



GMO Apples in BC

Please feel free to share this information with MLA's, MP's and colleagues as this issue is critical the BC Organic fruit sector. The following has been sent as a letter to CFIA and Health Canada.

Re: The CFIA application GD 743 and GS 784- the request for approval of the sale/distribution of the Arctic tree/apple. COABC requests that the following points be considered in evaluating it.

Loss of Organic Production

The inevitable measureable impact of the "Arctic" apple on the local economy will be a **loss of \$4,000,000 annually**. Because of cross-pollination [bees fly as much as 4 miles from a hive], organic producers will not get certification. This will cost organic tree fruit growers in the Okanagan-Similkameen \$2,500,000 in revenue (based on 16,000 bins of organic apple production). The Cawston Cold Storage Packinghouse will close, they cannot remain open running just soft fruit, costing local jobs and eliminating a payroll approaching \$1,500,000. Next to School District #53, CCS is the biggest employer in the Similkameen. It is unclear, whether the other two organic packing sheds, Harkers and Organics Plus can stay open but in any scenario the loss of organic apples will result in job cuts. The total impact on the economy, the loss to suppliers, wholesalers, retailers, truckers, local business, is hard to gauge but must be in the millions.

Loss to Conventional Growers

Once the Arctic tree is planted out, an orchardist growing any variety other than the Arctic, is also growing a GMO apple because of cross-pollination. It is generally accepted that bees will fly "as far as they have to", to forage. A flight distance of 4 miles is considered the practical maximum. The standard is 2miles/3kms from an area sprayed with a prohibited substance, for organic honey production. If a bee flew in a 3km radius, it would pollinate 8,658 acres. How will the OTFC packinghouse separate the non-GMO and GMO apples. For example, imagine segregating Arctic plantings and a quarantine of contaminated apples in both CA and common storage. What about private packers? It would be a logistical nightmare. Therefore, a consumer will be making a choice to buy a GMO BC Gala, or a non-GMO conventional Washington State Gala. Market research suggests, 87% of the time, the purchaser will select the non-GMO product, if priced the same. The \$2-4/box premium that BC Tree fruits has been able to get from Canadian retailers, for BC product, will evaporate. All varieties of our apples will be seen as GMO. It is impossible to predict how the major food retailers will respond to BC apples being GMO's but even if they are listed and sold for the same price as Washington apples, the loss in revenue at \$3/box (based on the industry packing 3,150,000 boxes) will be over \$9,000,000 annually!

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Loss of the Integrity of the BC Brand

Like Flax growers, the BC apple industry has positioned themselves as “healthful”, “good for you”, “buy local”, part of the 100 Mile diet, in fact the BC Agriculture Minister Don McRae has explained that a “Buy BC” brand campaign is unnecessary because the public’s support of the industry is so good. He called it a “motherhood” issue. On behalf of growers, the BC Fruit Growers Association has pursued having the Okanagan Similkameen declared an ALPP-area of low pest prevalence. Investment Agriculture has spent millions on the Sterile Insect Release Program with the aim of reducing pesticide use and supporting a healthy environment. With the distribution of the “Arctic” tree all the goodwill becomes irrelevant. Once testing indicates GMO seeds are present in a variety other than the “Arctic”, all BC apples will be perceived as GMO whether they are or not. BC could be the only jurisdiction in North America, in the world, growing a GMO apple. Unless all growers plant the “Arctic”, the majority of BC apples will be sold as GMO apples without the non-browning benefits. Market research would predict these BC apples will have to be discounted to be sold, by what amount is indeterminate, so the total loss to growers is indeterminate. But if you extrapolate from the organic-conventional pricing structure, then you could expect the GMO apples other than the “Arctic” to retail for 30% less on average than a non GMO conventional apple. If this were the case, the direct cost to the conventional industry would approach a loss \$20,000,000. The image of the BC leaf(which has a 89% recognition rate among consumers) becomes synonymous with the low cost generic brand, the “not natural brand”, instead of the premium President’s Choice brand. The most pressing question is whether or not BC retailers like Safeway, Overwaitea, Superstore continue to support BC growers or get non GMO apples from Washington.

What the Arctic apple is not.

