Fall 2020 Vol. 1 No. 2

THE PIPELINE

STEPHEN CHILDS' DEDICATED CAREER TO

The Sweet Life

From a child to a grown man, maple has been his life's work. When Steve was just a kid you could already find him in the woods collecting those sap buckets. Then when he got older, you could find him in the classroom teaching about the most efficient way to tap trees to make the process of collecting even easier. No matter what stage of life he was in, Maple has always been at the center.

Starting back in the 1980s, he has dedicated the last 40+ years of his life to NYS maple education and research to improve the production and use of maple products. He was the Wyoming County Cooperative Extension Agent for many of those years. During that time, he did a lot of potato research for potato farms as well as supporting other commodities, including maple syrup. He also ran his own greenhouse growing bedding plants and Christmas trees.

Then in October of 2004, he joined forces with Cornell University to help educate our maple industry on the best way to make maple products for efficiency and quality purposes. Several items he helped our maple business with are shelf-stable cream, he brought

Continued on page 6

A Message from our President

TONY VAN GLAD

What a strange year! COVID 19 put a major hurting on all human activity world-wide as well as the maple industry. Since early March, the NYSMPA Board of Directors has had several ZOOM meetings and conference calls relating to events and budgets.

It has been a disappointing year. First, Maple Weekend cancelled, then the county fairs cancelled, State Fair cancelled, plus everything else in our lives. The NYS budget is in poor shape. Our promotional and advertising funding is held up, and we have only recently received some reimbursement for 2019's expenses.

The Board of Directors has played it safe, staying on the conservative side with expenses. We just didn't have any cash flow for anything (NO DEBT!)

It's a shame the Maple Experience Trailer was not able to go out this summer. A big thank you to Keith Schiebel for maintaining and restructuring the display. It has gone to a couple of events this fall hosted by legislators, showing the legislators the importance of the exhibit. This was a good thing to do. We have a committee currently working on a policy for onsite maple sales when the Maple Experience trailer goes on trips.

With some of the 2019 reimbursement funds recently received, the board was eager to send out the Fall 2020 Pipeline so we could keep members up-to-date. Emails are just not the same!

COVID 19 has put a stop to our 2021 Maple Classic Conference in early January. The NYS Fairgrounds cannot host us, other venues would be hard to find and large gatherings may still be prohibited. Some dealers and distributors felt very uncomfortable about attending the event. We had to cancel. At this time, we don't know what 2021 will bring for other maple related events. We are crossing our fingers for October 2021 in Niagara Falls!

On the positive side, folks that sell at farmers' markets, out of their farm stands, and online have had a good year. Customers are cooking more at home, and want to support locally grown and produced foods. Bulk sales have been picking up this fall. That's a good sign!

With all that's going on, it's important to stay healthy and active through these tough times. Stick to what you do best – producing maple syrup and products. We will all get though this. Stay healthy and wear a mask!

Tony Van Glad
President NYSMPA

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HELP US KEEP YOU INFORMED!

We send frequent emails to the entire membership to let you know of things happening in the maple world.

IF YOU DID NOT GET THEM, DO THE FOLLOWING:

Send an email to office@nysmaple.com. This will tell us your current email address. It's possible that our records may need to be updated! Check your spam folder for emails from: office@nysmaple.com and info@nysmaple.com. We use these two email addresses to send you the latest news. If your spam filter has them blocked, you will not receive our communications.

USDA Provides Financial Assistance for Maple Sales Losses

The USDA has a program to provide farmers financial support for sales impacted by the pandemic. The program is called CFAP2. Many commodities are included, including maple sap. You must apply through your county Farm Service Agency (FSA). You can find your county office at this website: https://offices.sc.egov.usda.gov/locator/app?state=ny&agency=fsa. **Applications must be complete by December 11.** It is recommended that you call your county FSA office and do the application on the phone with an FSA agent.

