

GENETICS

## Evolution: still life in the pear category



Pears have evolved. Thanks to patient breeding, this pome category has come to life with Canadian-bred choices. The four varieties to the right are new in the last 20 years. Photographed at Thwaites Farm Ltd. at Niagara-on-the-Lake, Ontario, these pears are left to right: Old-style Bosc, Golden Russet Bosc, AC Harrow Crisp, AC Harovin Bounty and Cold Snap. Photo by Glenn Lowson.

### INSIDE

Vineland Growers' Cooperative expands cold storage pg 2

Syngenta's pipeline includes a fungicide pg 5

FOCUS: Food safety in the value chain pg 12



Volume 66 Number 12  
P.M. 40012319  
\$3.00 CDN

KAREN DAVIDSON

The table is set for a new generation of pears. Several varieties such as AC Harrow Crisp, AC Harovin Bounty and Cold Snap have made their debuts in the last 20 years. But by 2022, there should be two new Canadian pears available to consumers.

The first, still known by its breeding code HW623, was licensed to the Vineland Growers Co-operative in 2015 and first plantings are expected next year. HW624, which has red-blushed, medium-sized fruit and a high tolerance to both the bacterium that causes fire blight and the insect of pear psylla, is the most recent release from Vineland.

"To have tolerance to both fire blight and pear psylla adds armour to the variety and will benefit growers," says Michael Kauzlaric, technology scout and grower outreach, Vineland Research and Innovation Centre (Vineland). "There's interest around the world." These breeding efforts

“  
To have tolerance to both fire blight and pear psylla adds armour to the variety and will benefit growers

~ MICHAEL KAUZLARIC

”  
started by Dr. Dave Hunter at Agriculture Canada's Harrow research station are a testament to patience. Although he's retired now, his remaining seedlings from the breeding program were transferred to Vineland for further evaluation in 2013. About 20 of them have been chosen for further evaluation with plans to expand grower trials in British Columbia, Ontario, Quebec and Nova Scotia.

"We are right around 600 acres of pears in British Columbia, mainly grown in the Kelowna area," says Carl Withler, BC's industry specialist for tree fruit and grapes. "Bartletts, Anjous and Boses lead the charge."

What a turn-around from the gloomy days of canning plant closures across Canada. The St. David's peach and pear cannery

in the Niagara peninsula, for instance, closed in March 2009. For a niche industry, that could have been a death blow combined with the fact that fresh-market pears were also falling victim to fire blight.

Ken Slingerland, formerly the Ontario government's tender fruit and grape specialist, and a handful of growers saw a glimmer of hope in 2011 when they visited the high-density pear plots at Cornell University. Better yields of 15 to 16 tons per acre were being achieved in this radical new system that was already revolutionizing the apple industry. Their competitive spirits were also piqued by news of high-density orchards being planted by pear growers in Italy, Chile and Oregon.

The pear is an odd fruit. Botanically, it's a pome fruit

like apples with a core of several small seeds surrounded by a tough membrane. Yet it's unusual for apple growers to also grow pears. Mostly, it's tender fruit growers who are likely to include a few pear acres to harvest after stone fruit is finished.

Some of the growers are changing to accommodate orchard practices more akin to apple growers, hedging high-density rows for example to keep the whole tree productive with flowering buds. They are also realizing that storage practices such as cold-atmosphere environments improve the flavour and marketability. Suddenly, pears are no longer the end-of-season fruit but a category that can be stored and marketed into winter.

Continued on page 3

## COVER STORY

## Evolution: still life in the pear category

Continued from page 1

The Cold Snap pear is the first variety to bridge this gap into a new era. With local research as a guide, storage protocols have improved so that the crisp, apple-like bite of a Cold Snap pear off the tree mellows into a more traditional pear-eating experience.

John Thwaites, a tender fruit grower, followed the research developments both in Canada and around the world. Son Graham became intrigued with the pear potential when he spent a season, almost a decade ago, working in the Goulburn Valley near Melbourne, Australia. Intensively farmed and irrigated, this area showcased what could be done with pears.

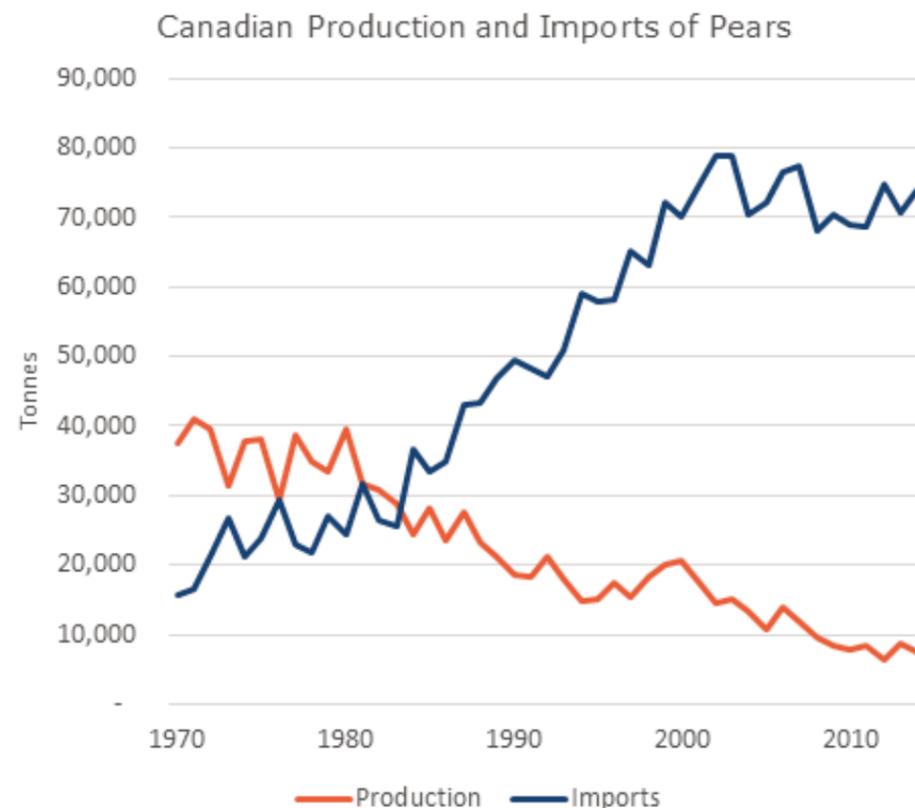
Just seven years ago, the Thwaites family planted their first high-density pear growers, now lay claim to 55 acres near Virgil, Ontario. Today, the Cold Snap plantings are yielding 13 tons per acre and with maturity, numbers should double.

