

THE PIPELINE

SAVE THE DATE

Oct. 18 - 20, 2021



Niagara Falls, NY

We are optimistic that travel between the USA and Canada will be possible by October. This means our planning for the International Maple Conference in Niagara Falls, NY, is full steam ahead.

Plans are to have fully inclusive registration options for the 3-day event or a one-day registration. Your registration will include entrance to the convention center for the trade

show, meetings, and scientific presentations. It will include breakfast and lunch all days and evening banquets on Monday and Tuesday.

We know the Niagara Falls area is looking forward to hosting visitors again, and their tourism group is working with us to make your visit memorable! We expect to be able to open the

registration website by mid-May.

Check for updates: <https://nysmaple.com/2021-international-maple-conference/>





New York State Maple Producers Association, Inc.

Board of Directors

Tony VanGlad, *President*
Stamford, 607-652-7590

Karl Wiles, *Treasurer*
Syracuse, 315-559-7630

Cristy Williams, *Secretary*
Tully, CLWmaple@gmail.com

Michael Grotoli
Middle Granville, 518-642-2856

Dwayne Hill
Harpersfield, 607-652-6792

Michael Bennett
Glens Falls, 518-222-4990

Ray Crouse
Richville, 315-877-5625

Eric Randall
Alexander, 585-547-3596

Nadeen Lyndaker
Lowville, 315-346-6829

Scott St. Mary
Malone, 518-483-6270

Douglas Thompson
Gouverneur, 315-287-0024

Dan Weed
Watkins Glen, 315-567-9900

Haskell Yancey
Croghan, 315-346-6356

Greg Zimpher
Attica, 585 591-1190

Joy Herfurth
Ellenburg Center, 518-569-5146

Office

Helen Thomas, *Executive Director*
hthomas@nysmaple.com
301 Myron Road
Syracuse, New York 13219
315-877-5795
Fax: 315-488-0459
www.NYSMaple.com

Produced by
Zoey Advertising
936 N. Clinton Street
Syracuse, NY 13204
(315) 471-7700
zoeyadvertising.com
steve@zoeyadvertising.com

A Message from our President



TONY VAN GLAD

What a good, old-fashioned winter here in Schoharie County! I am writing this on March 15, 2021. In the Catskills, we have had many snowstorms with snow accumulation anywhere from 4" to 30". Just this past week, it started to melt. Therefore, work in the woods has been slow. We were on snowshoes putting lines up, fixing line damage and tapping. And if it wasn't snowing, it was just too cold (with wind chill) to work in the woods. I think by now, everyone is caught up for tapping in the Catskill region. Now we wait for that sweet flow. We had a small run with the thaw last week.

The State Association has been alive and well. Helen has kept the Association on track for the yearly tasks and membership support. I would like to thank all the members who have renewed their memberships! The Board has had several Zoom meetings to discuss and act on issues. One major motion was to not support Maple Weekend on the state level. COVID has still been lurking around the corner, so we left the decision to the individual producers.

The State Association did participate in a NY Lobby Day - thanks to the NY Farm Bureau. We did a Zoom meeting with several legislative offices, explaining our mission and our position on financial support. Many thanks go to Eric, Dwayne, Chris, Karl and Helen for Zooming. We thought it was a great success. On March 26, Senator Hinchey, Assemblyman Lupardo, and members of the legislative Ag. committees sponsored a virtual "Maple Day." The state association supplied Maple Sugar Candy and sent them to all the participating legislators (75 offices!).

The committee presented maple facts, which included using some videos from the nysmaple.com website. As president of the association, I spoke for about five minutes about the importance of the maple industry in NYS, showed some photos of various maple activities, including the Maple Experience trailer, and then answered questions. Legislators are always in support of our maple association endeavors. If you see or speak to a legislator, be kind. Always thank them for their support of maple in the state budget!

We are starting to get requests for the Mobile Maple Exhibit from schools and other venues. That is a good sign our state and nation are getting back to normal. Keith Schiebel will be working on scheduling those visits. A new website page to help with that process is in development now. Watch <https://nysmaple.com/the-maple-experience/> for updates.

In closing, I hope everyone is happy and healthy for this maple season. Here in the Catskills, I think it will go into mid-April. Others in the state are already done, making it a tale of two seasons. Our state, with its climate, is one of the best maple states in the country.

Be well!

Tony Van Glad
President NYSMPA

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.

AFFORDABLE
Vacuum and Monitoring for the Smaller Sugarbush!

GUZZLER™
PUMPS

SapCheck
MONITORING

The BOSWORTH Company

888-438-1110
www.thebosworthco.com

International Maple Museum Centre Report

Submitted by Donald Moser, President-Board of Directors



The decision has been made by the museum board of directors to hold a virtual Maple Hall of Fame Ceremony on May 15th of 2021 to celebrate the induction of Ray Bonenberg and Joe Polak – 2020; Dr. Tim Perkins and Mark Harran – 2021 for their outstanding contributions to the maple industry. Information regarding this virtual ceremony will be posted to the International Maple Museum Centre's social media sites in April.

It has also been decided that an in-person ceremony will be held on October 19th, 2021 for all four inductees at the International Maple Conference, Niagara Falls, NY. More information will be forthcoming as details and times are decided upon.



PERKINS



HARRAN

At this time the International Maple Museum Centre is closed to visitors. We have spent some time re-organizing and updating rooms and artifacts and look forward to the time that we can open the doors to visitors.

You may contact us:
maplemuseumcentre.org or by phone:
(315) 346-1211 or follow us on facebook: International Maple Museum Centre.



BONENBERG

Member Alert!

A full membership in the NYS Maple Producers' Association gives your farm or company the right to be listed in our directory of sellers on the website.

