



Vol. 19, No. 1

April 18, 2019

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What Drives your Business?

On a cold February morning, a group of men and women stood shivering with both cold and anticipation. Some of us travelled long and far to reach the southern shore of Lake Ontario. The weather was hardly surprising, given that Rochester is known for a bitter cold – especially during an IFTA event. But our group wasn’t deterred by the cold as they stared at long rows of dormant trees, because we were ready to absorb the advice of the orchard owner.

There was one tour that really stood out, and not only because we took refuge in a heated building. Wafler Farms Inc. was a clear leader in benchmarking, orchard design, and development of technology. Why did Wafler Farms Inc. come across as a leader? They had a goal driving their work, which was to keep the flow moving in the orchard. During dinner the previous night, I also gleaned from Paul Wafler that he believes in thinking differently to produce high quality fruit and lower costs.

I have been asked many times why I decided to work with the tree fruit industry. One keen grower asked me unexpectedly. The answer is a difficult one if you haven’t given it much thought, apart from ‘it just felt right’. A pretty lame answer. After some reflection, the answer is that I enjoy eating delicious apples that are safe and have been produced sustainably. And any way that I can help NS growers achieve their goals will ensure that people have great fruit to eat. So now I’ll turn the question around to ask you; why do you grow apples? The answer is not profit because profit is the end result of any successful business. ‘Why’ is the reason your business exists, and the answer will be unique to your own operation.

The point is, the most successful companies constantly reflect on why they do what they do. So here’s a little inspiration for the start of the growing season in the form of a video from Simon Sinek on the TED Talk website about [‘How Great Leaders Inspire Action.’](#)

Sincerely, Michelle

Top 6 Takeaways for the Tree Fruit Industry

The tree fruit industry is constantly evolving. As I've been reading articles, I've marked down what I think are the top news items in hopes that the following summary will be helpful to your business.

1. Handle G41 with care because of a brittle graft union.
2. Be aware that Washington State is launching the variety Cosmic Crisp in 2019. They plan to exceed 14 million bushels in five years supported by a \$10.7 million marketing campaign.
3. Research continues on automated harvesters including a tiered shake and catch harvester, and vacuum assisted harvester.
4. Scoring or notching followed with Promalin is being used to promote shoots on blind wood.
5. Social media is a useful tool to introduce consumers to club apples.
6. Washington State researchers are working on a prototype smartphone app to count the crop load before harvest. The goal is not to have a technology that is 100% accurate but to have an app that is affordable and accessible.

2019 Pest Management/Spray Guides

Hyperlinks to Tree Fruit Management Guides

Minor changes have been made this year with the addition of new products. Stay tuned for the "Supplement to the Orchard Outlook" that will outline all changes for 2019.

- [Pome Fruit](#)
- [Stone Fruit](#)
- [Organic Apple](#)

Sprayer Tips

Consider how you can save money on sprays this year by improving coverage and reducing waste. Is it time to change your nozzels? There are more recommendations in the article, "Six smart tips for better spray management." I also recommend videos by Exploding Sprayer Myths including [Episode 9: Airblast Air](#).

Winter Weather Review

Temperatures

The average monthly temperatures for December 2018 through to March 2019 have been similar to the previous 5 years, with the exception of February that was colder than the last 2 years (Figure 1). Extreme minimum monthly temperatures were also similar to or warmer than the previous 5 years (Figure 2). In early December, temperatures gradually fell below zero meaning that trees were able to acclimate to cold weather by the time of extreme cold.

The critical mid-winter temperatures for fruit trees were not exceeded this winter, as the coldest temperature was -16.1°C in February. With a similar conclusion to last year, I don't expect to see signs of mid-winter injury to pome and stone fruit trees or flower buds in the Valley.