“The orchards of Bartlett pears are slowly disappearing,” Thwaites recounts. “When the St. Davids canning factory closed, the pear industry declined with it. Bosc is the loveliest tasting pear but it’s so susceptible to fire blight, we can’t grow it anymore.”

The Thwaites family and other growers are bucking the downward trend that’s been entrenched since the 1980s. According to Statistics Canada (CATSnet, June 2015), only one out of every 10 pears consumed in Canada is grown in Canada. More than 75,000 tonnes of fresh pears are imported annually – about 54 per cent from the United States -- with an estimated value of \$82 million. Canadian fresh pear production is pegged at 8,855 tonnes with a farm-gate value of \$9.2 million. Ontario leads the way with almost 60 per cent of the production followed by British Columbia with 30 per cent and the remainder shared by Nova Scotia and Quebec.

“There’s definitely room to replace imported pears,” says Lana Culley, director, business development, Vineland. “In addition to replacing imports, we also see huge growth opportunities for pears. When we did consumer research in the spring of 2015, we discovered that pears weren’t top of mind. This tells us that there’s room to create more consumer awareness and drive demand – particularly when the pears we’re marketing are developed and produced in Canada, and have more natural resistance to disease.”

If a new pear variety were to be introduced, about 30 per cent of consumers said they would be interested. If that new pear variety was Canadian-grown,



then interest increased to 46 per cent. If the new pear added the attribute of being grown with fewer pesticides, then interest climbed to 66 per cent. This baseline research is encouraging for the HW624 variety that is in the pipeline.

“The pear story is compelling,” says Vineland’s Kauzlaric. “The future prospects for growth are encouraging, due to consumer preference for local fruit and a good eating experience.

However, consumers will need some education to understand differences in varieties. Too green? A consumer might think the pear is under-ripe. Too yellow? The consumer might think the pear is too soft and will turn to mush.”

New colours and shapes of pears will require some positioning in the marketplace. Packaging – and directions for storing and eating pears – are the next chapter to that story.

## INTERNATIONAL

## NEW ZEALAND

### Apple industry sets sights on \$1 billion



The World Apple Report has ranked New Zealand as the most competitive performing country for apple production. With that praise, the country aims to export \$1 billion by 2022. That target is within reach at \$700 million this year.

The 2015 season broke records of 550,000 tonnes, up 13 per cent from the previous year. Two-thirds of the country’s production emanates from the Hawke’s Bay district.

Industry investment continues to keep up with international demand for apples. Another 1,700 hectares, representing one million trees, will be planted by 2020. Post-harvest technology and international marketing have moved New Zealand’s apples from a commodity to a high-value, niche premium product.

Source: FreshPlaza.com

## NETHERLANDS

### Tomato Experience Center underway



Despite a merger with Bayer in the near future, Monsanto’s seed company De Ruiter is building a new Tomato Experience Center in Lansingerland, the Netherlands. Construction is expected in 2017 for TEC 2.0 with a footprint of 8,000 metres squared.

Plans are to plant 300 different tomato strains in the new demonstration greenhouse. A visitors’ centre, with capacity for up to a thousand visitors annually, will allow education for the entire supply chain and consumers.

TEC 2.0 is testament to how quickly the greenhouse industry has evolved since the original greenhouse was built 13 years ago. The new centre will be used for new cultivation methods and plant sensors.

Source: FreshPlaza.com

## UNITED STATES

### McDonald’s names two potato varieties



McDonald’s, one of the world’s biggest purveyors of French fries, has chosen two new potato varieties. Not only are these varieties more environmentally sustainable, they live up to the taste test.

The Russet Burbank has been the gold standard for many years, but is susceptible to disease and requires top-notch soil fertility and water. Researchers from the Tri-State Program – Washington, Oregon and Idaho – have successfully bred the Clearwater Russet and Blazer Russet. These are the first two varieties that McDonald’s have added since 2000. It’s a significant move because only seven varieties are listed as acceptable for making their renowned French fries.

Seed production is ramping up.

Source: FreshPlaza.com

## NORTH CAROLINA

### Hurricane disrupted sweet potato harvest



From October 6-9, Hurricane Matthew spared crops in Florida and Georgia, but caught North Carolina sweet potato growers half way through their harvest. Damage is estimated at 10 to 15 per cent of the crop, but total losses won’t be known until after the curing process.

That’s a disappointing end to what looked like a promising crop. In 2015, there were 1.6 billion pounds harvested out of a total of 3.1 billion pounds in the United States. That’s a 4.8 per cent increase over the previous year.

Other notable states for sweet potato production include California, Mississippi and Louisiana. In the last 15 years, domestic consumption of sweet potatoes has risen from 4.2 to 7.5 pounds per capita.

Source: FreshPlaza.com