Reimbursement is based on liquid syrup sales for 2019. The USDA will apply a factor of 37.44% to convert it back to reach a sap sales equivalent to be entered on the application. **Please be clear it is ONLY for LIQUID SYRUP SALES** – no value-added products such as sugar, cream, cotton, etc. You may only claim sales of syrup from your farm – you cannot claim sales of syrup that you bought in bulk from another producer.

This program is an example of why we encourage all of you to consider yourself a farmer, and register as such with the FSA.

2021 IMC Still on!

The 2021 International Maple Conference is still scheduled for Mon., Oct. 18 through Thurs., Oct. 21, 2021 at the Sheraton Hotel Niagara Falls/Niagara Falls Conference & Event Center. Mark the dates on your calendar!

Like everything else this year, the Maple Experience Trailer was not able to attend public gatherings or make trips to schools. On Sept. 24, the trailer was able to be present at Stone House Farm (Patti and Tim Everett) for a legislative Agriculture Tour hosted by Assemblyman Chris Tague. At least 15 legislators attended this tour and were able to see the educational presentation of the trailer first-hand.

Mid-Winter Maple Classic 2021 Cancelled

After 25 years of in-person maple workshops and a trade show, the 2021 New York Winter Maple Conference has become the latest event to succumb to the COVID 19 virus. Also known as the Mid-Winter Maple Classic, the annual conference was scheduled to take place January 8 and 9, 2021 at the NYS Fairgrounds in Syracuse. It has now been officially cancelled.

While plans were underway, the host venue became unavailable. The NYS Fairgrounds have been closed to all indoor events since the start of the pandemic. Early in October, state fair management advised state maple association officers that they expect the building closure to continue into 2021 and therefore the state fairgrounds could not be planned for as the location for the Winter Classic.

We have explored other options, including a virtual conference, but the NYSMPA executive committee has concluded that there is no satisfactory substitute for the live event. NYSMPA President Tony VanGlad commented, "The COVID 19 pandemic has forced the NYSMPA board to make very hard decisions. Cancelling Maple Weekend was a toughie." VanGlad went on to explain, "The Governor's order to stop large public gatherings, such as fairs, festivals, and even the NYS Fair, has made it difficult for maple producers.

Our Maple Classic host, the NYS Fairgrounds, cannot host us this year. The NYSMPA board decided not to have the Maple Classic this year, to ensure safety for the country's maple community." VanGlad concluded with "Stay healthy and here's hoping for a great maple crop this season!"

Learn about Maple Tips and Techniques

Don't let the lack of live workshops keep you from learning about new maple tips and techniques!

The following websites have a wealth of information, including:

- Live webinar classes
- Books and other materials you can download
- YouTube videos
- Podcasts
- Maple business plan guidance

https://blogs.cornell.edu/cornellmaple/
https://www.uvm.edu/extension/agriculture/maple
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Maple Recipe Project

By Helen Thomas

January 2020 – the Western NY Maple Producers Association applied for a grant from the Genesee Valley Regional Market Association. The proposed grant topic was "marketing maple syrup to restaurants."

The Niagara Falls Culinary Institute would develop recipes with detailed instructions for chefs as well as menu item costs for the restaurant manager. Maple association members would use this information to market their syrup to local restaurants. The association would also share the information with the restaurant association, and of course with maple producers across NYS.

Early March 2020 – the WNYMPA was notified they were awarded the grant.

Late March 2020 – as we all know, the pandemic totally disrupted all restaurant business! It also forced schools to shutter their spring classes and limit any attendance on campuses. This delayed the start of the project with Niagara Falls Culinary Institute.

Summer 2020 – the Niagara Falls Culinary Institute chefs were able to return to work, and began developing recipes.

October 21, 2020 - the pictures on this page illustrate some of the foods made with the recipes developed. They were part of a 4-course maple meal held at the culinary institute that evening.

Now that they are complete, the NFCI is in the process of producing the printed materials that will detail the recipes and be available for members to use in their marketing efforts.