We have four directories in NYSmaple.com under "Buy Local":

Retail Maple Sellers

Wholesale Maple Sellers

Bulk Maple Sellers

Equipment Dealers/Service Providers

The information on these directories is only as good as what you give us. Please take time to check your information in ALL 4 listings. If it is not correct, you can change it yourself at this website:

<https://c6ect459.caspio.com/dp/91df7000ac9bd210b7d144bcfb2a>

If you need help or can't access the change website, call or email the office. This year, especially, the BULK listing is very important.

If you *have* BULK to sell, please be sure you are in this listing. If you *do not have* BULK to sell, call or email us to remove you from the BULK listing.

Mill Creek Maple Supply

Maple Sugaring Equipment & Supplies

David K Norton, Proprietor

1551 County Highway 20

Edmeston, NY 13335

Fully Stocked Store Location

Hours: M-F 8-4:30

After Hours & Saturday: Call Dave at 607-435-8539

607-965-6920

Email: millcreekmaple@yahoo.com

Like us on facebook at: Mill Creek Maple Supply



Complete Reverse Osmosis Systems

Starting at \$300



E-mail: sales@therobucket.com

www.therobucket.com



Increased European Gypsy Moth activity reported in West

Since it arrived in the United States in the late 1800s, the European Gypsy Moth has killed millions of trees in the Northeast. The caterpillars of this small white moth kill hardwoods by defoliating large swaths of forests during outbreaks when their populations swell to thousands of insects per acre.

This summer, many sugarmakers in New York reported seeing an increase of European Gypsy Moth (EGM) in their woodlots. Although maples are not their preferred food, it is worthwhile to assess the threat EGM may pose to your sugarbush.

EGM is native to European forests where it has co-evolved over millennia with a variety of natural predators and competing insects which helped keep its population in check. When it was introduced in Massachusetts in 1896, the absence of these predators and competitors allowed gypsy moth populations to expand to outbreak proportions. Over the last century, EGM has defoliated millions of acres of forest resulting in billions of dollars in economic losses. During intense outbreaks, the sound of caterpillars chewing and defecating resembles the patter of a gentle rain or a waterfall in the distance. In addition to direct economic losses, this “fecal rain” reduces the enjoyment of time spent in the woods,

and some people experience rashes and even respiratory distress after spending time in infested areas.

Gypsy moth prefers to eat the leaves of oak, aspen, birch, willow, and basswoods. Oaks have been particularly hit hard in past outbreaks in New York.

However, it will also graze on maple, hemlock, beech, and other species common to our sugarbushes. As a major constituent of our forests, the loss of ash due to emerald ash borers may have implications for gypsy moth activity.

Gypsy moth is now firmly established in New York forests. Several efforts were made to eradicate or slow its spread in the 20th century, but these efforts were largely unsuccessful.

Up through the 1980s, gypsy moth continued to inflict heavy losses on New York woodlands in periodic outbreaks. One initiative involved the release of a Japanese fungus called *Entomophaga maimaiga* in 1910 and again in 1985. These releases were deemed unsuccessful. However, in the 1990s the fungus finally took root and began proliferating in wild gypsy moth populations.

Since that time, the fungus and a combination of native predators have somewhat curtailed the frequency and intensity of gypsy moth outbreaks.

In addition to this natural control, gypsy moth can be directly treated



and managed by applying *Bacillus thuringiensis*. This rod-shaped bacteria, commonly referred to as Bt, contains toxic proteins that are activated in the gut of insects. When the gypsy moth larvae consume the bacteria, the toxin is released, and the caterpillar dies. The effectiveness of Bt, along with its low toxicity to humans, has made it a popular treatment for EGM and other insect pests. It is currently available in many formulations and can be applied with aircraft to treat large areas.

Although large-scale outbreaks of EGM are now less common, they do still occur. This summer, sugarmakers in western and central New York reported increased EGM activity in their sugarbushes. Whether this is cause for concern depends on several factors including woodlot size, tree species composition, and the density of the gypsy moth population.

Unfortunately, there is no threat assessment tool specifically tailored to sugarbushes. However, the New York Department of Environmental Conservation has created a survey tool to estimate the intensity of a gypsy moth outbreak in a generic hardwood forest, along with recommended decision-making thresholds for when treatment is needed to prevent a damaging level of defoliation. The survey methodology is straightforward and involves counting egg masses in sample plots. Following instructions provided on the NYDEC website, a landowner can easily complete the sample protocol and estimate EGM numbers with a tally sheet along with a good pair of binoculars. Once the sample is completed, the DEC protocol sets the following management thresholds:

- 250 egg masses per acre:
Treat to prevent Noticeable Caterpillars
- 500 egg masses per acre:
Treat to prevent Noticeable Defoliation
- 1000 egg masses per acre:
Treat to prevent Likely Tree Mortality

Although this protocol is not specifically designed for sugarbush management, it is the best tool currently available for making treatment decisions and in measuring the threat to your sugarbush.

Generally speaking, large sugarbushes with a small component of oak or aspen are not susceptible to damage. According to US Forest Service Research Entomologist, Andrew Liebhold, the vulnerability of a woodlot is primarily determined by the proportion of the forest that is the EGM's preferred diet - oaks, aspens, and other primary host species.

Sugar maples are a secondary host. Young caterpillars can feed on it, but older caterpillars do not fare well with a heavy component of maple in their diet. According to Liebhold, "It is quite rare to see defoliation in stands with less than 20% of their basal area in preferred hosts. Although, if there is a matrix of pure sugar maple with nearby stands with more hosts (oaks, aspens, birch), then the sugar maple can become defoliated. So if it is a large stand of pure sugar maples, then defoliation seems unlikely." However, he adds that "you never know" for sure. He also points out that gypsy moth activity has shown some unusual patterns recently, including unexpected activity in western NY in 2014-2015 and again this summer. Climate change, along with a rapidly changing forest composition due to emerald ash borer, amplifies this uncertainty.

