

# **Much changes when farm production moves indoors; Venture capital has inserted itself into this field since “over 90 per cent” of farmers installing \$2 million units and smaller "don't have access to capital."**

Ontario Farmer  
Tue Jun 19 2018  
Page: A21  
Section: News  
Byline: Ian Cumming  
Source: Ontario Farmer

Boston -It's a segment of agriculture growing at a blistering pace, but only about six per cent of American indoor farmers (greenhouses and other year-round environmentally controlled units) have a bank loan, being either financed on a medium to huge scale with venture capital, or starting small from their own savings.

Nicole Kerslake from Newhouse Capital, who made this statement here at the AgTech Nexus Conference at the Harvard Club, noted that with indoor agriculture, there are, "no real average-sized farms."

She joined three major American operators in this field; Josh Dunway from Aero Farms, Paul Lightfoot from Bright Farms, and Brad McNamara from Freight Farms, on a panel to discuss this segment of the industry in depth.

Kerslake estimated that, "over \$40 billion" in venture capital has been invested thus far, "to move growing lettuce and strawberries indoors." Most of these investments involve three to five year leases signed with "the best farmers we can find," and some centre around contracts signed with schools and hospitals, "to provide them with their own food," she said.

Venture capital has inserted itself into this field, since “over 90 per cent” of farmers installing \$2 million units and smaller, "don't have access to capital," said Kerslake.

Venture capital also works in conjunction with insurance companies, engineers, consultants and other professionals in setting up these projects, she said.

They are also investing in and working with research partners in plant genomics, such as the University of Japan, which "is the Harvard of this space," said Kerslake. Some of the biggest research challenges is taking, "outdoor seeds and making them better and more adaptable to indoor growing," said Kerslake.

Companies like Amazon and Ikea have "invested in space to grow food," she said. "You can make a 20 to 30 per cent return on your investment, versus one to two per cent out in the field," said Kerslake.

Dunway had raised \$100 million in equity, plus has some project debt for Aero Farms, showing slides of the massive 70,000 square foot indoor growing facilities they have constructed in New Jersey.

*Posted on internal media site of the Ontario (Canada) Farmer publication.*

After getting the process down pat on a smaller scale, "we are growing with economies of scale," he said.

Their massive growing facility uses no sun or soil, there is LED lighting, plus they deliver water and nutrients with aeroponics, using 95 per cent less water, than if out in the fields. Their motto is to have leafy greens in the store, "in hours," rather than in days.

"Consumers want trust and transparency," said Dunway. Serving over 200 supermarkets in Baltimore, Philadelphia and New Jersey, there has been, "a 25 to 40 per cent jump in salad sales since they are buying more due to lower costs," he said.

Perfect sanitation is strived for with their picking and packaging procedures. They use no pesticides, nor is their product washed, said Dunway, noting that stores don't publicly say it, but they prefer the less risk of food contamination coming from their controlled facilities, versus the outdoor conditions, combined with longer delays getting to the shelf, said Dunway.

Harvesting 24 times per year is enabling them to collect a massive amount of data, with which they have partnered with Dell, he said. "If there is an outcome, we can analyze what got us there."

Lightfoot raised \$55 million in equity, plus took on \$15 million in debt, to get Bright Farms up and running. "I knew what the market wanted," he said.

They have set up with growing and packing farms around the country, with horizontal glass roofs, plus ponds for their own water source, said Lightfoot.

They have installed the most, "sophisticated technology for inputs," with their ongoing quest to have, "constant incremental improvements in yields," he said.

They try to be near cities, but outside of them enough that it's far cheaper when buying property to build their units, said Lightfoot. They try not to be more than 100 miles from their markets.

"We pre-sell the produce first and then build the farm," said Lightfoot. "Supermarkets are gaining freshness, are assured of a supply, plus there are better demographics," he said.

"When the cabbage is three days old, rather than nine days, it looks different and you get way more sales per store," said Lightfoot. "We talk stores and consumers, not finances, that will follow if you have the first two."

"We need to be first class in food safety," said Lightfoot. He is also seeing stores, "shifting as much as they can to greenhouses for food safety."

Their competitors are, "salads grown (outdoors) in Mexico and the southern states," he said. "We don't have the weather and transportation problems."

To its credit this brand new indoor industry's main players are agreeing to meet this summer, with the goal being, "to set up a national organization with protocols," he said.

McNamara started with his partner and \$30,000 in "maxed out credit cards," to build their first 40-foot prototype unit for families and neighbourhoods to grow their own food. After demand took off like hotcakes, they have since sourced \$10 million in venture capital, he said.

They are now over 200 growers in 36 states and 12 countries. Places like northern Canada -where a head of lettuce in the store is \$14 -or the desert of Dubai, to downtown Boston, are some places where his units to grow food year round have been sold to individuals, hospitals and corporations, says McNamara.

*Posted on internal media site of the Ontario (Canada) Farmer publication.*

The "mobile food production" unit, known as a "leafy green machine" grows vegetables hydroponically without soil, and is monitored by a mobile app, he said.

They are still in the process of, "developing the correct software for farmers, to share information with growers in real time data," said McNamara.

This business has taken off, allowing people to grow what they want under their protocols. "The upcoming generation is more demanding," he said.

Those doing it as a business, "have year-round cash flow," something outdoor growers don't enjoy, he said.