MMMMM!

MAPLE, MISO AND MUSTARD GRILLED PORK SHOULDER STEAK

Yield: 4 portions

INGREDIENTS

2 lbs. Pork Shoulder, cut into ¾" steaks

⅔ c. NYS Maple Syrup

½ c. Dijon Mustard

¼ c. White Miso

2 cloves of Garlic, minced

1 tbsp. Soy Sauce or Tamari

DIRECTIONS

Blend all ingredients except the pork. Use half the glaze to marinate the pork steaks. Grill over medium heat to 145˚ internally, brushing extra glaze on steaks and turning frequently. Let rest for 5 minutes, then slice against the grain and serve.

Simple Pumpkin Soup

https://minimalistbaker.com with modifications by Maxon Estate Farms

A simple, 8-ingredient pumpkin soup that's savory, and sweetened with maple syrup.

PREP TIME	COOK TIME	TOTAL TIME
15 minutes	1 hour	1 hour 15 minutes

Servings: 4 Does it keep? 3 - 4 Days

INGREDIENTS

2 sugar pumpkins (2 pumpkins yield 2¼ c. / 450g pumpkin puree)
1 tbsp. olive oil
1 medium shallot, diced
1 clove garlic, minced
2 c. vegetable broth
1 c. canned light coconut milk
3 tbsp. maple syrup
¼ tsp. each salt, black pepper, cinnamon, nutmeg

1. Preheat oven to 350° F (176° C) and line a baking sheet with parchment paper.
2. Using a sharp knife, cut off the tops of the sugar pumpkins and then halve them. Use a sharp spoon to scrape out all of the seeds and strings (see notes for a link to roasting seeds).
3. Brush the flesh with oil and place face down on the baking sheet. Bake for 45-50 minutes or until a fork easily pierces the skin. Remove from the oven, let cool for 10 minutes, then peel away skin and set pumpkin aside.
4. To a large saucepan over medium heat add olive oil, shallot and garlic. Cook for 2 - 3 minutes, or until slightly browned and translucent. Turn down heat if cooking too quickly.
5. Add remaining ingredients, including the pumpkin, and bring to a simmer.
6. Transfer soup mixture to a blender or use an immersion blender to puree the soup. If using a blender, place a towel over the top of the lid before mixing to avoid any accidents. Pour mixture back into pot.
7. Continue cooking over medium-low heat for 5 - 10 minutes and taste and adjust seasonings as needed.

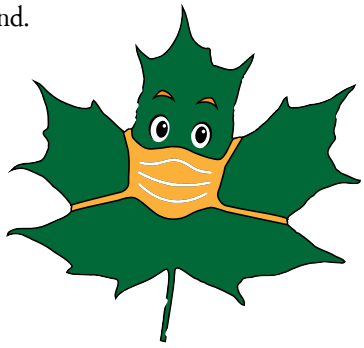
Planning for Maple Weekend 2021

Maple Weekend 2021 is scheduled for March 20, 21, 27, 28

November is traditionally the month we take registrations and start planning to advertise. Since this is anything but a normal year, the board has delayed registration for the event. While we are confident Maple Weekend will be possible, it is too soon to tell what type of event it can be. Social distancing guidelines for March 2021 are still unknown, particularly for pancake breakfasts. We know this will make it harder for you to decide whether to participate or not.

Another equally important factor in planning Maple Weekend is the funding for advertising. For many years, a significant amount for promoting Maple Weekend has come from the NYS budget. While money has been allocated again this year, the ink has not yet been signed on the paperwork as to how much, if anything, will be available to spend.

The NYSMPA board feels you need to know these factors before you decide whether you want to participate. The postponement of registration will be examined again by the board in late November and an update will be issued to members by December 1, 2020.



