduced input to the Corporation.

*Market Development:* Also of critical importance to the success of the Initiative is how business and marketing relationships are developed for the blueberry industry. This Initiative is breaking new ground - not just for members of the Corporation, but for the province. This Strategy envisages creating a modern, planned and organised blueberry industry in Central and Eastern Newfoundland where none currently exists. Arguably, there has never been a blueberry industry development plan proposed on the scale outlined in this Strategy anywhere in the province. Add to that our suggestion Newfoundland should not necessarily follow the development path adopted by other

provinces and it becomes clear this Initiative is truly charting new waters for the small fruit industry. As such, the Corporation has to make sure it “gets it right” based on few precedents and where the experiences of other industries and provinces may be of little help.

To illustrate this point, we suggested in earlier sections that there appears to be a rising demand in this province for locally-grown blueberries. Correspondingly, if the Initiative meets its objectives and opens up new blueberry producing lands, there will be additional product available to meet this demand. However, the supply and demand side of the equations must be compatible and it raises the question of who will attend to the market development aspects of the industry’s development. It is simplistic merely to argue that because supply is available, it will meet the demand. The following points have to be taken into consideration.

1. The traditional blueberry processors claim they seek more product, but under what conditions and price structure? How will negotiations with the processors proceed, who will lead them, and under what circumstances can deals be made between producers and local buyers?
2. While demand for additional berries is forecast to be high when new blueberry lands come into production, apart from the three main processors, there are only a few potential buyers in Newfoundland for this product. Producers may need to look to alternative markets off-island - perhaps even overseas. But, what will be their strategy given the size and power of mainland buyers, the constraints on shipping product out of province and producers’ relative inexperience at international and national marketing?
3. The Rodrigues-Markland Winery has expressed a need for millions of pounds of product once it expands its beverage operation and nutraceutical plant. But considering the Winery’s requirements for such large volumes of organically-grown blueberries within the next few years, how can the Co-operative gear its production to take advantage of this huge demand? Will the Winery sign bulk supply contracts with representatives of out-of-province sources (such as Russia) before local producers are ready to tap into this market? And if so, will there still be an opportunity subsequently for producers to capture a share of this market once they are geared up to the production levels required to supply the Rodrigues’ operations?
4. This Strategy envisages the Co-operative producing blueberries in several forms targeted to satisfy various market segments - fresh, fresh/frozen, organic, etc. How will production be geared to market segments in any one year, or over a number of production seasons, and how can a plan be devised to ensure the range of product types presented in the marketplace will find a buyer?

We reiterate our suggestion made in Section 3 that the Corporation start to develop and implement a Market Development Strategy based on the principles and recommendations of this Report in order to ensure there is a solid “match” in future years between increased blueberry harvests and market demand.

*Business Planning:* By the same token, the business development aspects of the Co-operative (which include market development issues) must receive special consideration. Too often attention in any new agricultural endeavour becomes focused on production or technical matters and the necessary strategic planning gets left behind. It is equally imperative, therefore, that the Co-operative be maintained on a strong financial and business footing and that it constantly look several years ahead in planning activities.

Since one of the Corporation’s responsibilities will be to assist the Co-operative in strategic and operational planning - especially during the transition period - the Corporation should use this Strategy as a foundation to ensure the business side of the Co-operative’s operations receives attention in a timely manner.

### **Partnerships**

As part of its long-term business development plans, the Corporation should establish solid partnerships and relationships with several key groups and agencies in and out of the province. The Corporation should proceed to develop and implement plans to promote its activities far and wide to key government officials, industry representatives, the media and the public. This builds on the Corporation’s recent approaches to various government agencies and industry organisations, such as taking out membership in the Newfoundland Horticulture Council which also provides the Corporation access to the services of the Newfoundland and Labrador Federation of Agriculture. This will allow the Corporation to help mold Council and Federation policy as well as establish contacts with other horticultural companies and agencies.

There are other business linkages to be investigated, notably the Canadian Alliance of Manufacturers and Exporters whose branch in Newfoundland and Labrador last year created a Food and Beverage Sub-committee.

Good relations and contacts should also be forged with all components of the blueberry industry and associated groups, not just in this province but throughout Canada. These include:

- growers
- processors
- manufacturers
- industry organisations
- the wholesale-retail trades

- mainland brokers and other buyers, and
- academia and other research/technology transfer interests, including agencies currently exploring nutraceutical and biotechnology initiatives.

Where possible, the Corporation should make formal presentations to strategic groups and agencies which would be aimed at not just informing, but

- securing support for the Initiative, and
  
- laying the foundation for developing active partnerships with government departments and industry groups, especially with existing blueberry growers, processors and others directly involved in the industry.