In summary, European Gypsy Moth continues to pose a major threat to NY forests, sugarbushes are typically less vulnerable. However, if your sugarbush has a large component of vulnerable species such as oak and aspen, your woodlot may be at risk. The assessment tool available online at the NYDEC website can help you assess this risk and formulate a treatment strategy, such as an aerial application of Bt by a licensed pesticide applicator. For more information, contact your local DEC office or search their website at www.dec.ny.gov.





Arnot Update



The long-awaited upgrade to the maple facility at the Cornell Arnot Forest is a reality! The photos show how far the work has progressed. The building project itself is complete, and the move-in has started.

The “new” building now houses an evaporator room large enough for two evaporators, a R/O room, a mechanical room for pump and releaser, a research kitchen, and office space. There is also an unheated work area which will be a classroom/conference room during warmer seasons. Last but not least – a bathroom!! Aaron and the staff have also done significant maintenance on the existing outbuildings so that the storage for equipment is

improved. They even have a self-service maple sales kiosk at the roadside now.

The good news continues in the 2021-22 state budget! There will be enough funding to hire a food scientist for maple food research. The job posting is scheduled to be public in May.

Though the building is complete, there are many small items still needed, such as trash cans and office furniture. If you want to help with furnish supplies, please reach out to the NYSMPA office, or look for an email from NYSMPA in the coming weeks for a list of needed items. Thank you!

Interesting find in Horseshoe Lake

Wayne Allen of Wanakena, NYSMPA member

These bottles were found at the bottom of Horseshoe Lake by Mr. Dan Weeden, a diver and a member of the Mohawk Valley Bottle Club sometime in the 1970s. It took him three dives before he found them in a pile at the bottom of the lake. These were unused bottles left on the frozen lake to sink in the spring thaw from the defunct maple syrup producing industry formerly located in 1899 at Horseshoe Lake and founded by the wealthy inventor named Abbot Augustus Low in the late 1800s.

Mr. Low founded the Horse Shoe Forestry Company at Horseshoe Lake, founded the town of Horseshoe, built a 15-mile railroad with two engines and various cars to access his extensive businesses. He got permission from the Postal Service to have a post office. Mr. Low owned more than 40,000 acres where he had a sawmill,

box and barrel-making factory, bottled spring water, and produced maple syrup. He had 10,000 trees tapped for a yearly yield of 4,000 gallons. He also made maple sugar. These unique bottles are a sample of the packaging invented to contain his product/s.

Some information is from the diver and finder, Mr. Weeden, and some facts are from an article entitled "A Patent Genius" by Mr. Tom Hughes. There are two books currently available on the history of Horse Shoe Forestry Co. by Mr. Mike Thomas, available through Amazon.com and eBay.com.



Add to YOUR product line ...

24# box Granulated Maple Sugar
33# box Maple Cotton Candy Mix

Maple Cream – Traditional, Robust, Cinnamon, Raspberry or Bourbon, Bulk Coated or Uncoated Maple Sugar Shapes, Bourbon Maple Syrup, Maple BBQ Sauce, Maple Hot Sauce, Hot or Sweet Maple Mustard, Maple Garlic Seasoning and Maple Fudge

Purchase with our label or unlabeled so you can add your own.

Merle Maple LLC – Attica, NY 585-535-7136
lyleanddottie@merlemaple.com



**SERVING THE MAPLE INDUSTRY
FOR MORE THAN 90 YEARS!**

**CHECK US OUT YEAR-ROUND
-FULL INVENTORY-**

EVAPORATORS ■ RO'S ■ FILTER PRESSES

TUBING ■ TOOLS ■ JUGS & CONTAINERS

All the Maple Equipment you need for Immediate Delivery!



PO Box 409, Albany St., DeRuyter, NY 13052

Fax: 315-852-1104 Hours: Mon.-Fri. 8-5; Sat. 8-4; Sun. 10-2

315-852-3326
www.countrysidehardware.com



USDA Offers Resources for New York Maple Producers

Available Resources Support Funding, Conservation and Natural Disaster Recovery for Maple Operations | Contact: Lynn

The U.S. Department of Agriculture (USDA) offers technical expertise and financial assistance to help New York maple producers fund their operations, conserve natural resources, and recover from natural disasters. Maple producers are encouraged to contact their local USDA Service Center to learn about resources to support their operations during the harvest season and throughout the year.

"We know this is a busy time for our maple producers," said Mark Dennis, acting State Executive Director for USDA's Farm Service Agency (FSA) in New York.

"Whether you've been a producer in our state for years or are just getting started, we encourage you to contact your local USDA Service Center to learn about programs and services to fit your business needs." Blake Glover, New York State Conservationist for USDA's Natural Resources Conservation Service (NRCS), agrees. "Maple producers provide an agricultural staple in our state," he adds. "Our local offices offer one-on-one technical assistance and financial support to help strengthen your operation."

Funding Opportunities for Maple Producers

FSA offers funding opportunities to help maple producers start, expand and maintain their operations.

FSA's Farm Storage Facility Loan

Program provides low-interest financing so producers can build or upgrade facilities and equipment to store certain commodities. Maple sap and maple syrup are both eligible, and equipment and facilities such as sap tanks, certain hauling trucks and storage space for maple syrup qualify. Eligible facilities and equipment may be new or used, permanently affixed or portable.

Additionally, there are several types of farm loans available to help maple producers finance their businesses. These loans are administered through FSA and offer access to funding for a wide range of agricultural needs, from securing land and constructing buildings to financing the purchasing of equipment.

Maple producers are encouraged to visit farmers.gov/fund or contact the FSA office at their local USDA Service Center to learn more about USDA funding opportunities. Through our Farm Loan Discovery Tool, you can answer five quick questions to learn about farm loans that might be right for you.

Conservation Resources for Maple Producers

NRCS offers programs and services

that benefit New York maple producers while conserving natural resources. Maple producers are encouraged to contact the NRCS office at their local USDA Service Center for free, one-on-one technical support. Visit farmers.gov/conserve to learn more about conservation at USDA and working with your local conservationists.