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Stephen Childs' dedicated career to

The Sweet Life

Continued frompage 1

attention to testing the invert levels of syrup to use for different products, he taught us how to get the best quality maple sugar candy by introducing the vacuum cooling technique and brought to light the best pouring temperature for texture and to eliminate white spots on the back. He also introduced us to YSI Testing Equipment, which is used for testing the invert sugar level in syrup and the alcohol content in bourbon syrup. And the list of achievements goes on from there with all of the research he has done on the different methods for cleaning tubing and his unique and creative ideas, such as the small-scale RO he came up with to help small producers be more efficient in their work. And he had some tasteful fun working on the invention of maple soda and maple marshmallows!

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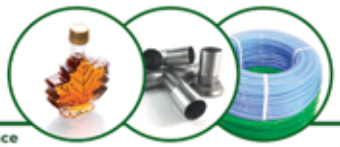

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PHOTOS COURTESY OF CORNELL MAPLE PROGRAM

We are so thankful for Steve's dedication to providing educational instruction and resources to the industry we all love. It is safe to say thanks to his life's work, he has helped build our industry into what it is today. Thank you, Stephen Childs, for always making us better than we were the day before! Your legacy will continue on in maple history. We wish Steve and Mona a happy retirement!












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Novel approaches at Cornell

By Adam Wild and Aaron Wightman

Pete Smallidge, Cornell DNR

This September, the Cornell Maple Program received two ACER Access and Development grants to explore novel approaches to sugarbush management and maple product development. The combined award of $996,495 funds a collaborative effort between Cornell's maple research forests in Ithaca and Lake Placid, NY. As a result of this work, maple producers will gain new knowledge for expanding profits and productivity.

Adam Wild is leading research on the first grant which addresses improved sugarbush productivity and health. The project has five objectives focused on maximizing the length of the sugaring season, assessing the sustainability of increased sap extraction, further investigating best practices for thinning a sugarbush to maximize health and productivity, as well as a study to examine the impact of fertilization on sap production. As a final piece of the project, real-time maple sap data from both research forests will be broadcast on the Cornellmaple.com website. This will be accomplished through the installation of remote sensors coupled with a custom web interface. This information will provide a useful benchmark for maple producers and will also serve as a long-term data set for future studies.

As a part of this project, Cornell researchers have already begun collecting sap. A total of 32 trees were tapped on October 28th and placed on a vacuum collection system. The sap is segregated into 8 separate collection vessels representing 8 groups of four trees.

Sap volume and sugar content will be measured continuously throughout the season. The trees will be retapped periodically to maintain maximum sap flow until the end of the dormant season in May. Ten additional trees were tapped in an identical fashion. These trees will be cut down and dissected after three years to examine the impact of this high-intensity collection method on growth and partitioned wood formation.

The second grant, which focuses on maple confections and new product development, is being led by Aaron Wightman. Objectives of this project include researching high-value uses for buddy syrup, developing new value-added products and creating a guidebook for bottling and selling sap. As a first step in researching buddy syrup, Aaron is seeking a wide selection of buddy syrups. If you have buddy syrup on hand and are interested in donating or selling a sample, please contact Aaron at the email following this article. Samples will be evaluated by the Cornell Sensory Program to develop a flavor map and lexicon. Buddy syrups can then be separated into different flavor categories. Some potential high-value options for buddy syrup include chocolate, beer and beauty products.

Another exciting component of this project is the development of gourmet maple chocolate recipes. These formulations will be based on the recipe for white chocolate, but with substitutions of maple in place of cane sugar and the addition of other natural ingredients to enhance flavor. The Cornell Maple Program is excited to collaborate on this initiative with world-class chocolatier Claire Benjamin of Rue Claire Lavender Farm and Artisan Chocolate in Lodi, NY. Claire is a French-

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The final output of this grant is the production of a monthly maple podcast featuring the conversations with maple producers, equipment manufacturers and researchers. The podcast, co-hosted by Aaron and Adam, will be published monthly and made available on a variety of podcast platforms.