There are also important contacts to be developed outside of the province - some of them may also lead to formal partnerships - such as

- the Crossroads Co-operative, Parrsboro', NS
- the Blueberry Institute, Debert, NS
- Nova Scotia Agriculture College, Truro, NS
- Wild Blueberry Association of Nova Scotia, NS, and
- Wild Blueberry Association of North America, Maine

Other activities which the Corporation may implement to promote itself and gain credibility for its Initiative include:

- developing a promotional brochure outlining its objectives and activities which, need not be glossy, elaborate or expensive to produce, but it must be visually attractive and professional in appearance;
  
- preparing articles for publication in trade and business journals (the Federation of Agriculture's *Pioneer*, *Farm Focus* and even *Atlantic Progress*, etc.), the print and electronic media; and
  
- developing a quarterly fold-out newsletter for general distribution and for circulation around the constituent development agencies/boards comprising the Corporation.

The Corporation should commence undertaking some or all of these tasks as soon as possible. However, the Co-operative will eventually take over some or all of these relationship-building and promotional activities. Therefore, the Corporation can lay a good solid base in this area for the Co-operative, thereby lessening the steepness of the learning curve for producers who will become members of the Co-operative.

### **Work Plan**

Throughout this report, we have suggested a number of actions and activities to be taken by the Corporation. Several of these, like developing a Market Development

Strategy, we recommended be started immediately while others, such as forming the Co-operative, will commence later at an appropriate time. In order to ensure all actions of the Initiative - especially those requiring immediate attention - are implemented in a timely and orderly fashion, the Blueberry Development Corporation should draw up a Work Plan covering at least the next 12 months which outlines a number of required tasks, who should undertake them, when, where and how. In particular, the various roles and responsibilities of members of the Corporation need to be spelled out and the co-ordinating functions of the Gambo Indian Bay Development Association defined clearly. The kinds of tasks to be included in the Work Plan are:

1. Determining the process for soliciting public and private investment for the Initiative by raising awareness through the media within government, industry and the general public.
2. Developing a generic Power Point presentation on the Initiative based on this Strategy, which can be used by members of the Corporation
  - to inform their constituents in the zone boards of Central and Eastern Newfoundland about the Initiative in a uniform and consistent manner, and
  - as part of the public relations campaign outlined in (1) above.
3. Development of the Market Development Strategy suggested in Section 3.
4. How the consultations towards outlining a Training and Skills Development Plan referenced in Section 3 should proceed.
5. The short- to medium-term staffing needs of the Corporation and the Co-operative, especially
  - the roles and function of the Corporation's General Manager
  - options for acquiring technical support which may be required by the Corporation and Co-operative - from government and other sources, and
  - ongoing business, financial and non-technical consultancy/resource services required.
6. How the land development plan described in detail in Section 4 should be implemented once public and private investment funds have been secured.
7. The stages of transition from the Corporation to the Co-operative can be defined, highlighting how and under what conditions assets are transferred.

### **Key Recommendations**

While this Strategy provides considerable directions on how the tasks suggested in the proposed Work Plan may be identified and implemented, only the Corporation can

make the final determination and complete the definition of tasks. To assist in this, below is a listing of the key recommendations contained in this Strategy.

- 2-1 Each of the land parcels listed in Appendix 1 requires a thorough evaluation and site development plan which takes into account specific locational factors.**
- 2-2 The set of criteria for evaluating potential blueberry-producing lands developed in this Strategy should be used in the land evaluation and site development plans as a “template”.**
- 2-3 The Corporation should make representation to Government to undertake comprehensive land assessments of sites considered to have potential for growing blueberries on a commercial basis.**
- 2-4 The Corporation should prepare a Training and Skills Development Plan with consideration given to adopting a three-pronged approach comprising on-site visits to other jurisdictions, classroom-style instruction on the theory and practice of blueberry production, and tailor-made instruction on Newfoundland blueberry farms.**
- 2-5 Producers should also be required to take any number of short courses and workshops on various aspects of farm business management, such as those sponsored by the provincial Agrifoods Branch and the Federation of Agriculture, in order that they can operate at the highest level of economic and financial efficiency.**
- 2-6 The Corporation should write to the Federation of Agriculture (or alternatively the Director of Soil and Land Management Division) regarding Crown land policy and availability of land for blueberry production in order to identify leased lands which may soon become free.**
- 2-7 As number of the timber licence lands are up for renewal over the next few years, the Corporation should present the Department of Forest Resources and agrifoods with a strong argument to identify additional blueberry lands from Crown land leases.**
- 3-1 As the Project Team’s conclusion is that there is considerable market demand for any additional blueberries brought into production in future years, the Corporation must start immediately to develop and implement a Market Development Strategy based on the principles and recommendations of this Report in order to ensure a there is a solid**