Producers in New York may also qualify for NRCS programs that support conservation efforts across maple operations. The Environmental Quality Incentives Program (EQIP) provides financial assistance and technical support to help maple producers address natural resource concerns through voluntary conservation practices. Multiple conservation practices for qualifying maple producers may be available through EQIP, including those to improve energy efficiency, filter sap, and improve evaporation rates.

NRCS's Conservation Stewardship Program is available for eligible maple producers to maintain and improve existing conservation systems and adopt additional conservation practices to address resource concerns. Enhancements might include strengthening the forest management of an existing sugar bush



Agricultural Marketing Service

Producers in



— SINCE 1936 —



Business and Bulk maple accounts accepted

Over 25 years of sugaring experience
Ioka Valley Farm - Rob & Missy Leab
3475 Hancock Rd, Hancock, Ma 01237
(413) 441-5147
Call ahead for hours or to make appointment

CDL Inventory at our farm store



MAPLE SUGARING EQUIPMENT



The CDL way. The power of expertise.

SAGE FAMILY MAPLE, LLC

4449 Sage Road • Warsaw, New York 14569

(585) 786-5684

www.sagefamilymaple.com
sales@sagefamilymaple.com



Complete Maple Sugaring Equipment
Pure New York Maple Products

Authorized Leader Evaporator Distributor
Leader 30P Tubing Systems • Sugarhill Containers

or sugar bush management to establish or maintain species diversity as well as improve wildlife habitat. [CE-FRN1]

Recovery Support for Maple Producers

FSA and USDA's Risk Management Agency (RMA) offer programs to help maple producers prepare for and recover from the impacts of natural disasters.

Federal crop insurance is administered through RMA to provide a robust and reliable farm safety net, regardless of the size and scope of natural disasters. RMA's Whole-Farm Revenue Protection covers all commodities on the farm, including maple, under one insurance policy.

FSA's Noninsured Crop Disaster Assistance Program helps producers manage risk through coverage for both crop losses and crop planting that was prevented due to natural disasters. The eligible or "noninsured" crops cover agricultural commodities not covered by federal crop insurance, including specialty crops such as maple sap.

Through the Tree Assistance Program, FSA offers financial assistance to eligible orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes and vines lost due to natural disasters. This includes eligible maple trees from which an annual crop is produced for commercial purposes.

Maple producers are encouraged to visit farmers.gov/recover or contact their local USDA Service Center to learn more

about USDA resources to manage risk and recover from natural disasters. Use our Disaster Assistance Discovery Tool to learn about USDA disaster assistance programs that might be right for you in five simple steps.

For an overview of available disaster assistance, view or download the USDA Disaster Assistance Programs At A Glance brochure.

More information

While USDA offices are currently closed to visitors because of the pandemic, Service Center staff continue to work with agricultural producers via phone, email and other digital tools.

To conduct business, please contact your local USDA Service Center. Additionally, more information related to USDA's response and relief for producers can be found at: farmers.gov/coronavirus.

USDA to Conduct Maple Syrup Survey

The U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) will conduct the 2021 Maple Syrup Survey for the Northeast Region. The survey will collect information from approximately 1,600 Northeastern producers.

"The Northeastern Region produced 3.94 million gallons of maple syrup in 2020. Vermont was the top maple syrup state with 51 percent of the United States' maple syrup," according to King Whetstone, Director of the NASS Northeastern Regional Field Office.

"Taps in the Northeastern Region totaled 12.2 million and accounted for 90 percent of the Nation's maple taps," added Whetstone.

The 2021 survey will ask about the 2021 and 2020 taps and production, as well as price information on the syrup produced in 2020. To ensure all survey participants have an opportunity to respond, NASS interviewers may contact producers who do not respond by mail or online to conduct telephone interviews.

NASS safeguards the privacy of all respondents. The information you provide will be used for statistical purposes only. In accordance with federal law, your responses will be kept confidential and will not be disclosed in identifiable form.

Survey results will be published in the Crop Production report, released on June 10, 2021. These and all NASS reports are available online at nass.usda.gov/Publications.

For more information, call the NASS Northeastern Regional Field Office at (800) 498-1518.



Justus Asthalter
Maple Syrup, Inc.

Authorized Dealers for



sugarhill
CONTAINERS

Fully Stocked Glass & Plastic Inventory

Sean Boyes
865 Aden Rd., Parksville, NY 12768
(845) 292-8569
family@justusmaple.com

