



Case Study

Les Fraises de l'Île d'Orléans inc.

Strawberry Production Reinvented



Strawberries are one of the most important fruit crops in the world, and Quebec – the third largest producer in North America after California and Florida – supplies 50% of Canada's total production. Strawberry production methods across the province have changed at an impressive rate over the last twenty years. Today, consumers enjoy an uninterrupted supply of fresh Quebec strawberries from June to October, but it was another story entirely before several research projects were undertaken to find ways of extending the harvest season. Before the 1990s, Quebec-grown strawberries were only available for three or four weeks in each region, stretching strawberry season to a maximum of six weeks for Quebec consumers.

Determination to innovate

Delicious locally grown strawberries are available in Quebec's major grocery stores all summer long, because there are now fifteen varieties that provide continuous production. A research project on day-neutral "everbearing" strawberry cultivars – plants that flower and produce fruit throughout the season regardless of day length – was led by a team from Laval University, including Yves Desjardins, Roger Bédard and André Gosselin. The founder of the *Centre de recherches en horticulture* (CRH; Centre for Horticultural Research) at Laval, Mr. Gosselin has dedicated his professional life to sustainably developing the resources of the province through innovation.

In the late 1970s, after a somewhat unconventional career path, the owner of *Les Fraises de l'Île d'Orléans* founded the company in collaboration with other family members. Now an SME with some fifty employees, the company is one of several businesses to which we owe the pleasure of enjoying Quebec strawberries until the first fall frost.



To try to increase the market share Quebec berries occupy in the province's food industry, *Les Fraises de l'Île d'Orléans* took part in a number of studies to develop techniques for growing day-neutral strawberries under high tunnels on soilless substrates.

This research provided important results for the industry. Compared to the traditional methods of strawberry production in open fields, plants grown under high tunnels yield significantly more fruit. For certain cultivars, the productivity per plant is two or three times higher when grown in tunnels. That more than justifies using this approach!

At *Les Fraises de l'Île d'Orléans*, some 150,000 strawberry plants are now grown under high tunnels in quality soilless substrate fed by drip irrigation to ensure precise delivery of water and minerals. In addition to the heat gain provided by solar energy, high tunnels offer better control of environmental factors, facilitating production of top-quality fruit.

A fruitful collaboration

Having completely changed the environment in which their plants grow, the company based on Île d'Orléans in Quebec had to re-evaluate all the factors that affect the plants' development. Clearly, the choice of growing media played an important role in the success of the soilless production system. Several research and development projects led André Gosselin and his team to Berger, a world leader in production of top quality growing media, recognized for the consistency and reliability of its products. With help from Berger's team of experts, *Les Fraises de l'Île d'Orléans* found a growing medium perfectly suited to their innovative strawberry production system, a substrate that also made it possible to optimize the yield of every plant. In 2016, the company is using a custom substrate from Berger for all of their strawberry plants growing in high tunnels.

The future is promising for strawberry growers, and the company is expecting significant growth in the coming years. The collaboration with Berger has just begun.

Although soilless strawberry production presents its share of technical challenges, when all the factors are well controlled, the system yields fruit of exceptional quality and high production density. *Les Fraises de l'Île d'Orléans* has been able to introduce major innovations in an industry that has long been rather conservative. Its founder's involvement in research has enabled the company to develop strong business relationships and establish an enviable position in Quebec's food and agriculture industry.

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