

### *Case Study*

## **Cold Snap™ pear – Winter's Favourite Fruit™**

### **Background**

The average Canadian consumes almost five pounds of pears every year. However, we now import more pears than we grow and currently, on average, only 10 per cent of pears consumed in Canada are grown locally.

In 2015, more than 78,000 metric tonnes of fresh pears (valued at \$120 million) were imported into Canada. Most of the pears came from the U.S. (54 per cent). This wasn't always the case. Pear production in Canada was thriving until the 1980s when it started to decline due to a number of factors including disease, conversion of farm land to housing and the increasing cost of labour. The collapse of the pear processing industry in 2008 further exacerbated the situation.

### **About Cold Snap™**

The Cold Snap™ pear was developed by plant breeders at Agriculture and Agri-Food Canada (AAFC) over decades of crosses and selections. In 2009, AAFC licensed the Cold Snap™ pear to Vineland for global commercialization and a new business model with benefits for both growers and consumers was developed.

The Cold Snap™ pear features:

- Wide consumer appeal
- Fire blight tolerance
- Large fruit size
- Superior postharvest storage life
- Winter hardiness



## Commercializing the pear

Vineland's approach was to bring this pear to market in Canada as a premium *club variety* providing the marketer with the competitive advantage needed for differentiation and building value. This approach works for other fruit varieties including apples and tomatoes by enabling the variety manager to achieve a premium price, ultimately benefiting everyone along the value chain.

The Vineland Growers Co-operative (Co-op), the largest packer and distributor of pears in Canada, was selected as the exclusive licensee for the commercialization of Cold Snap™ in Canada.

## Protecting intellectual property

New plant varieties are typically protected by Plant Breeders' Rights (PBR) to ensure propagation and distribution can be managed effectively. Vineland manages PBR for the pear on behalf of the Co-op and took the additional step of obtaining multiple trademarks for the Cold Snap™ name, logo and tagline to give Canadian growers a competitive advantage over imports. This trademark protection ensures licensed growers within Canada can market the pear under the Cold Snap™ name and unauthorized imports won't impact our markets.



## Incentivizing the shift to high-density orchards

In 2011, prior to the first Cold Snap™ plantings, Canadian pear orchards were traditionally spaced at a density of 200 to 300 trees/acre. Elsewhere in the world, apple and pear growers had shifted to new high-density planting methods, providing higher yields and earlier harvests. Canadian growers were hesitant about the upfront investment needed to plant 1,000 trees/acre and install extensive post and wire infrastructure, especially when facing a local pear industry in decline.

To encourage growers to adopt high-density production, royalty payments were structured to create incentive. Production royalties were charged on a per acre basis rather than the usual percentage of fruit sales. The rapid maturing, higher-yielding, high-density orchards would therefore provide a clear advantage over traditional low-density plantings. The fire blight tolerance of the pear was an additional incentive for growers, effectively de-risking investment in new plantings and reducing the cost of controlling disease. As a result, almost 100 per cent of all Cold Snap™ trees have been planted in high-density orchards.

The opportunity presented with the Cold Snap™ pear helped growers expedite the shift to high-density production and the practice is spreading with other fire blight-tolerant pear varieties being planted using high-density production.

## Consumer insights

The club branding approach to commercialization requires an identifiable brand supported with a strong marketing campaign. For this, the Co-op sought research guidance from Vineland for insights to identify consumer appeal. This research was critical for Kitestring, a creative branding studio, who used the findings to define the Cold Snap™ brand and story. Throughout the brand development process, Vineland worked with Kitestring to test consumer reaction and validate various elements of the marketing plan.

With its distinctive bright blue packaging, the Cold Snap™ pear was officially introduced at the Royal Agricultural Winter Fair and welcomed in grocery stores across Ontario during the late fall of 2015 and early winter months of 2016. Using Vineland's consumer data, the Co-op leveraged the brand story to price the Cold Snap™ pear at a premium in the marketplace.





# Consumer insights define the Cold Snap™ brand

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- Sweet and flavourful
- Juicier and less grainy than other pears
- Made-in-Canada, produced locally
- Naturally disease-resistant meaning less pesticides
- Longer lasting with firm texture even when fully ripe



## Impact

The introduction of the Cold Snap™ pear creates economic impact for multiple players across the horticulture value chain, including nurseries supplying trees and consumers purchasing the fruit. The greatest impact, however, is for growers and marketers of the fruit.

To quantify impact, Vineland assumed the variety will have a lifetime of 14-15 years, after which plantings of Cold Snap™ will taper off as other pear varieties enter the market. The numbers presented throughout this case study are calculated based on the first four years of tree sales data and projected over a 14-year period and discounted to 2015 dollars. However, once planted, individual orchards will likely yield fruit for as long as 40 years.

## Propagators

The interest from growers in an exclusive, branded pear variety created an exceptional demand for trees with sales reaching a peak of nearly 28,000 trees/year within four years. This uptake is much higher than for traditional open release varieties which tend to scale more slowly and peak at around 5,000 trees/year.