***“match” in future years between increased blueberry harvests and market demand.***

- 4-1 The Project Team strongly recommends that blueberry land development not occur on an ad hoc or piece-meal basis, but rather in an orderly and planned fashion in order to prove that commercial viability is possible. Therefore, the Corporation should view and use the land development model and criteria it has put together as a “blueprint” for blueberry industry development - much like the process developed a few years ago for the aquaculture industry.***
- 4-2 While the blueberry industries in neighbouring Maritime provinces, Quebec and Maine evolved under circumstances different from those existing now in Newfoundland and Labrador, their experiences can serve as models to this Initiative. But, it is not recommended that the paths followed by our neighbours be taken and simply applied to Newfoundland without consideration of local circumstances meaning a Newfoundland model may well require a different or even unique approach.***
- 4-3 The Project Team recommends advancing the Newfoundland blueberry industry in a methodical, cost-effective and co-operative manner by developing five selected parcels of land which are at differing stages of development in order to test the model outlined in this Strategy and to create commercially viable farms using sound horticultural principles and practices over reasonable time-periods.***
- 4-4 These “pilot projects” on five parcels of land should also allow for verification and refinement of the set of production and harvesting criteria which have been developed to guide future land management initiatives.***
- 4-5 As the model has application to all or most land-type scenarios in this province, the Corporation is encouraged to select parcels of land under different stages of development so as to be able to illustrate and verify the model.***
- 4-6 The Corporation should purchase equipment and expertise required to bring about a model of a managed blueberry operation that will enable the production of blueberries to reach maximum potential and to supply identified markets. This model should show that blueberry farm operations can be profitable, and entice investment by individuals interested in continuing or entering the industry so that the outcome will be a group of individuals forming a blueberry co-operative which will co-ordinate future growth and development of this industry.***

- 4-7 The Project Team recommends that Land Parcel A should be subleased to the Corporation. All of the revenues will therefore belong to the Corporation and used to fund its financial operating needs beyond year 6.**
- 4-8 It is recommended that Land Parcels Land B - E will not be subleased to the Corporation, but operated by the existing farmers in concert with the Corporation. The Corporation will share the development costs on a 50-50 basis, and it will take 25 per cent of revenues produced.**
- 4-9 Investment funds for the Initiative should be solicited from a variety of sources, particularly ACOA, HRDC and other federal agencies, the provincial ITRD, and from provincial and federal agrifoods departments.**
- 4-10 The Blueberry Development Corporation should hand over the responsibility for developing and managing blueberry farms to a Co-operative comprising blueberry growers in the region. At an appropriate time, the Corporation will divest its assets (primarily equipment and machinery) to the Co-operative which we suggest should take place during Year 6.**
- 4-11 For the Corporation to continue its prescribed function beyond the transfer of responsibility and assets to the Co-operative, the industry should pay Consultation Fees to the Corporation amounting to \$10,000 annually beyond Year 6, especially since the Co-operative will be generating revenue by that time.**
- 4-12 As initial discussions have been held with existing blueberry farmers and individuals interested in becoming blueberry producers, it is recommended that detailed individual land management plans for the parcels of land outlined be drawn up once the Corporation proceeds to implement the Initiative.**
- 5-1 In the context of this pan-zonal initiative, the producers' Co-operative should be established as the legal entity to oversee the common business activities of individual farm operations and registered under the Co-operatives Act (1998) of Newfoundland and Labrador.**
- 5-2 The co-operative registration is recommended as it seems to be the more appropriate corporate structure for the Initiative since it:**
- provides protection to the members from undue outside influences;**
  - focuses on providing important business services to members; and**
  - respects various sizes of member operations through strict democratic control.**

- 5-3** *The Co-operative should be governed by a set of By-Laws, developed with and by the founding members in accordance with the Act. These By-Laws will describe the general rules by which the co-operative will govern itself.*
- 5-4** *The Co-operative should also develop a Policies and Procedures Manual, which would lay out the day-to-day rules of operation.*
- 5-5** *The Co-operative should have the capacity to provide a range of services on a collective basis which would be either practically difficult or financially prohibitive for any individual farm to acquire on its own.*
- 5-6** *As the formation of a Co-operative is central to the vision of Corporation partners, it is recommended that part of the negotiated agreement with emerging farms will be an acceptance of the collective approach and a willingness to participate in the formation of the Co-operative. Once this is accomplished, the Corporation should arrange with the Newfoundland and Labrador Federation of Co-operatives to begin building the various components of the co-operative jointly with the initial farmers.*
- 5-7** *As the overall process of this Initiative proceeds, the Corporation should begin to reduce its direct involvement and the Co-operative become more active, until the latter is fully operational. This transition process should occur smoothly and ultimately result in the farmer/members being in full control of a functioning co-operative.*
- 5-8** *This transition should proceed as soon as there are a sufficient number of producers willing and interested in becoming part of a collective body. As soon as three producers agree to form a co-operative, the Corporation should commence working out the details of the Co-operative and especially how the Corporation and Co-operative relate to one another.*
- 5-9** *The Federation of Co-operatives should be engaged, along with a source of business development expertise, to design the details and guide the co-operative business development process.*
- 5-10** *The Corporation should continue to exist beyond the transition period and be a guiding force and support agency for the Co-operative, but its role may be focused more on overall industry direction and policy matters, rather than on the day to day running of blueberry operations*
- 5-11** *The transition process must involve the defining of the relationship between the Corporation and the Co-operative and especially their respective roles and responsibilities.*

