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Organic Greenhouse Production Booming Thanks to Research

The Science of Organic Agriculture in Canada

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Organic Science Cluster II
Activity B.15

The demand for organic fruits and vegetables is growing, both in Canada and around the world. Consumer interest in food that is produced sustainably and close to where it is consumed continues to grow. Canada imports significant quantities of organic fruits and vegetables, in part due to our climate, as well as lower costs of production in other regions.

The organic greenhouse sector has tremendous opportunity to displace imports of crops such as organic tomatoes, cucumbers and peppers.

Organic Greenhouse Research

A series of organic greenhouse research projects conducted by a team of researchers led by Dr. Martine Dorais have made tremendous advances supporting the growth of intensive, commercial production in organic greenhouses. The research focus was initially on finding the optimum blend of ingredients to produce a healthy and fertile soil medium that supported the crops in a container production system. This included considering soil biology to meet the requirements of organic standards without introducing soil diseases. Other research projects explored advanced LED lighting systems, efficient heating and cooling systems, and wastewater recycling and management.

These research projects have been supported by a $4.6 million investment through the AAFC AgriScience Clusters Initiative through the course of three Clusters (14 yrs). The collaboration of industry partners has been instrumental in this success as they not only provided cash contributions to support the research, but much of the work was conducted directly within commercial greenhouses.

Based on 2022 projections, organic greenhouse production has grown in the last 15 years to become a $43 million/yr industry in Quebec thanks to support of research and innovation.

The Results

Based on projections for 2022, the greenhouse research will result in over $43 million per year in sales of tomatoes ($31 mil/yr) and cucumbers and peppers ($12 mil/yr) in Quebec. In addition, innovation within the research program has produced new technologies to support the advanced production system. Canadian partners in the research have sold nearly $40 million in greenhouse technologies to export markets.

The future is bright for the organic greenhouse market thanks to the research and innovation that has occurred within the Organic Science Cluster program.

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.