CHECK OUT THE NEW
LOOK OF OUR WEBSITE
www.justusmaple.com

Serving NY, PA and NJ for 4 Generations



Thomas Kaufman
65 Charlie Wood Road
DeLancey, NY 12752

Maple Sugaring Equipment

607-746-6215/fax 607-746-8367

tomshane95@msn.com/www.catskillmountainmaple.com

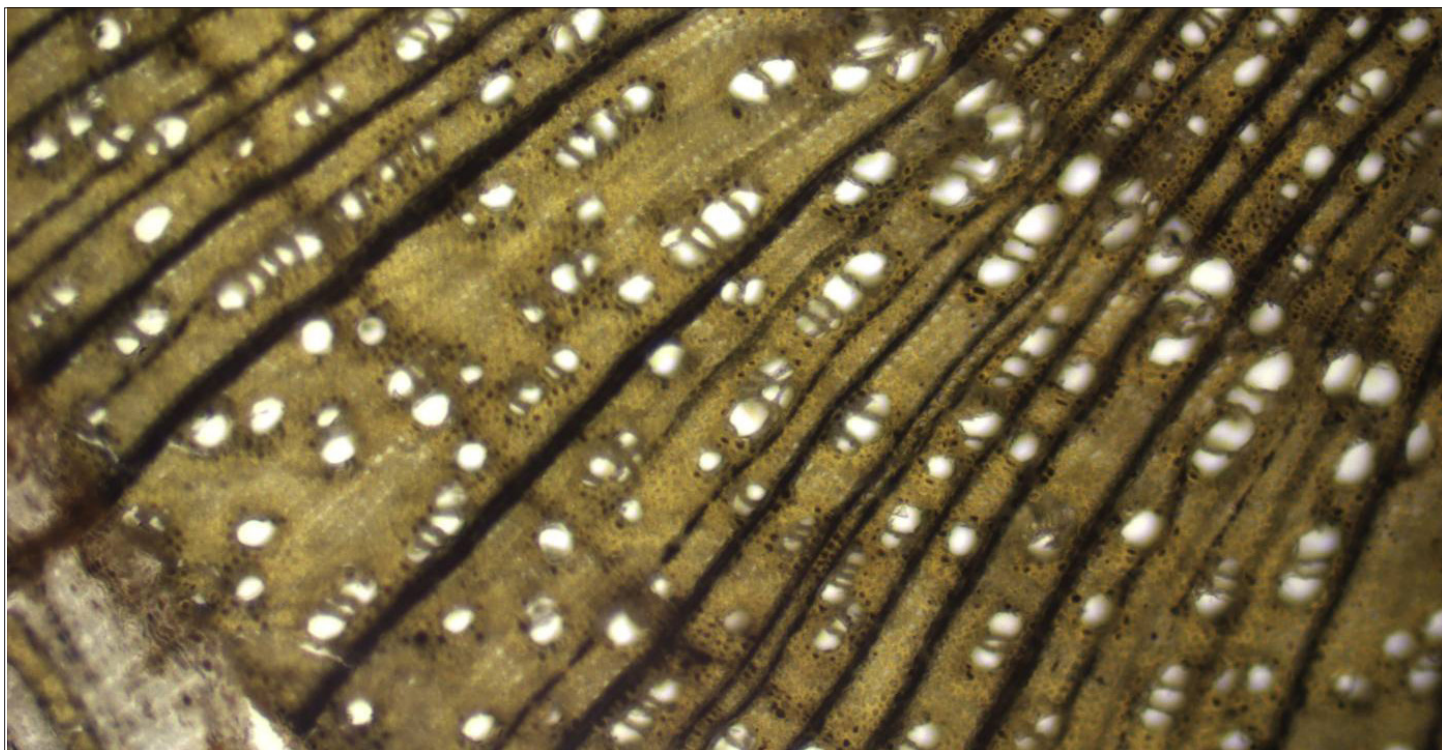
CDL USA, Wes Fab, Zap-Bac, Sugarhill



Sap flow, wounding, and compartmentalization in maple

Timothy D. Perkins, Abby K. van den Berg, and Mark L. Isselhardt
UVM Proctor Maple Research Center and UVM Maple Extension, Underhill, Vermont

(Originally published in the VMSMA Spring 2021 Newsletter, reprinted with permission)



Iodine stained sugar maple (*acer saccharum*) xylem. Photo courtesy UVM Extension | Flickr. Xylem vessels (white circles) conduct liquid. Fibers (dark yellow) provide strength. Ray parenchyma serve as storage for non-structural carbohydrates (dark brown diagonal lines) in the form of starch.

The mechanisms of sap flow in maple stems during the springtime are reasonably well understood. Water is drawn from the soil into the roots, stem, and branches of trees during a freeze cycle as liquid water transitions to ice and gases in the wood contract.

Upon thawing, pressure is created within the stem due to gas bubble expansion and the wood fibers, gravity, and osmotic factors from the conversion of starch to sugar. If a taphole is present, sap will flow due to the difference in the pressure from the inside to the outside of the tree; sap always moves from areas of high pressure to areas of lower pressure. This process of developing stem pressure is an adaptation of maple trees to living in the cold.

Freezing temperatures during the winter cause dissolved gases in vessels to come out of solution, forming emboli (bubbles). Air bubbles in vessels disrupt the water column and render affected vessels incapable of efficiently transporting liquid. Stem pressure develops in maple trees to eliminate bubbles.

Other cold climate trees deal with emboli differently, but the goal to eliminate air bubbles in the sap conducting system is relatively the same. With the emboli in the vessels eliminated, a continuous water column is restored, and maple trees can efficiently move water from the soil to the crown during the growing season. Maple trees used for sap production must contend with another problem, the wounds



Websites, logos, graphic design and more!
We customize each project to meet your needs!

Deidra Hill | Harpersfield, NY | info@delcocreative.com
www.delcocreative.com | (607) 441 - 6514 | [@](#) [f](#)



Greg Zimpher
3028 Merle Rd
Attica, NY 14011
(585) 591-1190
grzimpher@gmail.com

Add something different to your product line.

Maple Coated Dog Biscuits

I have the license, I get the analysis done, all you have to do is package them and enjoy the profits. Yes in New York State you have to have a license to coat dog biscuits with Maple Syrup!

Call, text or email me for pricing. I can package them in packages of 4 biscuits to a package or bulk, package them yourself and save money.





Photo 0324 courtesy UVM Extension | Flickr

created by tapholes. If not dealt with in some manner, water transport could be reduced or compromised.

So how does a tree react to a taphole wound? When a taphole is drilled, a wound response is elicited. The signal that initiates the wound response is triggered quickly to “wall off” or “compartmentalize” the wound. The trees alter the physical and chemical environment in the tissues surrounding the wound to form a barrier. They form new structures (gum plugs or tyloses) to seal off severed vessels. Then antimicrobial compounds are deposited in the zone around the wound. These make the affected area less hospitable, preventing disease and decay organisms from becoming established and

proliferate within the tree. One consequence of building these chemical and physical walls, is that the area around the wound is rendered incapable of transporting sap. Wood affected by this process appears darker in color and is referred to as “stain,” “stained wood,” or “non-conductive wood” (NCW). As a result, producers experience a reduced sap flow later in the production season, even if the weather conditions remain good. Maple producers refer to this as “taphole drying.” Although good spout/dropline sanitation practices can help delay the onset of “taphole drying,” when temperatures and microbial growth rise later in the season, the wound response accelerates and as a result the sap flows lessen dramatically.