If you have comments or questions about these projects, please contact Adam Wild at adw94@cornell.edu or Aaron Wightman at arw6@cornell.edu. More information can also be found at www.cornellmaple.com.

The Arnot sugarhouse project looks like a big mess right now! The engineer decided we should re-enforce the structure, so there has been a lot of excavation and cement pouring. More exciting pictures and updates will follow in future weeks.

First Fall Maple Event Survives Pandemic *55 NY farms participated*

A + B) Cedarvale Maple Syrup, Marcellus The value of the local community to a sugar maker is immeasurable, and they proved to be our lifeline since the start of the pandemic. Creating a safe, socially distanced atmosphere has comforted customers around visiting our location. We have taken an aggressive approach to following all social distancing guidelines!

C - F) Wild Hill Maple, Salem The weather cooperated both weekends and the foliage was spectacular. We received much positive feedback from those who ventured up the hill on how they enjoyed their visit and are looking forward to visiting us again in the Spring. The Tour was a successful event for us, allowing families to enjoy a safe outdoor environment and their favorite maple products by supporting small businesses like ours during these uncertain times. We want to thank everyone who made this possible!

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Increasing Syrup Production by Re-tapping Maples at the Cornell Uihlein Forest

By Adam Wild, Director of the Uihlein Maple Research Forest, Cornell Maple Program

Background

Recent maple sugaring seasons have seen increased amounts of thawing earlier in the winter to be followed by extended freezes and later thaw-outs. This flux in weather across the maple season has extended the duration of the sap season and warmer weather earlier in the season can increase microbial growth, slowing the flow of sap in a tap hole. Producers are challenged to anticipate future weather patterns to optimize their sugar yield. Maple producers who tap too early risk the chance of their tap hole drying up due to microbial plugging later in the season when the sap is still flowing. And producers who wait too long to tap risk missing out on the productive sap runs of the early season's high-quality sap that could be a significant portion of their season. Either scenario risks the chance of losing out on profits in a maple sugaring operation. One option we explored to counter this issue is to re-tap when sap flow slowed.

Methods

The feasibility of re-tapping maple trees during the sap season was tested in 2019 and 2020 at Cornell University's Uihlein Maple Research Forest in Lake Placid, NY using four treatments (Table 1). Each treatment was replicated three times throughout the forest with five trees tapped for each treatment replicate. All trees were under vacuum with only one tap per tree (except trees that were re-tapped later in the season). Spouts were brand new each season while lateral and dropline tubing (5/16") had been used for a few seasons previously. Installing used tubing was intentional to replicate a more realistic scenario of a sugarbush and would provide a higher inoculation of microbes later in the season.

Treatment 1 was tapped early and then pulled and tapped into a new tap hole drilled 8 inches above the initial tap hole (Figure 1). This new tap was into new wood that had not been compartmentalized into a dead zone and in theory, would not create further damage within the tree (we now know this is not always true). Re-tapping was initiated when the slightest reduction in sap flow was noticed (drastically different each season). Treatment 2 was also tapped early with an additional tap hole added 8 inches directly above (Figure 1). In this treatment, the original spout stayed within the original tap hole and a second spout with its own drop line was added to the new tap hole. Treatment 3 was tapped early but was not re-tapped. Treatment 4 was tapped later (March 1st) but ran the risk of missing potentially earlier season sap runs. Sap volume and sap sweetness were captured for each replicated treatment each time the sap ran.

Table 1: Breakdown of Experimental Treatments

	Method
Treatment 1	Trees tapped February 4th (2019) or January 22nd (2020). Original tap pulled and inserted into a new tap hole directly above initial tap, just before sap flow slowed (April 15th in 2019 and March 30th in 2020).
Treatment 2	Trees tapped February 4th (2019) or January 22nd (2020) and tap left in the tree all year. Additional tap added directly above initial tap, just before sap flow slowed (April 15th in 2019 and March 30th in 2020).
Treatment 3	Trees tapped February 4th (2019) or January 22nd (2020) and left in all season.
Treatment 4	Trees tapped on March 1st (2019 & 2020) and left in all season.

