

CASE STUDY

THE CANADIAN BIRCH COMPANY: AMBER GOLD BIRCH SYRUP

Rural Innovation In Manitoba:
Reducing Barriers to
Commercialization and Growing
Capacity.

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The data, analysis of data, project analysis and conclusions or other information in this report are those of the authors and the Rural Development Institute and not of the Government of Canada or Manitoba.



Rural Development Institute, Brandon University

Brandon University established the Rural Development Institute in 1989 as an academic research centre and a leading source of information on issues affecting rural communities in Western Canada and elsewhere.

RDI functions as a not-for-profit research and development organization designed to promote, facilitate, coordinate, initiate and conduct multi-disciplinary academic and applied research on rural issues. The Institute provides an interface between academic research efforts and the community by acting as a conduit of rural research information and by facilitating community involvement in rural development. RDI projects are characterized by cooperative and collaborative efforts of multi-stakeholders.

The Institute has diverse research affiliations, and multiple community and government linkages related to its rural development mandate. RDI disseminates information to a variety of constituents and stakeholders and makes research information and results widely available to the public either in printed form or by means of public lectures, seminars, workshops and conferences.

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Introduction

The Rural Innovation in Manitoba (RIM) project is funded by the governments of Canada and Manitoba through Growing Forward 2, a federal-provincial-territorial initiative. It attempts to create new knowledge that enhances the process of innovation by addressing barriers and opportunities in commercialization in Manitoba's Agri-Food sector, and improves capacity in organizations so they can facilitate innovation. As a part of the RIM project, we conducted five case studies that provide the information for a cross case study report on commercialization in the Manitoba food processing industry.

This case study is one of five conducted to explore the commercialization of a product/process innovation, and give insight through interviews with innovators and important stakeholders. For the purpose of this research a stakeholder is defined as someone who helped innovators achieve significant milestones in their commercialization process. The terms agri-food and food processing are used interchangeably: and innovators and stakeholders are referred to collectively as participants.

This case study briefly describes the research design and methods, for additional details see the cross case study report. This case study specifically highlights an innovation from The Canadian Birch Company. The report provides a brief overview of the company, describes their product/process innovation, and provides an overview of their commercialization timeline. The report covers the five stakeholders identified by the innovators, who they are and how they helped. The report also describes gaps and barriers identified by the innovator and stakeholders that are specific to The Canadian Birch Company. Finally, the report concludes with a summary.

Research Methods

This research project seeks increased understanding of the commercialization of innovations in Manitoba's food processing industry. The research method used for this study was qualitative case studies. We conducted five case studies examining the path to commercialization for five recent product/process innovations in the Manitoba food processing industry.

All the studies centre on a product/process innovation that has come to market in the last five years. They document the progress of an innovation from idea through to market, from the point of view of the innovator and five "stakeholders", people who had helped the company on the road to commercialization.

Data Collection

Semi-structured interviews were conducted with the head of the food processing company; who was intimately connected to the commercialization of the product/process innovation.

The interviews explored critical areas to help understand the commercialization of each innovation:

- Background of company or organization and the services or product offered
- Timeline and milestones in the progression of the innovation from idea to commercial product
- Stakeholders and their involvement in commercialization
- The nature, timing, stage and impact of stakeholder involvement
- Barriers and gaps, specific to the innovation and companies involved, and the food processing industry in general.
- Leadership and other skills or characteristics that are needed to successfully commercialize a food processing innovation.

Each innovator identified up to five stakeholders who helped with the commercialization of their innovation. The stakeholder interview explored similar questions to those listed above, as well as the services they offer to innovators.

Ethics approval was obtained from Brandon University Research Ethics Committee (BUREC) for this study. We ensured confidentiality and accuracy by inviting innovators to review the draft case study first, before it was circulated to other participants for validation.