Continued on page 12



**WENDEL'S
MAPLE & MORE**

12502 Vaughn Street
East Concord, NY 14055
Nick Wendel Marty Wendel
(716)954-3019 (716)954-3016
Sugarmaple717@aol.com
www.wendelsmaple.com

Serving Western New York and beyond with the best maple equipment and supplies the industry has to offer.

Distribution Partner for:
LEADER EVAPORATOR CO.

Dealer for:

Indiana Vacuum	H2O Innovations
MARCLAND	Sugarhill Container
LOAC Tools	SMART TREK
Smokey Lake	Artisan Printing



SHAVER-HILL MAPLE

Authorized Dealer of Leader Evaporator Equipment & Supplies

Fully-Stocked Equipment Showroom



Ship  Daily

310 Shaver Road
Harpersfield, NY 13786
607-652-6792
www.shaverhillfarm.com

Available Wholesale

- Granulated Maple Sugar
- Maple Cream
- Maple Sugar
- Maple Lollipops
- Maple Drops
- Maple Popcorn
- Maple Peanut Brittle

Cardinal, Bluebird & Oriole
Basquaise Bottles Available





Sap flow, wounding, and compartmentalization in maple

continued from page 11



Photo 0898 courtesy UVM Extension | Flickr

Over the subsequent months, the tree continues to strengthen the walls around the wound. Because vessel elements are vertically oriented and are fairly large in comparison to other tissues (maple vessels are generally under an inch long, but can rarely grow up to 10-12 inches), staining occurs mostly in the up/down directions, which is away from the tap hole. On each side of the tap hole, the wound is typically well contained, so the stain extends only a short distance laterally. Inward (radially), the stain typically extends a bit further. The new ring of wood formed during the following growing season forms the final barrier to compartmentalize the wound. Although the majority of the stain completes development during the growing season after sugaring, the column can continue to grow for a few years after tapping. But with smaller spouts and good growth rates, tapholes may close the opening in a single season. With large spouts and slow-growing trees, closure of the taphole could take several years. As long as tapping is done sustainably so that trees can grow enough new conductive wood each year to compensate for the loss of functional volume to NCW from tapping, the wound is not detrimental to maple trees.

If a producer taps into an area of NCW, then less sap will be collected. The loss in yield is directly proportional to the amount of stained wood hit. If only a small amount of stain gets hit, a minor loss of sap is expected. If a large amount of the stain gets hit, then sap yields will be lower. Producers should monitor the amount of stain encountered while tapping by inspecting drill shavings. Whether to put in a new tap if a lot of NCW is hit is a

difficult question. It is generally not recommended if it is difficult to find good tapping locations on previously heavily tapped or slow-growing trees. It is also important to remember that when a taphole is drilled into pre-existing NCW, the amount of new NCW formed in response will be much larger than if a taphole was drilled into clear sapwood – the pre-existing NCW contains no living cells to mount the wound response.

When sap cannot flow through the affected NCW, what happens to water transport in that zone? Do the branches and leaves supplied by those vessels die? Vessel elements are not simple, straight pipes. They are groups of pipes that have a high degree of interconnectedness and, therefore, a great deal of redundancy. While the flow of unaffected vessel elements is mostly upward, some lateral movement of sap occurs during the transitions from one vessel element or group of elements to another. Therefore, the sap can flow around stained areas, much like water will flow around an island in a stream. The rate of sap flow increases near the NCW and slows down beyond this area but flow itself is unimpeded unless NCW is tapped into or NCW is so extensive that blockages dominate.

For all these reasons, maple producers are fortunate that the trees we use are well adapted to winter and are sustainable to repeated injury and the loss of a small amount of sugar each year.

Several educational videos relating to tapping and staining can be found in the "Keys to High Sap Yields" playlist on the UVM PMRC YouTube Channel at: <https://www.youtube.com/c/UVMProctorMapleResearchCenter>
<http://www.mapleresearch.org>
<https://www.youtube.com/c/UVMProctorMapleResearchCenter/videos>

Season Report for NYS as of April 2

St Lawrence Region

Overall, it is a very poor year for all producers. Many producers have already finished up for the year, with more stopping every day. Higher elevations are still producing and might for another 5-7 days. Gravity tubing system and smaller producers are at about 1/3 crop (25% to 40% range). Medium and large producers with vacuum systems are at about 1/2 crop (45% to 60% range). Producers at higher elevations may end up with a better season. On average, sugar content has been poor. Color has tended to be darker than usual. Still moderately dry, but recent rain has helped a lot with more predicted.

Last summer's drought likely had a strong influence on the poor season. Sugarmakers are already hopefully talking for next year.

Gavin MacKellar, NYSMMPA St Lawrence Region President

Lewis Region

It looks like a short season in the Lewis Region; producers are making about half of their seasonal goals. Maple quality is excellent. Some producers are still trying to make some late-season syrup but are concerned about a lesser quality product. Hopefully, bulk prices will help our maple farmers' bottom line.

Larry Rudd, NYSMMPA Lewis Region President

WNY

The 2021 WNY Season was a bit disappointing. Typically, we start in January with a few small runs, and then in mid-February, things get going. This year there was one very small run around the 20th of January and then nothing until the very end of February. Once we finally got going, we did well. Then once the hot weather arrived around the 18th of March, the season came to an end relatively quickly. Producers with buckets had a really bad season, gravity tubing systems didn't do well either, and producers with vacuum systems ended up with 70 to 80 percent of a crop.

Greg Zimpfer, NYSMMPA WNY Region President

Upper Hudson

Producers in the Upper Hudson region are reporting half to three-quarters of a normal crop of syrup. The season was cold early on and then a warm week hit in the middle of the season. A few in the North and higher elevations are still producing, but with the size of buds on trees, not much longer.

