

Huge rooftop greenhouse is Montreal's local farm

April 6 2011, by Geraldine Woessner



The young entrepreneur and founding father of Fermes Lufa, Mohamed Hage, checks plants in March 2011. Lufa Farms combines cutting edge technology with heirloom varieties of vegetables to bring surrounding residents that garden-fresh taste any old time of the year.

A Montreal company is eagerly awaiting a crop of tomatoes, cucumbers and herbs grown in a vast greenhouse perched on top of an office building, and billed as the world's first rooftop garden farm.

"Our vision is a city of rooftop farms," says the Lufa Farms website of the gardens nestled above the Canadian metropolis, as it mourns the loss of good farm land due to commercial development and urban sprawl.

With the world's population continuing to grow while available arable

land falls, the young duo behind Lufa Farms believes greenhouses in the sky could be the way forward to providing fresh food for hungry urban dwellers.

Designed by Mohamed Hage and his partner Kurt Lynn, the greenhouse spreads across 3,000 square metres (32,300 square feet) above Montreal's north end, wafting the scent of fresh thyme and coriander onto streets below.

Lettuce, peppers, zucchini, eggplant, bok choy, celery, or fine herbs such as rosemary, basil and parsley -- the choice of produce is varied and plentiful enough to fill 2,000 grocery carts each week.



The 3,000 square meter greenhouse atop the roof of Lufa Farms in Montreal, where the temperature is maintained at 26 degrees Centigrade.

The urban farm's first harvest looks promising and is almost entirely pre-sold. Buyers signed up online over the winter to receive baskets of fruits and [vegetables](#) at distribution points throughout the city, starting later this month.

Marie-Eve Allaire was the first to be tempted by this new kind of market.

"I chose a small basket of produce, which is for one person or a couple. It costs 22 dollars per week, so it's no more expensive than what I'd pay at a grocery store for vegetables," she said.

But the produce is fresher as it is sold on location where it is grown, she noted. It is also better for the environment, say the two men behind the business.

"Everything is automated," said Hage. "We can set the temperature, lighting and humidity according to the needs of each group of vegetables." It is all done by computer.

A system has also been set up to collect [rainwater](#) to water the plants and help them grow.

It took a significant investment to get off the ground, almost two million dollars to build and stock the greenhouse.

But the urban greenhouse is closer to the people than rural farms and so saves money on packaging, transportation and refrigeration.

Hage is counting for success on their proximity to food buyers -- distribution is exclusively local -- and the quality of the produce that relies on honeybees for pollinating and ladybugs to attack pests in lieu of using chemical pesticides.

But a return on the investment is only in the long term.

In fact, said Hage, to make a profit the business will have to expand from a single location to include a cluster of greenhouses. "We need

more greenhouses, more space," he said.

The company plans to build more greenhouses and is searching for suitable urban space. About 10 percent of commercial rooftops in Canada could support a greenhouse, Lufa Farms maintains.

And they are actively recruiting space, calling for building owners to consider lending over their rooftops to greenhouses.

Stanley Kubrow, a professor of nutrition at McGill University in Montreal, whose team is closely involved in the urban farm, is also a proponent of bringing producers closer to consumers in this way.

"A large selection of fruits and vegetables is best in terms of nutrition for consumers. And if it tastes better than trucked-in produce, people will buy and eat more of it," he said.

Meanwhile, Lufa Farms is already set to open another greenhouse on a city rooftop, five times larger than the original.

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