The Canadian Birch Company

The Company

<http://canadianbirchcompany.com/>

The Canadian Birch Company Ltd. is a privately owned Manitoba based company that processes sap from birch trees on the eastern shore of Lake Winnipeg into a variety of 100% natural birch syrups. Glenda and Rory Hart, owners and operators of The Canadian Birch Company, started the company in March of 2012. The company is fully food handler certified. Birch syrup requires a high volume of sap to produce, therefore, large-scale production and use of birch syrup as a gourmet ingredient is a relatively new development. The Canadian Birch Company began its research and experimentation in 2006. The company developed a number of new products and processes, which it continues to revise and improve to reach the full potential of the product. After placing third in the 2013 Great Manitoba Food Fight with its Amber Birch Syrup, they began refining and expanding its product range. There are currently 2 full-time employees working at The Canadian Birch Company processing plant located in Beaconia, MB on the East shore of Lake Winnipeg, Manitoba, as well as six additional seasonal employees. The company's goal is to create a long lasting, environmentally and socially sustainable industry in its home community.

Products

★ Amber Gold Birch Syrup

- Amber Birch Syrup
- Dark Birch Syrup
- Other products in development:
Whisky Toffee sauce, Birch Bacon jam,
Birch BBQ sauce, Birch fudge

Raw Materials

The Canadian Birch Company harvests and processes birch tree sap to create a variety of birch syrups. The location of their trees is essential to the quality of the syrup. As a result of the glacial retreat in the last Ice Age, the soil in the Winnipeg Lake area is the ideal condition for the production of pure and clear birch tree sap. Birch syrup has a substantial nutritional value as it contains high concentrations of calcium and antioxidants. The Canadian Birch Company owns the trees they tap in order to acquire the highest quality sap.

Market/ Customers

The Canadian Birch Company's products are available for purchase through its website, as well as through specialty retailers across Canada.

Position in industry

The Canadian Birch Company is a new company with an innovative product and a unique location. The Canadian Birch Company plans to expand from 1,250 birch trees to 2,000, which would make them one of the largest birch syrup producers in Canada.

Birch syrup is an emerging industry in Canada. It is important to note that birch syrup is not the same as maple syrup. Birch syrup is used for similar purposes as maple but also has different uses and a very different taste profile.

Competitive Advantages

- Location - The East shore of Lake Winnipeg has a micro climate with glacial soil that causes the birch sap to have a sweet and fruity, yet mellow taste.
- 100% Natural – All products are free of chemical additives, no added fructose or sugar.
- Variety of syrups - Amber Gold, Amber, and Dark.
- Nutritional - High concentrations of calcium and antioxidants

Awards

2015 Canada Consumer Survey of Product Innovation, Product of the Year - Innovative Packaging Award. Amber Canadian Birch syrups are packaged to highlight the quality and craftsmanship of their product, using high quality Italian glass bottles. The Canadian Birch Company is the first Manitoba company to win Product of the Year Canada in any category.

2015 Manitoba Taste Awards – Best New Product for Amber Gold – 3rd Place.

2013 Manitoba Food Fight 3rd Prize - Amber Syrup

Commercializing a New Food Product

PRODUCT / PROCESS INNOVATION

Amber Gold Birch Syrup

The Innovation:

The Canadian Birch Company's Amber Gold Birch syrup was the first in Canada to achieve golden birch syrup without adding sugar. Some producers add some type of sugar is added to birch syrup to make it golden, however Amber Gold pure, first-tap syrup has a natural light colour and taste when processed using their proprietary techniques.

Amber Gold syrup is a product innovation; it is also a result of a number of process innovations that were adapted from the Maple syrup industry, such as vacuum assist harvesting and UV pasteurization equipment, reverse osmosis process to increase sugar content, using innovative new to the industry evaporator and a filtration process and equipment that creates the sparkle.

The Product:

This product innovation is partly related to the location of the trees, the climate and soil affect the quality and flavour of the birch syrup. The harvest period takes place over 3 to 4 weeks as winter turns to spring in Central Canada, falling anywhere from late March to mid-May; Amber Gold is made from the first-tap in early spring. The Canadian Birch Company controls the entire process from tree to the bottle.

Amber Gold is the most popular syrup produced by The Canadian Birch Company, it is a lighter syrup that is very different from its competitors and more in line with the general public's preferred taste.