Dave Campbell, NYSMMPA Upper Hudson Region President

CNY

The Central Region members struggled with the late start to the 2021 syrup season with a cold January and February, along with significant snow cover in the woods. This affected tapping and made

working in the woods VERY difficult. An informal survey of the members provided feedback regarding the following questions:

What percentage of an expected crop did your farm harvest?

The numbers varied from 50% to 100%, with a mean of 80%.

What was your average sap sugar content?

The mean sugar content was 1.6% (one small farm reported 3-4%, which I left out of the mean calculation).

What was your syrup production per tap?

The mean was .24 Gallons per tap.

How long was your season?

The average was 26 days.

Some comments:

"It was one of the shortest seasons people could remember."

"Toughest start to a season in my 52 years."

"However, many reported that the syrup tasted terrific."

"The Best Dark Robust I've ever made."

The grades were: 60% Amber, 30% Dark Robust, 10% V Dark and a small amount of processing syrup.

Mike Blachek, NYSMMPA Central Region President

NENY

Season so far: 81%, 50-60%, 60%, 60%.

Sugar content: 2% and declining, 1.7, 1.2-1.3, 1.6

Prediction for season: hoping to get to April 10, and whatever we can squeeze out!!!

Quotes:

"Very quick turn from nothing to full go. Production has been good, but not long enough to get leaks taken care of, and low sugar content has been an issue."

"Just not a long enough season to get everything straightened out or not enough days of sap running. Bigger temperature swings as well, not a consistent rhythm. No two alike, either too cold or too warm."

"Sap flow was slow early on but just picked up in the last week. We have been making nothing but dark syrup. We usually produce mostly amber syrup for the majority of the season. The flavor has been good. The sap is filtering through the RO hard. Obviously, too warm of weather at the beginning of the season. We are hoping to keep holding on at our higher elevation."

Joy Herfurth, NYSMMPA NENY board member

Catskill Region

Producers in the Catskill region are reporting an average of 60% of a normal crop of syrup. Sugar content has been lower than usual – average around 1.5%. Very little golden produced. 60% Amber, 30% Dark.

The flavor is good. Most folks are done or will be done by April 7.

Dwayne Hill, president, NYSMMPA Catskill region



Maple sausage is here!

New products available for members!



Have you tried the Hofmann Maple Sausage at the New York State Fair or maybe even at the NYSMPA Mid-Winter Classic?! Exciting news for fans of this sausage... you can now find it available for retail sale at the following locations:

- BIG M, Alexandria Bay
- Buckingham Market, Constantia
- Chanatry's Hometown Market, Utica
- Big M, DeRuyter
- Dexter Market, Dexter
- Great American, Greene
- Jubilee, Horseheads
- Mazzaferro Meats, Rome
- Mike's Pig Pen, Watertown
- Mohawk Village Market, Mohawk
- Morgans Grocery, Penn Yan
- Nichols, Liverpool
- Ontario Orchards, Oswego
- Paul's Big M, Oswego
- Red Onion General Store, Central Square
- Save-A-Lot, Watertown
- Save-A-Lot, Fulton
- Big M, Sherburne
- Great American, Sidney
- Speras, Cicero
- Union Springs Supermarket

Look for the package above and enjoy the taste of real NYS Maple in your breakfast sausage!



We have expanded our packaging varieties for Maple Coffee and Maple Tea!

MAPLE TEA (herbal or black) is now also available in a kraft paper pouch (see photo). It contains 13 tea bags, the same as the tea box. Your price is \$4. The box remains available at the member price of \$5.10, as does the bag of 25 individually wrapped tea bags for \$9.60.

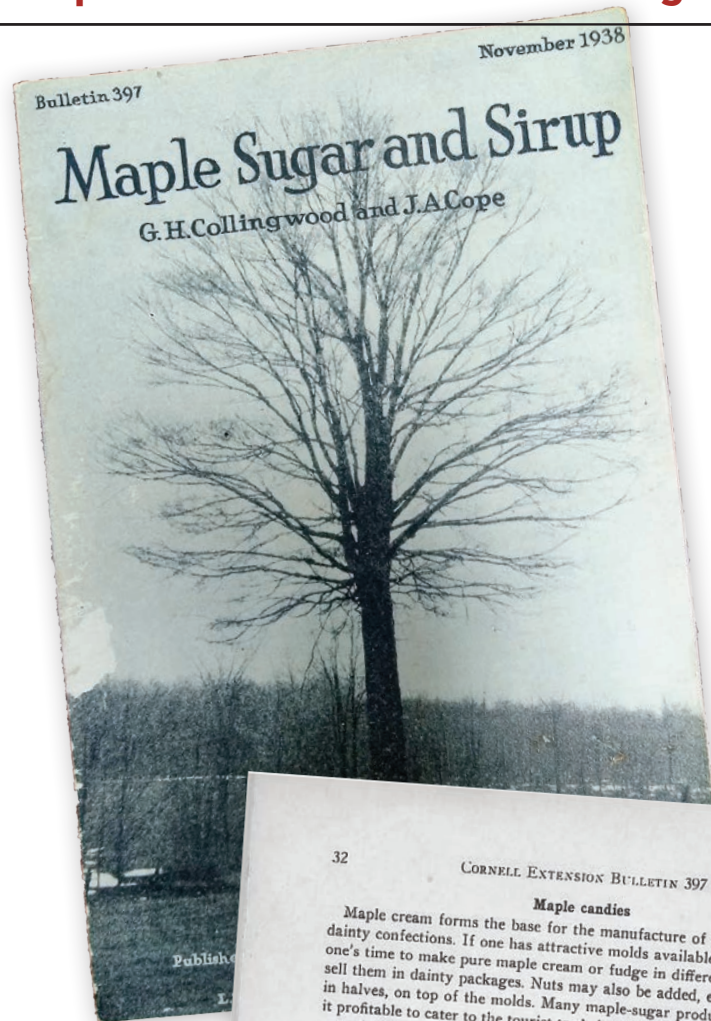
MAPLE COFFEE (ground) is now available in K-Cups. The K-Cups come 12 in a box (see photo). The boxes are packaged in a case containing 6 boxes. Member price for a single box is \$5.50, a case of 6 is \$33. Also, the cases of bagged coffee (ground or whole bean) are still available. "Best Used By" date on both tea and coffee is 12 months for best quality.

