

# 'FUTURE OF FARMING'



Susie Kockerscheidt/Metroland

Adam Care, owner of Grown with Care Farms Inc., checks out the seedlings that grow under a red light – verticle hydroponic farming in his freight trailer in northern Whitchurch-Stouffville.

## *Whitchurch-Stouffville resident's business venture is on a growth projection*

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It uses 90 per cent less water than traditional farming, operates year-round, and it's not a greenhouse.

It's a shipping container.

Whitchurch-Stouffville resident Adam Care has one of these containers on his property. He uses it to farm 4,000 plants and sells them to local buyers. He said it's the first of its kind in Stouffville, and the second in Ontario.

"My mom and I started a business this past year, it's called Grown With Care Farms," Care said.

"When regular farmers stop producing come the fall, that's when I kick into high gear because I can keep producing the same stuff over and over again."

The 40-foot insulated shipping container is air conditioned and controlled with LED lights. No natural sunlight touches the produce Care is growing, but the LED lights work just as well as they're active

for 18 hours a day, unlike natural sunlight.

Care first starts by germinating seeds in soil plugs. Inside the container, he fills several trays of plugs with seeds and sets them aside.

"You put a seed in here, you wet it, and put it down here for about a week under these lights," he said.

After a week, the germinated seeds move up to a higher shelf, where water is mixed with nutrients. CO2 levels are controlled to stay between 1200 and 2000 ppm, water pH level is controlled to stay at 6, temperature is controlled to stay at room level, and it's all from an easy control panel or Care's cellphone.

Once the plants begin to sprout, Care transfers them into vertical hydroponic towers. The 7-foot tall towers are three sides closed, one side open, and can grow 16 to 17 plants each.

Produce that Care was growing included butterhead lettuce, Swiss chard and cilantro among several

others.

The Vivian Road farming operation takes 20 to 30 hours a week to operate, Care said.

The red and blue LED lights increase the overall temperature, for which Care has installed intake fans. To reduce humidity, he's also fitted a dehumidifier in the container.

The produce doesn't grow in any soil, but Care said that's not an issue.

"It's organic seeds, natural and tested well water, no modification. Your greens in their purest form," he said. "No pesticides, no herbicides, non-GMO, but it's not grown in soil."

"Talking to people, they're just happy that it's local and sustainable," Care added.

Care said in addition to providing year-round fresh and local produce, the shipping containers can provide great benefits to rural areas in Ontario.

"I'm working on possibly buy-

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– Adam Care

ing a couple and shipping them to more rural areas in Ontario where you can only get to by flying," he said.

"They have real big problems with nutritional levels there where they have to import everything."

Care said if rural communities have their own shipping containers to grow produce, it can tackle major food insecurity and malnutrition issues.

With 16 years working in restaurants, Care said chefs are always looking for fresh Ontario produce. But one shipping container isn't enough. He plans to expand into an old barn, using the same technology.

"Pizza Libretto took a sample, they loved it," he said. "A company like that goes through 500 pounds of produce a week. This (container) can produce about 100 pounds a week."

Care purchased his shipping container from a company in Boston called Freight Farms. The company releases updated versions of its "freight farm" every year. Care says each update makes it easier to operate.

With the recent hot and dry weather, news of droughts across the world caused by climate change and an ever-increasing population set to reach 8.1 billion by 2025, Care said it's time for change in how humans farm their food.

"People really need to look at the future and realize the population is skyrocketing, but food production isn't," he said. "More and more people need to get into ideas like this, farming hasn't changed to adapt, we see this as the future of farming."