

**Lead Researcher:**

Dr. Shahrokh Khanizadeh, Agriculture and Agri-Food Canada and Université Laval

Industry Partner:

“The workers are able to harvest almost twice as many strawberries per hour as compared to the traditional system in the field.”

A Sweet Story: Organic Fruit Tunnels

Organic Science Cluster I

Activity F.6

Although the Canadian market for organic strawberries and raspberries is growing, most products are imported from international sources due to our short growing season and cold winter temperatures.

A team of researchers from Agriculture and Agri-Food Canada (AAFC) and Université Laval collaborated with Les Fraises de l'Île d'Orléans Inc. in Quebec to address this challenge as part of the Organic Science Cluster (OSC). Their goal was to design a commercial system for producing organic strawberries in tunnels in order to increase yield and extend their growing season.

Here we reached out to André Gosselin, owner of Les Fraises de l'Île d'Orléans Inc. and full-time fruit grower, to talk about the success and impact of this research since their time in the Cluster.

Raised Gutter Approach

The OSC researchers developed a raised gutter approach within tunnels to grow strawberries. This was a novel approach, with Les Fraises de l'Île d'Orléans Inc. being the first to introduce it. The gutters held 10 plants per m length and were 1.2 m off the



ground for easier management and to reduce contact with the soil where diseases and pests are more problematic.

One of the biggest challenges was development of a soil medium that provided the proper balance of nutrients to sustain healthy plant growth and fruiting.

The researchers found that raised gutter systems with organic growing medium and fertility inputs produced strawberries with yields comparable to conventional fertilizers, and requiring less labor.

Fruit, and Beyond:

Today, strawberries are being produced successfully with this system. Les Fraises de l'Île d'Orléans Inc. has adopted it as their standard practice, and the organic berries they produce have higher yields and greater fruit size.

Through this collaborative research between the university and industry, an organic growing medium was developed and is still used by the grower today. For Canadian organic fruit growers, this OSC research has demonstrated a successful new practice and supports increased production of local organic strawberries in Canada!

ABOUT THE ORGANIC SCIENCE CLUSTER

This bulletin reports research results from the Organic Science Cluster program which is led by the Organic Federation of Canada in collaboration with the Organic Agriculture Centre of Canada at Dalhousie University. Organic Science Cluster 3 is supported by funding from the AgriScience Program under Agriculture and Agri-Food Canada's Canadian Agricultural Partnership (an investment by federal, provincial, and territorial governments) and over 70 partners from the agricultural community. More information about the Organic Science Cluster Program can be found at, www.dal.ca/oacc/OSC.

