

## Aquaponics Project Delivers Fresh, Locally Grown Vegetables and Fish Year Round

Imagine being able to eat locally grown fresh Rainbow trout and leafy-green vegetables all year round. That may soon be possible for the Moose Cree First Nation living in Moose Factory on James Bay thanks to their proposed aquaponics project.

*“Food sovereignty and food security is of great importance to our community,” explains Stan Kapashesit, the Moose Cree First Nation aquaponics project manager. “We’re on an island and our food also has to be shipped a long way.”*

Aquaponics combines raising fish in tanks (recirculating aquaculture) with growing plants in a soil-free environment (hydroponics). The nutrient-rich water from raising fish provides a natural fertilizer for the plants while the plants help to purify the water for the fish. It’s a system that mimics a natural ecosystem.

The Moose Cree plan is to build a 6,000 square foot steel-frame building to house the tanks pumps, aerators and other aquaponics equipment. It is designed to grow 80,000 heads of lettuce and kale, along with cucumbers and tomatoes, and around

2,000 kilograms of rainbow trout every six months. It won’t use a great deal of electrical energy or heat to run and there are plans to incorporate solar panels later on Kapashesit says.

Besides being an economic driver for the community, the facility will be integrated into the local schools so children will have learning opportunities in sciences and life skills including biology, agriculture, aquaculture and nutrition. The facility will also be used to raise sturgeon fingerlings to help re-stock the Moose River.

The detailed design stage of the project has been completed and is now nearly shovel ready. Aquaponics is a relatively unknown technology, so getting the \$1.8 million in funding for the project has been a challenge. “We’re hoping to hear some good news on this soon.”

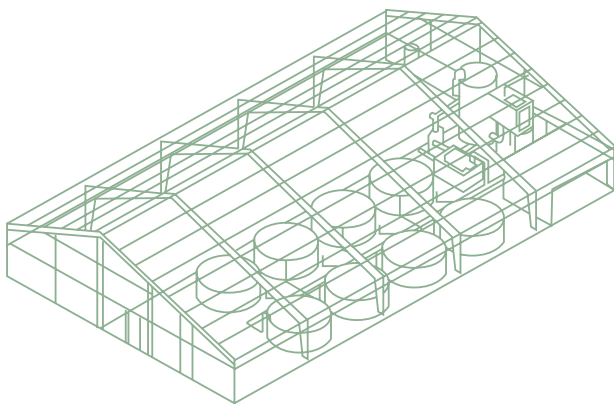
An important first step in getting the project started was educating the community about aquaponics and its potential to provide lower-cost food, as well as improved variety and quality. Along with information sessions, members of the economic development committee toured aquaponic facilities down south.

A small demonstration facility located in the Cree Cultural Interpretive Centre will first be operational so everyone will see first-hand how aquaponics works.

“We hope to be sharing some of our home-grown lettuce by early spring,” says Kapashesit.

Members of the community were also surveyed to find out what kind and how much fresh leafy vegetables and fish they would be likely purchase if it were available. The facility was then specifically scaled to meet the needs of the 2,500-member community.

The scalability and flexibility of aquaponics and aquaculture are an ideal fit for many Indigenous communities says Nick Huber, the aquaculture specialist at Waubetek Business Development Corporation. Waubetek is an Indigenous-owned financing institution with the mission of improving the sustainability of First Nations through business



development. Waubetek is assisting communities with aquaculture projects in Ontario, including Moose Cree, as well as in Manitoba, Saskatchewan and Alberta, as part of the Business Development Team for the Northern Integrated Commercial Fisheries Initiative.

The costs of growing food from aquaponics can be higher compared to traditional farming, but less than what remote northern communities pay for food due to shipping costs and other factors. Locally grown food is also fresher and more nutritious. And it also keeps money in the local community, Huber says.

“With growing awareness, many communities have been looking into aquaponics and aquaculture to become more self-sufficient in food production and the economic opportunities,” he says. These facilities can have a big impact on communities by addressing food security concerns and providing economic opportunities from raising fry or fingerlings to restock a local river or lake for commercial production. And, communities don’t need to be on the ocean or a lake to do this as nearly any source of water will do.

*“I’m happy to talk to anyone about the potential of aquaculture,” says Huber. For example, Huber and the Waubetek team have been assisting Moose Cree First Nation through the development of their commercial operation and demonstration facility by providing technical advice and financial support through the program.*

“It helps to have someone champion the project in the community,” he says.

That champion needs patience and persistence. It’s taken five years to get to the point where the Moose Cree aquaponics project is awaiting final decision on funding. Kapashesit says Waubetek has been very helpful and that he has learned an enormous amount about aquaponics. Good partners and solid understanding of the entire project have been crucial.

It was also important to train the local people who will operate the facility so they will also be able to repair it. “We’ll have up to six people working when it gets going.”

When asked what advice he’d like to pass on, Kapashesit said: It’s prudent for communities to know where their food comes from and to explore alternatives. “I’m happy to talk to anyone about our experience.

**Best Practise:**  
*Community Values and Adaptability Drive Economic Development*

