

Greenhouse gardens the way of the future

Thanks to indoor agriculture, we may soon be able to enjoy locally grown veg even in winter.

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By Sonia Day, Gardening



Vineland scientist Viliam Zvalo poses with Asian eggplant vines indoors. The research station in Niagara is the first place in the world to grow this tropical vegetable successfully inside a greenhouse. (SONIA DAY PHOTOS)

Ah, winter's here. That means lots of plastic-wrapped vegetables arriving in our supermarkets from thousands of miles away.

Yet who doesn't feel a twinge of guilt when putting these imports into a shopping cart? The zucchini flown in from Guatemala. The garlic from China. The bunches of kale that bear a little sticker saying: "Product of Chile."

Talk about carbon footprints. I can't help thinking of the huge quantities of fossil fuel needed to transport those foodstuffs to us in the frozen north.

Still, the environmentally responsible alternative — a peasant diet of carrots, cabbage, turnips and spuds all winter long, because they're grown locally and store well — isn't exactly appealing either.

So here's the good news: those summer-season veggies that we've become accustomed to buying year-round are increasingly raised right here, in Ontario greenhouses.

You've probably seen them. Yummy tomatoes (quite unlike the pale pink, turnip-hard specimens that used to come from fields in Florida), colourful bell peppers, cucumbers and various salad greens are already a familiar sight in supermarkets. Just check their labels. They often say "Grown in Canada." That makes me feel proud.

And now there's a more exotic contender in the works: Asian eggplant.

Decidedly tropical and as flighty as a hothouse flower, this veggie belongs to the Solanum family (which includes potatoes and tomatoes) and is a diet staple in India, China and the Middle East. But the fetching purple fruits, so shiny you want to stroke them, can have a tough time adapting to our climate.

I know. My own attempts at growing eggplant, whose unusual flavour I've grown to love, have been a disaster in my veggie plot northwest of Toronto. I usually wind up with hard, wizened fruits the size and appearance of — dare I say it — dog turds.

So what's currently happening at Vineland Research Station in Niagara strikes me as pretty exciting. Crop experts there have developed three super-tough kinds of eggplant that can cope well with our unpredictable weather and will thus be commercially viable for our farmers to grow.

Yet there's more. One — a long, pale purple kind, popular in China — has proven such a prolific producer under glass, it outshines its outdoor-cultivated counterparts by a wide margin.

"We're the only place in the world that has managed to grow eggplant in greenhouses successfully," exults a triumphant Viliam Zvalo, the research scientist who spearheaded this three-year trial.

He adds: "We're excited because Canadian growers can easily produce up to 42 kilos of eggplant fruit per square metre when they grow them inside a greenhouse. Yet outside, the yield is substantially less — only from four to 6.5 kilos in the same area."

Why the huge difference? Zvalo explains that a longer growing season indoors helps. Also, eggplants, which develop on vines, get damaged easily in windy weather outside. And they need propping up with costly fencing.

I got a peek at the super-performers during a visit to Vineland's palaces of glass a couple of weeks ago. They are certainly amazing — like mad, monster vines in some Hollywood movie.

Their tendrils grow so long — often at least 10 metres — that greenhouse staff must climb tall ladders to keep twisting the stems around strings suspended from the greenhouse roof. Their leaves get huge — like elephants' ears — while the fruits, big, prolific and healthy-looking, are mostly clustered in bundles up near the top.

They put my own humble attempts at growing eggplant to shame. Even so, there's one aspect of all this that bothers me a bit. As more and more of the world's food is produced this way — i.e. indoors, in hi-tech greenhouses — will we gardeners one day be relics from another age, the only people left who still grow things in the conventional way?

"No," Zvalo assures me with a grin. "There'll always be traditional farmers, because some crops — root vegetables, for instance — can only be grown outside, in the ground."

How reassuring. Yet I still look forward to buying those greenhouse-raised eggplants.

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