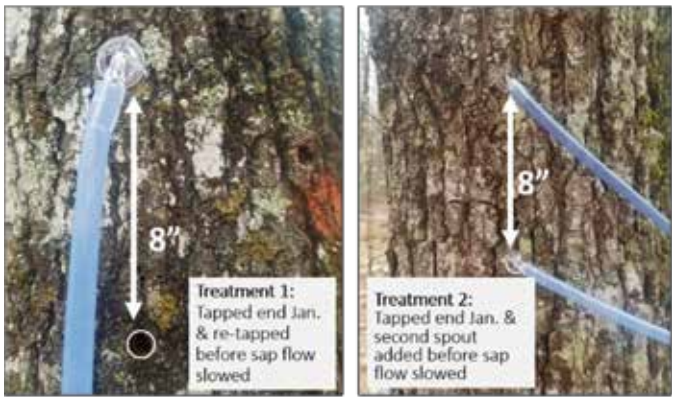

Figure 1 : Treatment 1 (left side) had the spout removed from the tap hole before sap flow slowed (April 15th in 2019 and March 30th in 2020) and moved 8 inches up to a new tap hole. Treatment 2 (right side) had a second drop line with a new spout added into a new tap hole before sap flow slowed (April 15th in 2019 and March 30th in 2020) 8 inches above the initial spout tapped in early February.

Results

Actual heavy sap flow in 2019 did not start till later March and ended by April 19th, barely lasting 5 weeks. Results of the study from 2019 showed that re-tapping trees into a new tap hole or adding a second spout later in the season was not effective for increasing syrup production (Figure 2 & 3). Instead, a high vacuum and limiting the time tap holes were open proved to be more effective. Oddly enough, the most amount of syrup per tap was produced by control Treatment 4 when the trees were tapped March 1st and not re-tapped; a 25% increase in syrup production over trees tapped in early February and not re-tapped (Treatment 3). Trees that had a second dropline and spout added near the end of the season (Treatment 2) was the second-best with an 18.5% increase in syrup production over trees that were tapped at the same time but not re-tapped. The first treatment where the spout was pulled near the end of the season and inserted into a new tap hole produced 5% less syrup per tap even though the spout was in a new tap hole the last few days of the season. The reduction in sap production could be a result of the old tap hole acting as a vacuum leak.

Significant sap flow started a month sooner in 2020 (end of February compared to the end of March in 2019) yet lasted a couple of days longer than the 2019 season. This extension in the heavy maple sap flow season was perfect for testing re-tapping. Again, the most amount of syrup per tap was produced when we waited to tap the trees on March 1st (Treatment 4), producing 29% more syrup per tap than trees tapped on January 22nd. Trees that were tapped on January 22nd and then had a second, new tap added on March 30th, just before sap flow slowed (Treatment 2), produced equal amounts of syrup per tap as Treatment 4 (28% more syrup per tap than not re-tapping). However, even during this long season, the added work and supplies did not yield more syrup per tap than just waiting to tap (Table 2). Instead, a negative gain in value is created once time and materials are factored in. Pulling the spout before sap flow slowed and moving it to a new tap hole (Treatment 1) provided 19% more syrup per tap than not re-tapping. When the

spouts were pulled and inserted into a new tap hole, loss in vacuum from the old, open tap hole was witnessed.