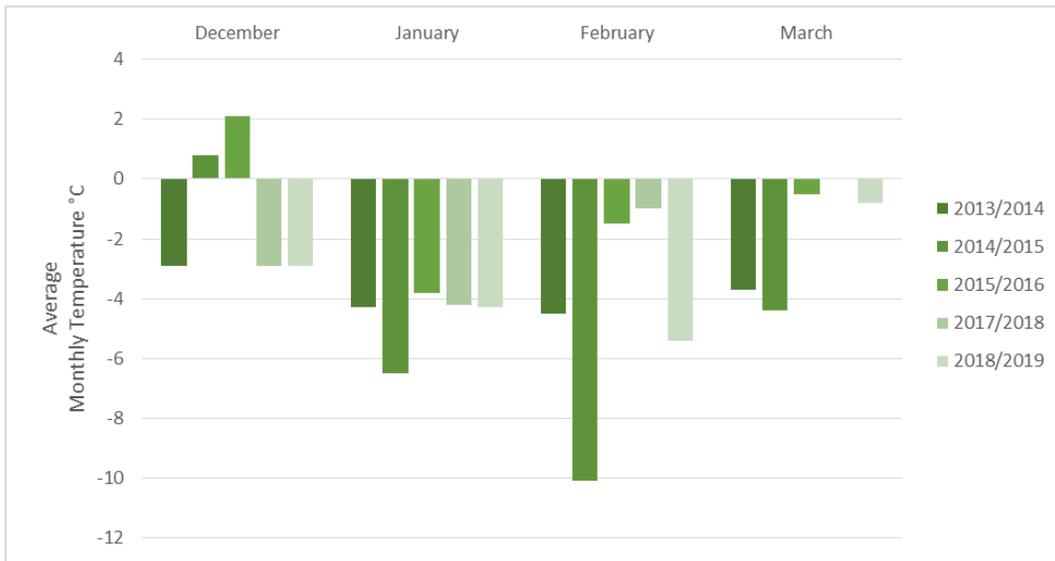


Figure 1: Average monthly temperatures from December through March for the past six winters at Kentville AAFC.



Figure 2: Extreme minimum monthly temperatures from December through March for the past six winters at Kentville AAFC.

Frost

The ground was bare for a significant portion of winter. Without the insulating effects of snow, there was certainly more frost in the ground this year when compared with average. We will likely see the effects of frost-heaving as spring progresses.

Bud Development

Most apple varieties are at dormant to silver tip. If you have not done so already, within the next week you might consider emptying the antifreeze and calibrating sprayers, and clearing brush from alleyways.

Diseases

Peach – Peach Leaf Curl

Peach leaf curl is a disease caused by the fungus, *Taphrina deformans*, which causes deformation and premature leaf drop of peach and nectarine leaves. If trees are left untreated, the fungal disease can reduce yield, fruit quality, and lower overall tree health. The spores of *Taphrina deformans* overwinter on the bark of the tree and when buds swell the spores are washed into the bud where they infect young tissues.

Recommendations:

- A protectant fungicide is needed in spring if a fall application was not applied, or if you applied a fall fungicide but disease pressure is generally high. The fungicide can be applied when buds are dormant and up until bud swell – but prior to green tip. Delayed applications will still provide some control.
- If applying a fungicide during both fall and spring, do not repeat the use of chlorothalonil products because they can be applied only once per year.
- Chlorothalonil products (Bravo ZN or Echo 90 DF) have worked best in Nova Scotia. Alternatives are listed in the spray guide. Organic producers should be able to use the fixed copper products but should check with their certifying bodies.

Japanese Plum Varieties – Plum Pockets

This fungal disease is caused by *Taphrina communis*. Infection causes the fruit to become large and deflated. The fungus travels by spores soon after bud break.

Recommendations:

- Thiram is the only product registered for control and it is applied just prior to bud swell. If applied later, Thiram will still provide some but not complete control.
- Thiram is still a registered use according to label directions. However, there will be a phase-out period because the regulatory decision was to cancel uses of Thiram on apple, peach, and plum.
- Plant disease-resistant varieties.

Plum Varieties – Bacterial Spot

Recommendations:

- Cueva is the only product registered for use. Use a 0.5% to 2% solution, applied at 470-940L/ha. Re-apply using 5-10 day intervals. Apply as a dormant spray as buds begin to swell, repeating at the bud burst stage, and weekly thereafter as needed, up to six sprays.
- Plant disease-resistant varieties.

Cherry – Bacterial Canker

Recommendations:

- Coppers products listed in the spray guide can be used prior to bud break to suppress bacterial canker (*Pseudomonas syringae*) in sweet and sour cherry. This treatment should be made prior to bud swell to avoid phytotoxicity.

Horticulture

Pruning

- With bud break just around the corner, ensure that youngest blocks are pruned first to ensure growth is directed into desirable leader and terminal extension. Mature blocks can be pruned later and are best when pruned prior to bloom.
- Crop load management can begin during pruning if you assess your bud load and prune to remove excess spurs.

Fertilizer

- Bud break to bloom is the ideal time for granular fertilizer application to maximize tree growth.

Lime

- Lime addition to raise pH is best applied as soon as possible to get the product working in the top layer of soil before the season. Surface applied lime will take a number of years to adjust pH of the soil profile so it is best to apply annually or biannually where needed. If soil testing for pH, measure during the same time each year as pH can change over the growing season.

Herbicide

- Studies have shown maintaining weed free strips from bud break to 30-days after full bloom has the greatest impact on tree growth and yield. Timely herbicide application will ensure you make the most of the weed free window.
- Residual herbicides such as Chateau, Alion, and others offer a much longer weed control period than post-emergent products such as Ignite, Gramoxone, and glyphosate. Chateau should not be applied after budbreak unless application equipment is shielded to prevent crop injury. Always follow label directions. Note that residual herbicides can damage single tree replacements.
- Experience in NS suggests that Sandea may stunt young trees. This observation is not from a controlled trial and may have been the result of soil type or unknown factors. Use caution when applying Sandea to young trees and follow label directions.

This is the initial Orchard Outlook issue of the 2019 growing season with regular weekly newsletters beginning next week.

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