The Process:

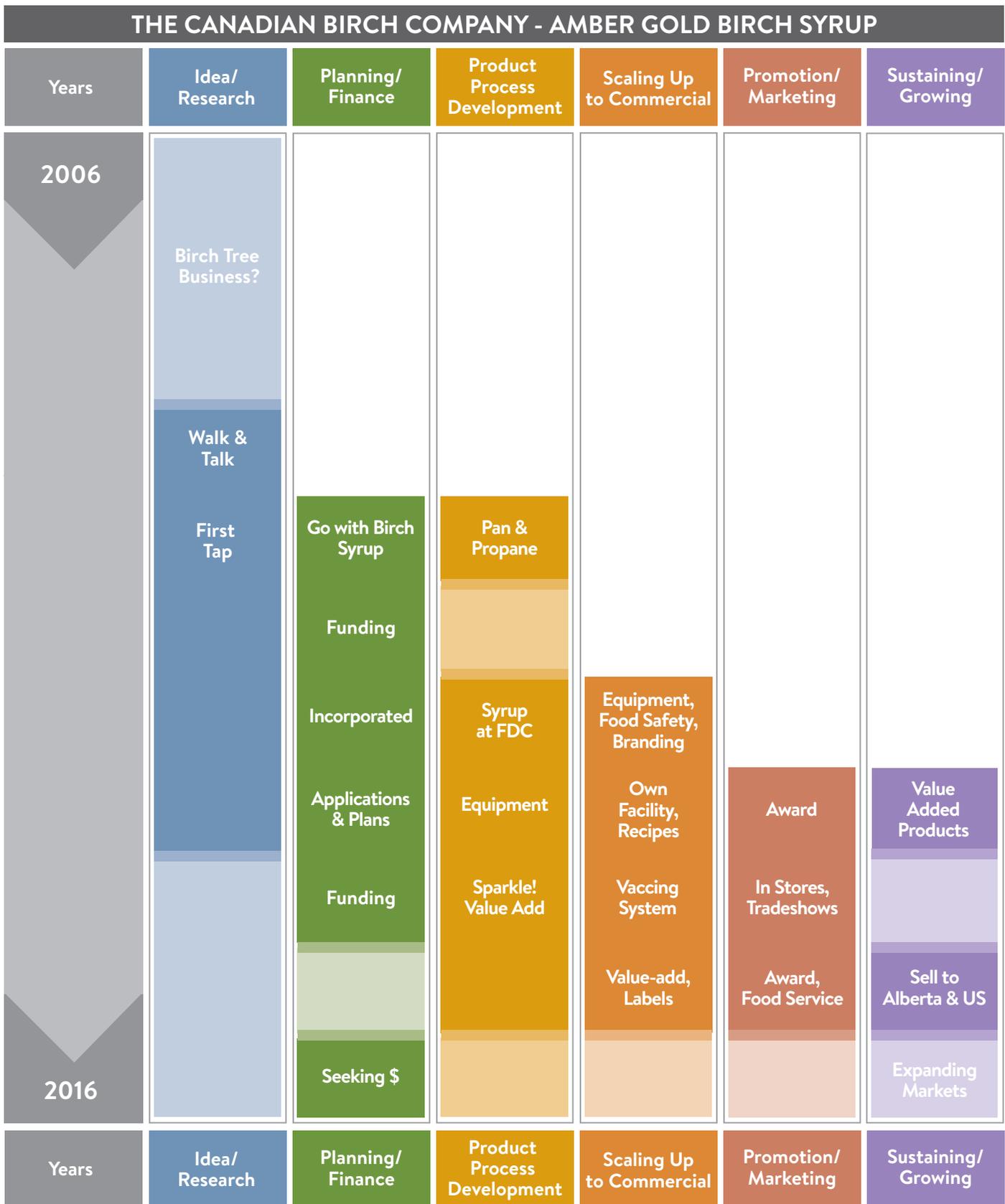
The Canadian Birch Company combines advanced technologies with time-tested techniques and the natural cycle of the birch trees to produce The Canadian Birch Company syrups.