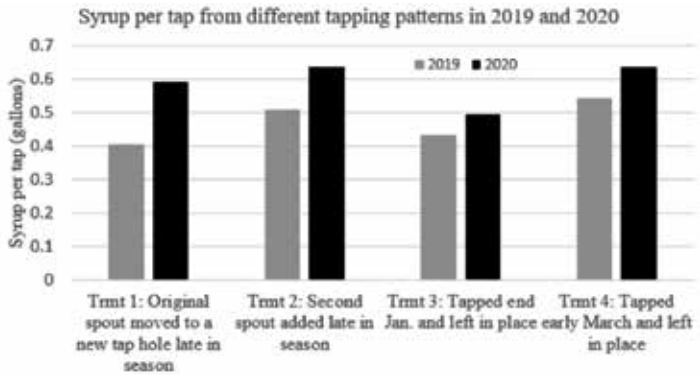

Figure 2: Average syrup production per tap under differing re-tapping (Treatment 1 & 2) and control treatments (Treatment 3 & 4) at the Cornell University Uihlein Maple Research Forest in 2019 and 2020. Refer to Table 1 for full treatment descriptions.

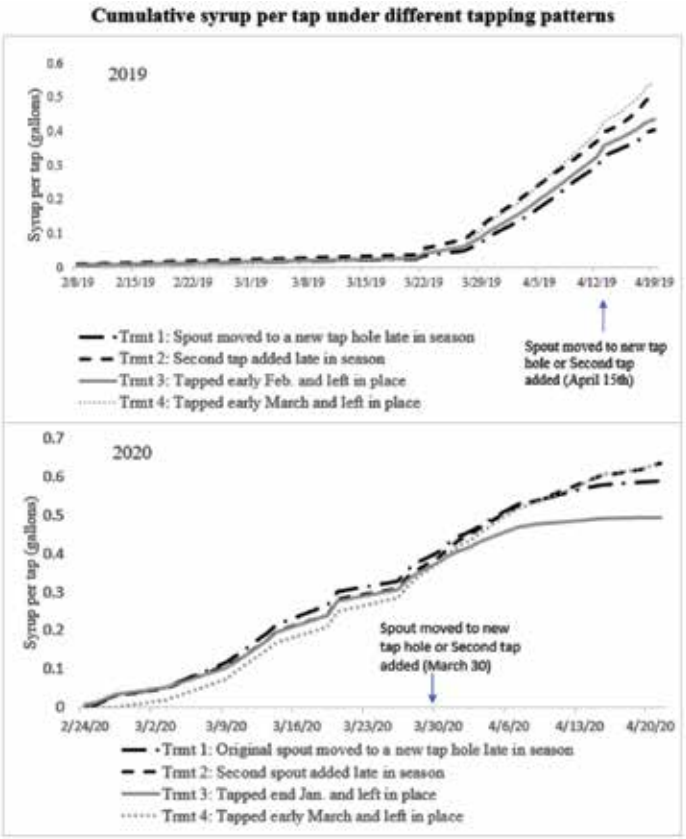

Figure 3: Cumulative maple syrup yield per tap under different tapping patterns at the Cornell University Uihlein Maple Research Forest in 2019 & 2020. Black lines (Treatment 1 and 2) represent trees that were re-tapped near the end of the season. All trees were tapped on February 4th (2019) or January 22nd (2020) except for Treatment 4 where trees were tapped March 1st. In Treatment 1, the spout was pulled and inserted into a new tap hole 8 inches directly above the initial tap hole just before sap flow slowed. In Treatment 2, a second spout and dropline were added 8 inches above the existing spout just before sap flow slowed. Treatment 3 and 4 (gray lines) acted as controls which were not re-tapped but tapped at different times.

Discussion

Although going back and re-tapping by adding a second drop line with a new spout produced an average of 23% more syrup per tap, once time and material was factored into the equation there, was a loss of $0.73 per tap (table 2). Although the dropline and T-fitting could be used for a few seasons there is still added time and that dropline must be capped off completely to prevent vacuum loss.

