

Containerized farming division now a standalone company

Plans include introducing patented container farm technology to cannabis industry



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are greenhouse growers from the Netherlands who first began developing the CubicFarms technology about nine years ago.

It's now ready to be its own separate business, according to CubicFarms CEO Dave Dinesen. As well, Zenabis will be launching ZenCube, bringing this patented containerized farming technology to the cannabis industry.

"CubicFarms systems are focused on growing food, but ZenCube will take this technology to market globally for the cannabis industry," Dinesen said. "This will facilitate growing cannabis in a very efficient way; our machines can optimize the climate perfectly."

The machines Dinesen refers to are exactly what set CubicFarms apart from other players in the containerized farming space.

Traditional vertical farming

Vancouver – A British Columbia propagation greenhouse is spinning off its containerized farming division as well as joining with Sun Pharm to become the third-largest licensed cannabis producer in Canada under the name Zenabis.

CubicFarms was started by Bevo, a 100-acre 32-year old propagation greenhouse facility in Langley, BC. Bevo founders Jack and Leo Benne



The rotating shelving brings all plants to the front of the growing chamber regularly, eliminating the need for aisle access to reach the plants. (IMAGES COURTESY CUBICFARMS)

systems are what he calls "rack and stack": vertical towers of horizontal plant shelves, each with its own row of growing lights, and the towers are separated by aisles to allow farm workers access to the crops.

CubicFarms, by comparison uses a machine to continuously

and evenly move trays of plants through the growing space. This requires only one row of light at the top of the chamber and each tray is regularly brought to the front of the machine for plant management and harvest.

"Two people can harvest an entire machine. It's very efficient and you don't lose space for hallways," he said. "Plants get the same even temperatures and lights and all sides of the plant are consistent. You need a machine to be efficient (in container farming)."

One machine can produce about 6,000 heads of lettuce every three weeks and at 17 harvests per year, that single machine will yield over 100,000 heads annually. The custom-built growing chambers are the same shape as a 40 ft. high cube shipping container, and each one has its own air handling unit to supply heating and cooling needs and control humidity.

This lets users optimize each machine for the specific crops it's growing, making the system more versatile and profitable for growers.

"You can actually do 690,000 plugs of basil per year per machine but basil wants a very different environment than lettuce," Dinesen said, adding that microgreens are a particularly outstanding crop for the CubicFarms system. "This takes a lot of labour and time out of microgreens, and we can optimize the climate for them and make it perfect."

It can take as little as a week from planting microgreens to harvesting them, with each machine capable of producing 240 to 300 pounds of microgreens weekly.

The smallest CubicFarms unit the company will sell, according to Dinesen, consists of 14 growing machines, two machines for germination and one for irrigation. This will give a grower

enough variety, volume and harvest dates to be both a meaningful employer and commercial produce supplier. The modular nature of the system makes expansion relatively simple.

The price tag for getting started with the entry-level system is around \$3 million CAD, with an estimated return on capital of approximately two years.

"We only sell to groups who want commercial scale production of leafy greens and we prefer to only have one cubic farmer per region who can be the local supplier," Dinesen said. "The goal is to stop shipping perishable leafy greens very far; ideally, they are harvested in the morning and on the shelf later that day."

CubicFarms does have one production facility of its own in Pitt Meadows, BC from which they've been selling produce for the last several months. Their main focus, though, is on the production system itself and on providing support to their growers from seed to store shelf.

This includes sourcing the best seed, nutrients and substrate, as well as sharing ideas on packaging and creating an established brand – Thrive Local Garden – under which growers can market their produce.

Partner farmers pay a subscription fee for consulting and troubleshooting and all software updates, whereas seeds, nutrients and substrates are provided at cost plus 15 per cent, thanks to the considerable buying power of parent company Bevo.

"Most important, though, is the new crop technology. We really act as our partner farmers' R&D division and much of what we do is focused on new crops and new varieties," he said. "Their success is our success."

Five complete CubicFarms systems have been sold to date with more in the works.



Unlike traditional containerized farming units, the CubicFarm system only contains one set of overhead lights and rotating racks ensure all plants get the same temperature and light levels.

November includes some positive machinery sales news

November continues to be a slow month for new machinery sales as overall tractor sales amount to about half of that in October and combine sales were roughly half as well.

But it's not all bad news. AEM's monthly sales report also shows many positive gains for machinery sales, Farm Journal reports.

Four-wheel-drive tractor sales in November 2018 were up 60.7% compared with November 2017, and year-to-date the segment has sales up 15.9% compared with the previous year.

Combine sales in November

2018 were up 9.2% compared with November 2017, and year-to-date sales for combines are up 16.6% compared with 2017.

Total two-wheel-drive tractor sales were nearly flat (0.9%) comparing November 2018 to November 2017 sales. However, year-to-date, two-wheel-drive tractor sales are up 6.9% so far in 2018 compared with the first 11 months of 2017.

As new delivery of units to dealers declines toward the year's end, inventories of all categories are lower than at the end of October.

"Equipment sales overall have been resilient this year,

but we are starting to see some softening as the year winds down," said AEM Senior Vice President of Ag Services Curt Blades in a statement to Farm Journal.

"Trade issues remain a major concern, especially the uncertainty caused by tensions with China. On a brighter note, we are encouraged by the administration's efforts regarding year-round availability of E-15 fuel. And we're urging swift action on the Farm Bill to provide some stability for farmers dealing with uncertain markets and lower farm income."