1. Tapping & collection: When the sap starts to flow, tappers go into the forest to tap the trees. A network of tubing and a vacuum-assist bring the sap directly from the trees to the processing plant.
2. Purification & pasteurization: The collected sap is treated with a special UV pasteurizing machine.
3. Concentration: The sap then undergoes a Reverse Osmosis process to remove much of the water it contains.
4. Evaporation: The concentrated sap enters the evaporator where it is cooked to give the correct Brix value (sugar content) and shelf stable syrup.
5. Filtration: The syrup is carefully filtered through a filter press to produce clean, sparkling clear syrup.
6. Bottling: The syrup is bottled in Italian glass, labeled and packaged in individual boxes for safety and presentation.

INNOVATION & COMMERCIALIZATION TIMELINE

Figure 1 gives a simplified representation of the milestones in developing and commercializing Amber Gold Birch Syrup, as identified by The Canadian Birch Company and their stakeholders. The milestones are organized on a timeline from the idea for a birch syrup company to the present day. They are also categorized according to the stage of the commercialization continuum they were most related to. More details on the progress through commercialization are given in the "Milestones" section below as well as in the sections on how each stakeholder was involved in the commercialization process.

Figure 1.1 The Canadian Birch Company Simplified Innovation & Commercialization Timeline



*Darker shading indicates more intense activity

Milestones:

- The Canadian Birch Company started with an idea in 2006, to start a business using the birch trees on their land.
- In 2010 after a first-tap and first syrup – they decided it was either go-big or not pursue it. They purchased more land in 2011, and applied for funding for equipment.
- The Canadian Birch Company established brand identity in 2012 including logo, labels and choice of bottle.
- Initial processing was done on site with a reverse osmosis concentration, state of the art evaporator and filtration system and bottling was at the FDC. From 2012 to 2014 they scaled up production, improving their own facility to include bottling. Over this time they perfected their process to make “sparkling” Amber Gold birch syrup.
- In 2014 they purchased a new vacuum-assist harvesting system with the help of a loan obtained through the WEC, increasing both capacity and efficiency.
- Branding was taken a step further in 2014 with the introduction of a new high quality website with professional pictures and professionally written copy, as well as, attending trade shows and building retail and food service sales in MB, SK, AB, NB, and ON. In 2015, attending the Fancy Food Show in San Francisco resulted in syrup sales in the USA as well.
- The Canadian Birch Company is aiming to grow through developing new “value-add” products, to expand and diversify their product range.

Stakeholders

For the purpose of this study we have defined stakeholders as any person or organization that has helped The Canadian Birch Company on its path to commercialization. Examples of stakeholders include but are not limited to: family members, scientists and researchers, prototype developers, government agencies, economic and business professionals, funders/bankers, and agricultural associations. The five key stakeholders identified by The Canadian Birch Company are described below, together with the services they offer and how they assisted The Canadian Birch Company.

Food Development Centre (Alphonsus Utioh and Roberta Irvine)

<https://www.gov.mb.ca/agriculture/food-and-ag-processing/food-commercialization/food-development-centre>

Description:

The Food Development Centre (FDC), located in Portage la Prairie, is a Special Operating Agency of the Province of Manitoba. The facility assists the Agri-food industry and entrepreneurs with the transformation to commercialization through research and development of agricultural commodities, as well as value add food products. The centre offers entrepreneurs access to expertise, pilot plant facilities, and research. The Food Development Centre's clients range from first time entrepreneurs to global corporations.

Services Offered:

The Food Development Centre's pilot plant is Canadian Food Inspection Agency licensed for processed food production, allowing food companies to use the facility as a food business incubator to develop, produce, and market their products. The FDC has conducted a number of industrial research and development projects that focus on functional foods and nutraceuticals. The FDC's facilities provide the essential flexibility to conduct a wide variety of research and development projects in a number of different disciplines that use a vast diversity of processing techniques.