When we waited to tap the trees on March 1st, despite missing a few runs, there was still 27% more syrup per tap, an additional $2.94 worth of syrup per tap than trees that were tapped at the end of January, without additional labor costs of going back out to re-tap (Table 2). Pulling the spout and inserting it into a new tap hole produced only 7% more syrup per tap on average across the two seasons. Although no additional materials were needed there was still an added time cost (loss of $0.70 per tap by going back out to re-tap, less of a loss than adding the second spout. Pulling the spout and inserting into a new tap hole (Treatment 3) produced less syrup than trees not re-tapped in 2019 which lowered the two-year average. If you consider the longer 2020 season alone where an additional 19% syrup was produced, an added value of $0.75 per tap was achieved after labor costs. Additional seasons of testing are needed to see if this increase in value holds true.

It is important to note that this research was tested on previously used tubing (new spouts each season) which is more than likely why the later tapped trees were more effective than either of the re-tapping procedures. Using new tubing would more than likely produce different results. However, having new tubing is not feasible each year.

Although our research showed more syrup per tap was achieved by waiting to tap on March 1st in Northern New York, I realize that this is not realistic for most maple operations of any substantial size. Even operations with a thousand taps need to start tapping weeks prior to the start of the season to ensure taps are in before sap flow starts. As an alternative to re-tapping, I recommend increasing sanitary practices in your tubing to limit microbe growth. Although not tested in this study, check valve spouts would prevent the backflow of sap and microbes and presumably produce more sap per tap on trees tapped early. The additional $0.25 cost for the check valve spout is much cheaper than labor and material costs to re-tap.

All this research was done within the Uihlein Sugarbush in Lake Placid, NY, a northern forest with extremely cold winters, deep snowpack, and a maple season that starts later than southern maple producing regions. In areas where heavy sap flow starts in January followed by intermittent freeze-thaw cycles, re-tapping could provide more of a benefit than in maple producing regions like Lake Placid.

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Increasing Syrup Production by Re-tapping Maples at the Cornell Uihlein Forest

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Increase in value of different tapping patterns tested

	Trmt 1: Original spout moved to a new tap hole late in season	Trmt 2: Second spout added late in season	Trmt 3: Tapped end Jan. and left in place	Trmt 4: Tapped early March and left in place
Average gallons syrup per tap in 2019 & 2020	0.498 gal.	0.572 gal.	0.464 gal.	0.590 gal.
Additional gallons of syrup per tap than trees tapped at the end of Jan.	0.034 gal.	0.108 gal.	----	0.126 gal.
Additional pounds of syrup per tap than trees tapped at the end of Jan.	0.38 lb.	1.20 lb.	----	1.40 lb.
Value of additional syrup @ US$2.10/lb	$0.80	$2.52	----	$2.94
Estimated additional labor cost to re-tap*	$1.50	$2.50	$0	$0
Added material cost to re-tap**	$0	$0.75	$0	$0
Total added value of re-tapping after time and material	**$-0.70**	**$-0.73**	**$0**	**$2.94**

Table 2: Comparison of the increase in value created by tapping early and then re-tapping or waiting to tap right before the season started. The only situation where value is gained and not lost is when we waited to tap the trees right as the season was starting. Note that this was tested on used tubing, no cleaning or check valve spouts were used. Presumably, different results would be achieved if different sanitation methods were used.

**Based on a value of $30 an hour with an estimate of 3 minutes to pull a spout and insert into a new hole and 5 min to add an additional dropline with a new spout and tap into a new hole.*

***Added material costs for adding a second dropline and spout include costs of a new spout, dropline tubing, and a T-fitting.*

Conclusions

Due to the additional costs, re-tapping was found not to be cost-effective or worthwhile for maple producers in northern forests. Waiting to tap the trees closer to the start of the sap season showed to be more effective for increased sap production and did not require additional time or materials. At this time, it is not recommended to re-tap maple trees unless a clear slowdown of sap flow is observed. If a producer does re-tap, my recommendation would be to pull the spout and re-insert into a new tap hole.

Although the increase in production may not be as high as adding an additional new spout, an added cost of additional materials would not be necessary. Instead of re-tapping, maple producers should first consider practices that prevent contamination of the taphole such as check-valve spouts, new droplines, or cleaning.

For More Information

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