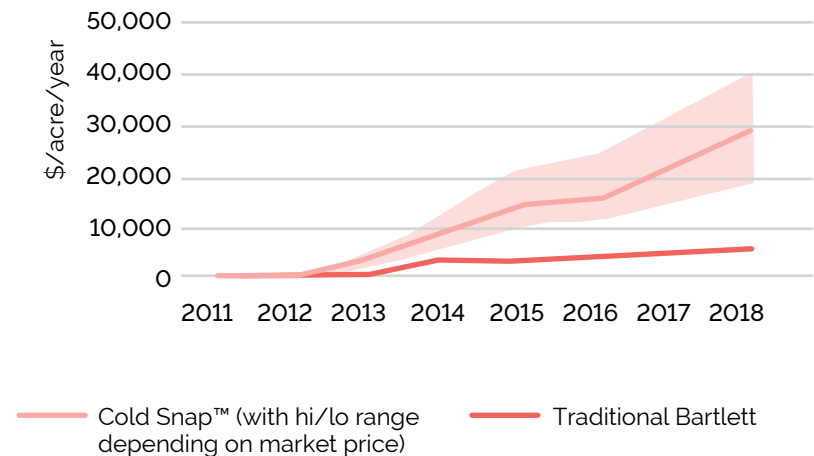
In addition to the rapid scale-up, it is clear high-density planting sells more trees and propagators benefit significantly when growers plant Cold Snap™. Based on projected acreage being planted and assuming an average tree price of \$12, sales of Cold Snap™ will generate a present value of \$1.3 million in revenue for propagators, which is \$1 million more when compared to standard Bartlett pear orchards planted on the same acreage.

## The Co-op and its growers

The high-density plantings, coupled with premium pricing, will generate significantly higher benefits to growers when compared to traditional plantings of Bartlett.

At a premium wholesale price of \$1.11/lb, the net present value of all production when moving from a standard pear like Bartlett to Cold Snap™ generates \$51.5 million which will accrue to both the Co-op (as the exclusive marketer) and its growers.

**Growers' Revenues for Cold Snap™ vs Bartlett**



# Cold Snap™: a grower-friendly pear

- Fire blight tolerance dramatically reduces the risk for growers when shifting to high-density production which produces higher yields per acre, accelerates the time to first harvest and allows more sunlight to create the pear's desired blush
- The fruit stores extremely well, maintaining quality throughout the winter
- The large fruit size means the majority of pears can be sold into the high value fresh market category
- The fruit hangs well and is easy to harvest
- The fruit is harvested late in the season which helps farm labour scheduling
- Fire blight tolerance reduces need for spraying

*"Cold Snap™ has everything going for it- it's fire blight-tolerant, which is a huge plus, it's easily trained for higher density, the late harvest helps with farm labour organization and the pear also hangs well. It really is a grower-friendly pear."*

John M. Fedorkow - Fruithaven Farms



*"Cold Snap™ is especially appealing because of the later harvest, eating quality and exceptional storability. While typically pears can be stored until November/Christmas, Cold Snap™ can be stored well throughout the winter, giving the market access to local pears for most of the year. Breeding should continue for these type of pears, there is definitely a future in that."*

Jamie Warner – Warner Orchards



### ***International growers and marketers***

The appeal of the Cold Snap™ pear variety extends beyond Canada, particularly due to its fire blight tolerance. Interest from international partners has led to the variety being licensed for production in the U.S., Europe, Northern Africa and other regions. To retain a competitive advantage for Canadian growers, Vineland has developed licence agreements and trademark protection to prevent trees and pears from being sold back into Canada. International plantings will generate significant royalties to support ongoing research at Vineland with benefits flowing back to the Canadian industry.

### ***Reinvesting in research***

The royalty structure for the Cold Snap™ licence in Canada sees \$1.50 for every tree sold returned to Vineland. After five years, when the orchard has reached maturity, a charge of \$225/acre will be levied. Based on projected plantings, the present value of these royalties over the 14-year period is estimated at \$1.3 million for reinvestment in research to further support horticulture innovation.

### ***Retail and consumers***

The late season harvest and enhanced storability of the pear create an opportunity to put local pears on grocery store shelves throughout the winter. This advantage, in combination with the branding strategy, allowed grocery stores to position Cold Snap™ as a premium product, selling 90,000 pounds of pears in the launch year, pre-packaged and branded in two-pound bags. Building on this strategy, marketable yields are expected to increase substantially to generate sales to almost two million pounds by 2018 and four million pounds by 2024.





# Success at a glance

Success is the result of a multi-faceted collaboration between many organizations and a broad base of growers who embraced a new business model delivering benefits to growers and consumers. The Cold Snap™ pear is rejuvenating the pear industry in Canada with production continuing to scale-up, ensuring more pears reach the market in the coming years.

- Cold Snap™ can be stored for longer and sold throughout the winter, meaning consumers have access to fresh Canadian pears
- Cold Snap™ is fire blight-tolerant, reducing the need for spraying and allowing growers to shift to high-density orchard production
- Vineland has commercialized the pear using a club branding approach including exclusive licensing, consumer-informed marketing and trademark protection
- Sales of Cold Snap™ trees escalated rapidly to a peak of almost 28,000 trees per year and will generate a present value of \$1.3 million in revenue for propagators, \$1 million more than if standard Bartlett pear orchards were planted on the same acreage
- Cold Snap™ will create a net benefit to growers of \$51.5 million
- Canadian and international sales of Cold Snap™ will generate royalties of \$1.3 million over 14 years to support ongoing research at Vineland