Their Involvement:

The Food Development Centre was involved with initial planning and research stage for The Canadian Birch Company. FDC took Canadian Birch through the bottling process the first year, did the nutrition analysis and helped with labeling requirements. They also assisted with education on food safety, and producing test market samples. FDC continues to stay in contact with them to answer questions and provide advice.

Forestry Training Services (Ken Fosty)

<http://forestrytrainingservices.blogspot.ca/>

Description:

Forestry Training Services is a Winnipeg based company owned by Ken Fosty, a Certified Arborist. He provides tree related education in in Manitoba, Saskatchewan, and Ontario. Forestry Training Services specializes in agri-food, specifically maple and birch syrup, mushroom production, and herbal tree production.

Services Offered:

Forestry Training Services provides specialized seminars and workshops about maple and birch syrup production, woodlot services, chainsaw training, insects and disease training. The company conducts lecture-style seminars, as well as hands-on presentations on a variety of topics.

Their Involvement:

Ken Fosty was involved with The Canadian Birch Company from the beginning and helped them explore the options of how their birch trees could be used and harvested. He also provided educational training, technical support and research for The Canadian Birch Company.

Women's Enterprise Centre of Manitoba (Nancy Brommell)

<http://wecm.ca/>

Description:

The Women's Enterprise Centre of Manitoba (WECM) is a non-profit organization dedicated to assisting women entrepreneurs successfully start and grow their businesses. It does this by providing three core services: confidential, one-on-one business advising; training; and business financing up to \$150,000. In addition to these services, the Centre also offers a variety of innovative networking, training and mentorship programs to assist women entrepreneurs in Manitoba grow and develop their businesses. WECM services are also available to male/female partnerships, provided the woman owns at least 50% of the business and is active in the management and operation. The Centre does not specialize in food processing but provides support to businesses in the food processing industry.

Services Offered:

The Women's Enterprise Centre of Manitoba has four staff who provide business advising services and deliver workshops on business-related topics including market research, marketing, operations and financial management. Each loan application is evaluated on its own merit but must demonstrate potential for commercial viability and loan repayment capacity.

Their Involvement:

The Canadian Birch Company was already in the market when it began working with the Women's Enterprise Centre of Manitoba. In addition to helping them update the business plan and develop the financial projections, WECM also provided The Canadian Birch Company with a loan to purchase equipment, advice and counselling on social media marketing, guidance on the development of a capability statement, and display and promotion of their products at WBENC 2015 (the international supplier diversity trade show) and to Canadian trade commissioners with Global Affairs Canada. The Centre continues to provide The Canadian Birch Company with business advice and support.

PackEdge Designs (Sandra Carson)

<http://www.packedgedesigns.com/>

Description:

PackEdge Designs is a St. Andrews based company that provides a unique approach to designer-client collaboration for packaging and specializes in agri-food industry. The company works with a large network of specialized independent contractors including writers, translators, and web designers to support clients' business objectives. PackEdge designs oversees the entire packaging process from its initial design to promoting the finished product with marketing tools such as brochures, signs, and tradeshow displays.

Services Offered:

PackEdge Designs assists business with establishing a logo and develop the brand name that will appeal to the consumer demographic. After the packaging is finalized, PackEdge Designs photographs the products, creates sale sheets, tradeshow displays, handouts, and business cards in order to support sales of the product.

Their Involvement:

PackEdge assisted The Canadian Birch Company with their promotion and marketing. Specifically aiding them in label creation and designing the company brand. They also focused on developing promotional materials and marketing supplies for the company.

Family (Alan Griffith)

Description:

Alan Griffith is related to the owners of The Canadian Birch Company. Alan brings the experience he gained from his extensive engineering background to them. Alan has offered the company practical help, encouragement and support throughout the various stages it has gone through.

Their Involvement:

Alan's engineering background has helped him lend technical assistance to The Canadian Birch Company. In the early years, he also brought his previous business experience to the company emphasizing the importance of strategic business planning. Alan also contributes through sales and promotion of The Canadian Birch Company products in Alberta.

