

GREENHOUSE GROWER

# EZ Grow Farms showcases strawberry propagation glasshouse



Dusty Zamecnik, centre, explains the benefits of precision watering and misting equipment with robotic booms in the new strawberry propagation facility, EZ Grow Farms, near Langton, Ontario.



Want to taste the berry first? The Ed Zamecnik Berry Testing Center showcases three high-tunnel types with various gutter positions and strawberry genetics.

KAREN DAVIDSON

“It’s a dream come true,” says Dusty Zamecnik, general manager, EZ Grow Farms, Langton, Ontario, of the 18.5 acre glasshouse now propagating strawberry plants for greenhouse and high tunnel growers across North America. The capacity is for 15 million-plus plants annually.

What sets this facility apart is that it is one-of-a-kind in Canada with proximity to the 500 acres of greenhouse strawberries in the Leamington, Ontario area. Built by South Essex Fabricating, it integrates several high-tech features in one facility: the Growtec hoisting gutter system, the Robur robotic boom, and MJ Tech’s high-pressure fogging system. Together these technologies allow for broader

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~ DUSTY ZAMECNIK

delivery window from June to November and flexibility in genetic choices. There are 33 new varieties available.

“Last week it was 36°C outside,” says Zamecnik, “but through our environmental control systems, we were able to keep the temperature at 30°C indoors. Misting lowers the temperatures. We’re keen to keep the plants in a generative state.”

The sprawling facility has 72 zones, each with a Robur robotic boom, for

precise watering according to need. Sensors detect temperature and humidity, triggering automatic watering for the fledgling daughter plants which grow in a proprietary tray mix.

The glasshouse operation uses about 1.4 million litres of water per day of which 400,000 litres are used for high-pressure fogging. The ozone-treated water ensures there are no pathogens. Water is collected from the roof and stored in a retention

pond before re-use.

Clients keen to source these plants must think about ordering almost one year in advance. It’s a long process from variety choice to delivery. For those wanting a heads-up on taste, the Ed Zamecnik Berry Testing Center showcases three high-tunnel types with various gutter positions. Depending on production practices, the final berry may taste different. The Albion variety is still a standard but may be eclipsed by new varieties in time. The testing center pays homage to the grandfather that started it all in the 1930s.

“As much as we talk about the high-tech elements, there are still some basic principles,” says Zamecnik. “We put plants and people first. That’s why we strive to be the trusted source of strawberry propagation plants.”

## Goodleaf Farms appoints new CEO



Andy O’Brien has been appointed as GoodLeaf Farms new president and Chief Executive Officer, replacing Barry Murchie, who is transitioning to a role on the company’s Board of Directors.

He comes to GoodLeaf with a career in the food industry, most recently as CEO of M&M Food Market. Prior to this he led well-known consumer brands at General Mills, Campbells, Sunkist, MARS and Cara (as

President of Kelsey’s and Montana’s). He also is on the Advisory Board for Northland Restaurant Properties (Moxies, Chop Steakhouse and Denny’s Canada), as well as the Board of Directors for Bakers Delight/COBS Canada.

Since opening its first indoor vertical farm in Guelph, Ontario, in 2019, GoodLeaf has been in a significant expansion mode, adding farming facilities in Calgary and Montreal to establish itself as Canada’s only national supplier of domestic leafy greens. Mr. Murchie has been guiding that expansion as CEO of GoodLeaf for more than five years and will continue to be a major contributor to the future growth of the business from a Board position.



## GREENHOUSE GROWER

## High-pressure fogging optimizes growing conditions



Rob Kwinten, business development manager for MJ-Tech/Growtec/Robur.



The Robur high-pressure fogging system is installed at the EZ Grow Farms' strawberry propagation and growing facility, Langton, Ontario.



KAREN DAVIDSON

Rob Kwinten makes a good case for the MJ-Tech high-pressure fogging system that cools down the greenhouse crop during different growing seasons. As the business development manager of the companies MJ-Tech, Growtec, and Robur, he presented at the grand opening event of EZ Grow Farms, a strawberry propagation and growing facility, in Langton, Ontario, in late June 2024.

A key observation is how this high-pressure fogging system is combined with other growing parameters such as ventilation, screening, and CO<sub>2</sub> dosage.

High-pressure fogging promotes a balanced water uptake, keeping stomata open for both photosynthesis and transpiration. Consequently, both air and plant temperature decrease. This combination of increased humidity and decreased temperature improves water use efficiency, avoids water stress, and enhances photosynthesis. And this system results in reduced screening hours in warm periods due to the lower greenhouse and plant temperature.

It is important to ensure that the moisture evaporates before reaching the plants to minimize the risk of promoting diseases in this controlled environment, Kwinten advises. The optimal environment is achieved by

using small droplet sizes and determining the right start and stop time of the high-pressure fogging unit based on solar radiation (W/m<sup>2</sup>) and humidity deficit level (g/m<sup>3</sup>).

“Nevertheless, other risks can occur,” says Kwinten. “For example, if the grower starts fogging too early, that can lead to tip burn.”

Controlling the ventilation rate is crucial to maintaining the perfect balance between greenhouse temperature and humidity. As humidity levels rise, the enthalpy of the greenhouse increases, allowing for a reduction in ventilation rates. This reduces CO<sub>2</sub> losses and helps maintain higher CO<sub>2</sub> concentrations inside the greenhouse, optimizing photosynthesis.

To optimize misting control, sensors should be installed to monitor solar radiation, plant/leaf temperature, water uptake, air temperature, and relative humidity. These sensors enable the grower to precisely adjust misting setpoints in different climate conditions, greenhouse set-ups, seasons, plant types, and planting dates. High-pressure fogging is beneficial after planting in August/September, as it will create a vegetative climate. That will contribute to creating a well-formed root system from the start.

Temperature control over the 24 hours of a day is critical. If the 24-hour temperature is too high, the fruit size will decrease, and irregular-shaped fruit will occur.

Ensure that day temperatures are controlled so that fruit size and weight are well classed, and to keep the fruit load in balance.

Research has shown that in a greenhouse microclimate, IPM management has never been more important. Beneficials are more effective when the ratio of temperature and humidity are in balance. For example, *Phytoseiulus* is a predator of spider mites. This species is most effective in a temperature range of 21-27°C. Creating a stable climate with high-pressure fogging will allow better development, and higher hatching and survival rates, which will result in higher population and efficiency of the beneficials.

EZ Grow Farms has installed a high-pressure fogging system to create a vegetative climate for stable tip production. In the propagation phase, fogging is used to stimulate root growth and the settings are adjusted when the tips are well rooted.

Last but not least, the use of a high-pressure fogging system creates a more comfortable working environment, not only for the plants but for the employees as well. That is also important, especially during heatwaves or warm summer days, allowing the workers to safely complete their tasks and maintain high work efficiency.



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