- 5-12 A formal Advisory Committee should be created with representation from a broad spectrum of knowledge and expertise associated with the blueberry industry and business development. Initially, the Advisory Committee would serve the Corporation, but as the Co-operative becomes established, the Committee may focus most of its efforts on Co-operative activities with a corresponding reduced input to the Corporation.**
- 5-13 As part of its long-term business development plans, the Corporation should establish solid partnerships and relationships with several key groups and agencies in and out of the province.**
- 5-14 Good relations and contacts should also be forged with all components of the blueberry industry and associated groups, not just in this province but throughout Canada.**
- 5-15 Where possible, the Corporation should make formal presentations to strategic groups and agencies aimed at informing and securing support for the Initiative.**
- 5-16 In order to ensure all actions of the Initiative - especially those requiring immediate attention - are implemented in a timely and orderly fashion, the Blueberry Development Corporation should draw up a Work Plan covering at least the next 12 months which outlines a number of required tasks, who should undertake them, when, where and how.**

## Post-Script

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The purpose of this Strategy (and the Initiative it supports) is to develop a sustainable and commercially-viable blueberry industry in Central and Eastern Newfoundland. To recap, some of the key points underlying the Strategy are:

1. the Initiative should be based on commercial viability - creating business enterprises out of blueberry-producing lands.
2. the Initiative is intended to enhance and augment all components of the province's blueberry industry, but its efforts are *incremental* to existing activities and will not displace any current production, producers, processors or associated efforts.
3. As there is already an over-capacity in the processing sector, no consideration should be given to setting up new processing equipment or facilities, except in cases where there is no alternative - such as in an operation geared to the fresh berry market which is geographically remote and where basic primary processing on site may be required.
4. The Initiative recognises that the picking of blueberries in the wild should continue unfettered since it is focused on developing harvests from managed berry lands which will not encroach on the wild-pick component of the industry.
5. The Corporation should proceed carefully and strategically to demonstrate the commercial viability of developing blueberry producing lands by first using relatively small tracts of land and gradually increasing acreage under production over a number of years, rather than attempting to work with large acreages simultaneously.
6. The Corporation should follow the model for bringing blueberry lands into production as outlined in this Strategy, such that the first few parcels of land (for example, the 5 plots already identified) be seen as demonstration or pilot projects.
7. The model should be used by the Corporation as a template for determining how to proceed to develop any new parcel of land for blueberry production.

8. The Corporation is the innovator and leader of the Initiative, and it should continue to play this role even after the proposed Co-operative has been established. The Co-operative's principal mandate will be to develop blueberry lands and grow the region's blueberry industry to maturity. Hopefully, the Corporation and the Co-operative will work harmoniously to fulfil these objectives.
9. Neither the Corporation nor Co-operative can achieve their goals in isolation. They must both develop contacts throughout government and industry and, where possible, form active partnerships with individuals, groups and private enterprise at home and in other provinces.
10. Once the Strategy has been adopted, the Corporation should aim at promoting itself widely in the province and elsewhere in order to gain public visibility and ensure respect and credibility for the Initiative. Once the Co-operative has been formed, it too should focus attention on promoting itself and its product.

This Strategy covers a lot of ground and it has raised many issues. Keeping in mind the goals and objectives of the Corporation, we have tried to remain realistic in our presentation of research findings. But at the same time, we are enthused by the potential of this Initiative to both create a viable industry and also serve as a model for future agricultural development.

We believe the Corporation could ultimately be seen as a pioneer in promoting this industry. To our knowledge there is no blueberry land development model like that presented here in any other province.

We hope that all agencies and individuals currently involved in the blueberry and other agrifoods industries will be supportive of the Corporation's efforts. While many of the ideas we are putting forward have been expressed in previous documents, strategies and plans, the Corporation may be the first agency to actually put its ideas into practice. The key will be how it implement its plans in a co-ordinated and effective manner, acquire support and assistance from governments and industry, as well as develop formal and informal partnerships to help it move the Initiative forward.

**Appendix 1: Blueberry Land Development Sites**

**Appendix 2: Photos of Equipment**

**Appendix 3: Sample Co-operative By-Laws**