Okanagan Specialty Fruits has at times suggested the non browning apple can do for the apple industry what the baby carrot did for carrot consumption/grower income. There are a number problems with this assertion. First, baby carrots were created from a change in processing, not from a completely different GMO variety. Any carrot can be grown or sliced and peeled to a baby size. To have a true comparison, all baby carrots would have to be GMO. If the Arctic is going to succeed as a table apple then mom is still going to have to slice the apple, cut out the seeds and put it in a bag for their child's lunch-an operation similar to peeling a carrot and slicing it into pieces. This is not what increased consumer demand for carrots. Baby carrots are in a bag, bite sized, peeled and ready to handle or eat. If the Arctic is going to succeed as a “fresh cut” ready to eat ‘slice in a bag’ apple, then it is a processing apple. Currently, returns for processing apples to conventional growers are -.05/lb, returns to organic growers +.04/lb. For a grower to get a .22/lb return on his processing apples(this would make it economically feasible)-the price would have to increase by .27/lb or 2700%. At the local supermarket, a 2lb bag of baby carrots sells for \$3.49, the bag of big carrots \$1.99, a premium of

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43% (\$.75/\$1.75). If a similar premium was received by growers for their non-browning apples, they would charge - .02/lb instead of -.05/lb-a gain of .03/lb not the .27/lb needed. Even if you used the average fresh price as a benchmark (.15/lb), the price rises by .215/lb but this is still a net of .165/lb, which is not economically viable. Before being diverted for processing, the Arctic would still have to be sorted for bruising and defects and packed in a manner that would not cause damage in shipping. The overheads are higher than a regular processing apple so .165/lb is optimistic.

The carrot growers cost is the seed. The Arctic growers cost is a tree, plus a royalty, and the loss of orchard revenues for as much as 5 years while waiting for the new replant to reach full production. And, there is no guarantee of success. The grower has made a significant capital investment in his trees, but at this point in time there is no processing facility committed to taking the Arctic apple, no market research indicating a huge increase in demand because of a non-browning fresh cut apple, and in fact, the problem with fresh cut is the distribution and shelf life. Whether carrots or apples, consumers don't want to open a bag of slimy product. Baby carrots incidently, are dipped in a chlorine solution to keep them fresher and orange.

The Arctic is not a solution to any supply chain problems. In talking with production and field staff at the Okanagan Tree fruit Co-op, browning isn't on the radar. Concerns are for loss due to codling moth, leaf roller, aphids, bud worm, scab and bruising both while picking or packing.

This is not a matter of letting consumers decide. By the time the Arctic is on the retail market, if a consumer is buying a BC apple the choice will be a GMO Arctic or a GMO Gala (or any other apple variety). There will not be non-GMO product, conventional or organic, for sale, unless it is from some other apple growing country.

An Economic Risk.

The Arctic is untested and may not be a commercial variety. Since 2000, the industry has had winners like the Ambrosia, but it has also had varieties like the Silken, Aurora and Nicola, which were developed at PARC Summerland, planted by growers and are not commercially viable. The Aurora scored higher in taste tests than any other commercial variety, but it bruised easily, couldn't be packed or picked, and the cull rate was over 50% per bin. It failed as a commercial variety. The Aurora is a yellow apple, the Arctic is a yellow apple. The top 3 attributes consumers judge an apple by are taste, crunch and color (they like red). A non-browning apple doesn't address any of these qualities. If it's non-browning but mushy, people won't eat it. Will it bruise, will it last in CA storage, how will it handle in the packinghouse? These are all the types of questions that cannot be answered until the variety is planted out and enough are grown to be graded.

If the Arctic proves to be uneconomic/non commercial, there is no going back. In the years it takes to assess the viability, the organic industry will have collapsed, conventional growers and the BC brand will have been damaged and as long as even a

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few growers or backyard trees remain, the problems for all growers continue. It's not canola, where you can plow in a crop, use a different seed source and be non-GMO. People don't grow canola in their backyard. There is no legislation that requires a person to pull a commercial or backyard tree because it's GMO. A commercial replant back to non GMO conventional trees, is costly (as much as \$20,000/acre) and at least a 5 year wait for full production. Why put the industry at risk for this 1 untested variety?

The BC Industry Position

Imagine you're standing in front of the panel on Dragon's Den. You and your friends have spent a lot of money developing this invention and not one Dragon wants to invest a dime in your company. This is the situation for Okanagan Specialty Fruits. In the past 2 years, the BC Fruit Growers Association has passed 3 non-GMO resolutions. Washington State growers don't want this technology: the Research Commission hasn't invested in GMO research in 20 years. The government of Ontario has cancelled funding for the Enviropig, the animals euthanized. Maple Leaf has recently introduced a "Natural Selections" brand...for their hotdogs and Kraft a "Smart Kraft Dinner" with Flax Omega 3 and no artificial flavors, colors or preservatives! The marketplace is deciding, and apple growers are not stupid. The current trend is for natural, healthy, environmentally friendly products. A GMO apple does not fit with this trend.

Accepting that marketing research and trends are correct, the potential monetary damage, to the BC apple business, from the introduction of the Arctic apple, could be as much as \$34,000,000. The entire BC industry, both organic and conventional are against the introduction of this apple.

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