You can order from the Syracuse office and have it shipped or pick it up at the office. We also are arranging for Member Dealer-Distributors. They will have the coffee and tea in stock and will sell to NYSMPA members at the member price set by the state association. We currently have Merle Maple LLC in Attica and Shaver Hill in Harpersfield as member distributors.

If you are interested in being a distributor, contact Helen at the office.



Bulletin 397: Snapshot of the State of the Art of Sugarmaking in 1938



“One-half ounce of silicate of soda (water glass), 1 ounce of cornstarch, and 1½ pints of cold water. Add the starch and the silicate to the water and stir the mixture until smooth, then place the vessel in a double boiler and heat it until the starch is gelatinized.”

Says page 32 of Cornell Extension Bulletin 397, published by the New York State College of Agriculture at Cornell University in Ithaca, NY, in November of 1938. The bulletin is entitled “Maple Sugar and Sirup” and was a complete handbook written by G.H. Collingwood and J.A. Cope to “...help New York farmers to increase the yields of their sugar bushes and to improve the quality of the sirup produced.” (And, yes, back then, it was spelled “sirup”!)

Having discovered this antique bulletin that is now over 80 years old, I thought it would be fun to feature some sections of it in each Pipeline for a few issues so we can all share what our sugarmaking forebearers were given as the best practices at the time. The recipe above is not for a maple delicacy - it does sound rather bland, doesn't it? Some might say it would probably taste like paste, and they would be right! The recipe was recommended as a paste for paper labels to stick on tin or

glass, and the coaching further recommended that “this paste should be made often as it soon loses its sticking properties.” I can only imagine what working with THAT was like! Next time you grumble as you peel the backing off of your self-adhesive labels, think of how it used to be!

Back then, you could write to the Department of Forestry at the State College of Agriculture in Ithaca to get more information about “an attractive label, 4 by 6 inches,” that they had prepared for sugarmakers. They further claimed, “this label is suitable for both tin and glass containers, features New York State maple sirup, and also provides a place for the individual producer's name and address.” So, you would stick a stamp on an envelope and write a nice letter to the folks in the office there (ah, the days of real mail!), and you could obtain your own supply of labels. Mix up your paste, and you were on your way to an enhanced marketing campaign for your “sirup”!

As we explore the bulletin over the next few issues, you'll be surprised at how many things have changed, and yet how many things have remained the same. We are a craft with a rich heritage, and Bulletin 397 is a great snapshot of the state of the art of sugarmaking in 1938. More to come in future issues!

32

CORNELL EXTENSION BULLETIN 397

Maple candies

Maple cream forms the base for the manufacture of a wide variety of dainty confections. If one has attractive molds available, it is well worth one's time to make pure maple cream or fudge in different shapes and to sell them in dainty packages. Nuts may also be added, either chopped or in halves, on top of the molds. Many maple-sugar producers have found it profitable to cater to the tourist trade by direct sales at roadside booths or to build a mail-order business thru advertising. While sirup, as well as sugar, is often sold, this business rests essentially on maple sugar in the form of high-grade confectionery.

PACKAGES FOR SIRUP AND SUGAR

Sirup and sugar are put up in packages as various as can be suggested by the minds of the makers. Pails, both wood and tin, boxes of all sizes, tins, glass (from gallon jugs to tiny glasses), waxed paper, brown paper cartons, dainty confectionery boxes, and so forth, all are used.

Farmers who prepare sirup for local trade or home consumption usually pack it in rectangular tin cans with a screw cap. The one-gallon size is most popular with producers; a few use half-gallon tins, and others pack in quart jars.

The principal advantages of the rectangular tin can has been its comparative cheapness, ease of packing for shipment, and ready availability. These advantages are offset by unattractive appearance, the fact that cans cannot be held over to another year on account of rust, and finally because unscrupulous producers may put an inferior dark-colored product in them and “get away with it” at least once. Glass is now coming widely into use because it is cheaper, permits the customer to see the product purchased, and is available in all sizes from a gallon down to a half pint.

Labels

An attractive label, 4 by 6 inches, has been prepared.¹⁸ This label is suitable for both tin and glass containers, features New York State maple sirup, and also provides a place for the individual producer's name and address.

The following recipe is recommended for a paste which will cause paper labels to stick on tin or glass:

One-half ounce of silicate of soda (water glass), 1 ounce of cornstarch, and 1½ pints of cold water. Add the starch and the silicate to the water and stir the mixture until the whole is smooth, then place the vessel in a double boiler and heat it until the starch is gelatinized. This paste should be made often as it soon loses its sticking properties.

¹⁸Detailed information will be furnished by writing directly to the Department of Forestry, at the New York State College of Agriculture, at Ithaca, New York.
This bulletin is published and distributed in furtherance of the purposes provided for in the Act of Congress of May 8, 1914

301 Myron Road
Syracuse, New York 13219



A new NYSMPA membership runs from January 1 through December 31.

Rates are:

1 YEAR: \$65.

3 YEAR: \$180.

ASSOCIATES: \$25.

(Must be a colleague of a full member)

RETIRED *(No longer making syrup)*: \$25.

STUDENT: \$10.

(Must present proof of school registration)

Contact:

Helen Thomas,

Executive Director

office@nysmaple.com

301 Myron Road

Syracuse, New York 13219

315-877-5795 Fax: 315-488-0459

NYSMaple.com