

GREENHOUSE GROWERS WORK TO MANAGE WATER:

Spring 2017

Greenhouse Hydroponics improves efficiency & becomes more environmentally sustainable

Driving through the Kingsville area of Essex County Ontario, you will see plenty of greenhouses. Great Northern Hydroponics (GNH) has some of the most technologically advanced facilities. Their state-of-the-art 65 acre growing facility, puts them on the cutting edge of technology. And by doing so, they are also a prime example of how environmentally-friendly a greenhouse can be.

One key component that sets GNH apart is the use of a state-of-the-art cogeneration facility. GNH is the first greenhouse application in North America to successfully install a cogeneration system of such capacity. The 12 MW system features heat recovery and exhaust treatment equipment, noise abatement and systems controls. The cogeneration plant operates with a system efficiency better than 93 percent and will provide enough electricity to the Ontario grid to power approximately 12,000 Canadian homes. The province gets a clean and reliable electricity source, while GNH gets the heat (for warming the greenhouses) and CO₂ (for plant fertilization); it is a win-win-win situation.



Water Smart
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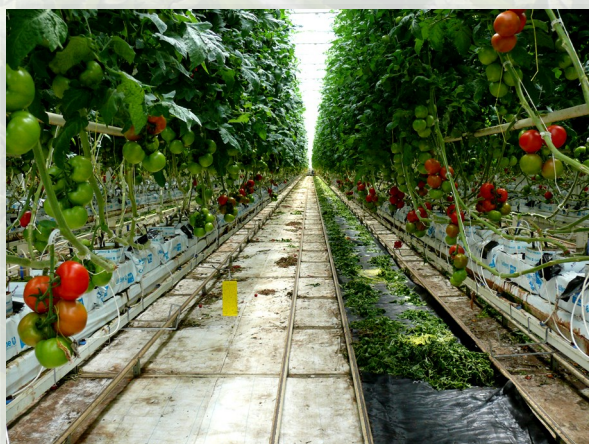
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Using top notch water recirculation and environmental control systems GNH achieves maximum water and fertilizer use efficiency. All the water that they use to feed their plants is collected, treated and reused (see recirculation insert), eliminating the risk of excess nutrients entering the environment. These advancements allow Great Northern to produce 13 times the nutritional value per litre of input water as compared to traditional techniques and varieties. The recent expansion to the sanitary sewer system provides the operation with a fail-safe outlet for recirculation water in case of emergencies. This is a huge step, especially in the Kingsville/Leamington area, which has been identified as a priority region in the binational agreement for phosphorus reduction in Lake Erie.



By controlling the enclosed environment in the greenhouse, GNH not only gives the plants exactly what they need, when they need it, but they are also able to control pest populations with the use of beneficial insects. Total control over the growing environment and all aspects of food safety provides GNH 100 percent confidence in guaranteeing to its customers a healthy, fresh, nutritious and most importantly safe product.

GNH is not only great at growing tomatoes but they also like to give back to their surrounding communities. All of the produce that cannot be packaged is donated to local food banks. They also support the Kingsville soccer team and offer up their facility to the Kingsville Fire Department for training exercises. They employ over 240 people, year-round, and have been a part of many research studies with OMAFRA to help better their sector.



Photos: Farm & Food Care

GNH is an excellent example of a company that is doing their part to help sustain the environment and their community. "We can warrant the product because we control everything," says Guido van het Hoff, president and general manager of Great Northern. "As farmers, we need to be environmental stewards and I think Leamington greenhouses have a great story to tell."

Farm & Food Care Ontario's Water Smart program is designed to help growers better understand how and where they use water. By having better information, growers are often able to reduce their water use, cut costs and generally find lower cost treatment systems. For more information visit www.FarmFoodCareON.org



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