Barriers and Gaps

A key purpose of this research is to identify gaps and barriers experienced by innovators on their road to commercialization. Below is a list of specific gaps and barriers faced by The Canadian Birch Company as they commercialized their birch syrup. The barriers and gaps identified have been ordered by the stages of commercialization.

Planning/ Finance

- Access to capital is challenging for all businesses, The Canadian Birch Company found it hard to access money through banks. When they did receive funding such as ARDI funding it worked well, however, the program is not currently available.
- Government funding requires that company's pay first then wait to get reimbursed, this is a challenge in terms of cash-flow. Applying for these grants required a lot of work with no guarantee of return. Also government grants are not always available for the purposes the business needs help with.
- Most business and marketing resources are located in urban centre. Given Manitoba's geography and small population, it is difficult to have enough sales without exporting.

Product Process Development

- The Canadian Birch Company had initial challenges with health inspector requirements concerning the use of bleach, as the interaction of chlorine with raw sap brings unfavorable results in the syrup. If contact with sap or syrup is expected, heat is used for sanitizing instead.

Scaling up to Commercial

- Food Development Centre is a very important resource for food processors, however it is expensive to use and does not always have the necessary equipment. This can reduce efficiencies and increase cost. It can also take a long time to get in to use the facility.
- The Canadian Birch Company was successful in attaining contacts for products; however, production is weather dependent and in years of poor production like 2013, they were not able to follow up on those contacts.

To minimize the problem they need to find a way to finance the cost of adding more trees to the system.

- Birch syrup is a niche product and The Canadian Birch Company does not expect to be in mainstream retail stores. Getting a distributor is difficult because the product is niche, expensive and little known.
- Rules and regulations for exporting food outside the province/ country have slowed the establishment of The Canadian Birch Company and specifically their value added products because of a lack of processing facilities in Manitoba that are CFIA compliant.

Promotion/ Marketing

- Birch syrup is a relatively unknown product, therefore, a lot of education is required in order to market and sell it to the consumer.
- A challenge with birch syrup itself is there is no grading system for the quality of birch syrup. It is hard for the customers to distinguish between pure birch syrup and syrup that has been made with added sugar. It is expensive to make good birch syrup and much of the birch syrup available to the consumer is of poor quality. Often when a consumer has experienced poor quality syrup they are reluctant to try birch syrup again.

Sustain/ Growing

- In order to expand the use of their birch syrup, The Canadian Birch Company has created value-added products. These products have created their own challenges because there is no accessible CFIA approved processing facility to work in, with the appropriate equipment. It can be challenging to get proper USA labeling to sell outside Canada without spending a lot of money to do so.

Summary

The Canadian Birch Company is a part of an emerging birch syrup industry in Canada. Their company started in 2012 and is selling retail and direct to customers across Canada. The Canadian Birch Company's product process innovation was their Amber Gold birch syrup. This syrup is different from other golden birch syrups because they do not add sugar to make the syrup lighter; their pure first-tap syrup has a natural light colour and taste when processed using their proprietary techniques. Throughout their commercialization process, The Canadian Birch Company has refined their process, built their own facility and is now exploring value-added products to expand their sales.

The Canadian Birch Company identified five stakeholders who helped them through their commercialization process. The Food Development Centre and Forestry Training Services were both identified as stakeholders who were primarily aided The Canadian Birch Company in planning/ research. Women's Enterprise Centre was identified as a stakeholder who helped with planning and finance which lead to the purchase of equipment for scaling up. PackEdge Design assisted The Canadian Birch Company with promotion and marketing. The Canadian Birch Company also identified a family member who has supported them throughout their entire commercialization process.

Finally, this case study highlighted gaps and barriers specific to The Canadian Birch Company's commercialization of their innovation. The Canadian Birch Company and their stakeholders identified the most gaps and barriers around planning/finance and scaling up to commercial production. These challenges focused on lack of access to capital, distance from services, lack of production facilities and challenges around exporting their value-add products.

As The Canadian Birch Company moves forward they are looking to create value-added products that use birch syrup as an ingredient and expand their markets.



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