Maple Syrup Digest

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2024 International Maple Hall of Fame Induction
Frequency of Maple Crop Failure in the U.S
2024 Maple Crop Reports

The Newsletter of the North American Maple Syrup Council

MAPLE SYRUP DIGEST

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NAMSC's Mission is to be a leading advocate and resource for maple associations and their members, working to ensure that sugarmakers have the tools and support needed to sustainably produce high quality products.

NAMSC's Vision is for all sugarmakers to consistently and sustainably produce high quality maple products.

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President's message

The '24 Maple season will be remembered for one of the earliest starts— and in some regions for the longest season— with definitely the least amount of snow cover ever. Many felt that winter never actually occurred. Still, overall a good crop was produced, especially for those who tapped early and utilized technology.

I did many media interviews during the season and the most frequently asked first questions were, "Is the early spring was going to ruin the crop? Will there still be any syrup available?" Neither concern proved valid, despite the unusual season.

Yes, the season started early, but as Maple producers we adapt and adjust. Every year there will be a spring and sugar time; as producers we have to adapt to what Mother Nature provides. As for the question of how much syrup the season might yield, I always answer "Ask me the end of April."

From the crop reports overall, at least an average year was achieved, and in Quebec the Strategic Reserve is expected to be back to the 2022 levels, with the reporting of 200M lbs. The great news coming in is that the quality of this season's crop was excellent. Please read the individual crop reports in this Digest.

Our delegate meeting was held May 10 in Croghan, NY, in conjunction with the Hall of Fame inductions on May 11. The latter recognized Stu Peterson (Minnesota) and Yves Bois (Quebec), with both being inducted into the Hall.

The Museum hosted a well organized ceremony. I am always humbled to tour that setting, and embrace the history preserved there. It gives one pause to remember all those already inducted into the Hall and reflect on the efforts they made to get us to the present point in our Industry. It was also impressive to see that all signage has been replaced, proclaiming the facility as the International Maple Museum. I encourage anyone who can do so to take the time and visit the Museum in Croghan. While it may be a little off the beaten track, it is well worth the time and effort to tour. You won't be disappointed.

The search for a permanent ED is progressing with the advertising for the position now published. Applications will be accepted until the position is filled, with applications received by July 15 to be given priority. The committee consists of David Briggs, Helen Thomas, Alison Hope, Jim Adamski Co-Chairs Stu Peterson and Brian Bainborough.

At the delegate meeting, the Hall of Fame committee presented recommendations regarding terms of reference for the selection processes involved with the Hall. This recommendation was unanimously endorsed by the

Council. Thank you to this committeef-for their hard work on this: RayBonneburg (chair), Eric Randall, Joe Polak, Tom McCrumm, Bill Robinson and Kathy Hopkins.

Over the years, NAMSC has received money from various donors and managed each of these donated funds separately. At the October conference a motion to consolidate these investments was made and approved. Terms of reference were proposed at this meeting to document and memorialize the purpose of the of the Legacy Fund; this plan was passed unanimously.

The Research Committee reported that requests for proposals have opened and preliminary proposals are being accepted now.

Maine will be hosting this year's conference October 21-24 in Portland, ME and the host group is putting the finishing touches on an exciting program. Registration will be available shortly. The International Grading School , which is partially funded by NAMSC, will be held right after the conference. If you haven't taken the course, please consider enrolling. The course is extremely informative, and learning is guaranteed. Participation in the School can only add to your sugar-maker knowledge.

Brian Bainbourgh

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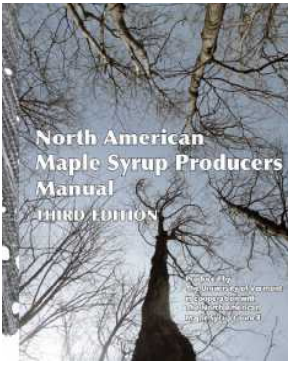

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2024 Maple Hall of Fame Inductee
Stu Peterson

Stu Peterson did not tap his first maple tree until he was 53, but his journey into maple began nearly 20 years earlier when he and his wife Corinne purchased a 190 acre woodlot on Star Lake in west central Minnesota. The property had formerly been home to the well-known "Camp Aquila for Boys", a high-end summer camp that attracted young campers from all over the U.S. Years later, the "Camp Aquila" name would become the logo and identity for one of the western-most (at the time) commercial maple syrup operations in the world. The property is on the very western edge of the mixed hardwood forests that once stretched-from eastern Canada to western Minnesota. Just a few miles to the west of Camp Aquila, the hardwoods of Minnesota transition to the open prairies of the Dakotas.

At the time they purchased the property in 1983, the Minnesota Dept of Natural Resources (DNR) prepared a Forest Stewardship Plan. It included recommendations for future sustainable uses. Among the DNR's observations was that the property "... had great potential as a sugar bush..." because of an abundance of sugar maples.

In 1983 the term "sugar bush" was a foreign concept to the new (and naïve) rural land-owners from the big city of St. Paul, but they became intrigued with the idea of producing maple syrup on their own land from their own trees. The idea percolated as a future endeavor that with brace and an old 7/16" bit. Stu hauled that first sap harvest 5 miles down the road to a neighbor who had a flat pan over a cinder block arch. They combined their sap and boiled into the wee hours for three seasons. It was the beginning of a maple passion that continues to this day.

In October 2001, Stu attended his first North American Maple Syrup Council (NAMSC) and International Maple Syrup Institute (IMSI) Annual Convention and trade show just down the road in St. Cloud Minnesota. That was the beginning of his relationship with the three maple groups: NAMSC, IMSI and the Minnesota Maple Syrup Producers Association (MMSPA).Corinne and Stu would go on to attend nearly every succeeding maple convention and MMSPA membership meeting for the next 23 years. Eventually, Stu served on the boards of all three organizations.

The 2003 season was a turning point when the Petersons built their first sugar house, installed new equipment, became licensed and inspected by the MN Dept of Ag, and became certified USDA organic producers. They installed a wood fueled, Waterloo Small USA (now CDL) Intense-O-Fire evaporator and related finishing and bottling equipment. As they moved from hobbyists to small commercial producers, they formed Camp Aquila Pure Maple Syrup LLC,purchased business and product liability insurance, and began selling to the public, primarily to area stores and restaurants.

Camp Aquila Maple has always been a basic operation, evolving from those first 50 buckets to a gravity tubing system collecting sap from 1300 sugar maples. Sap is gathered using ATVs equipped with pumps to transfer from collection bins to transport tanks. Reverse osmosis is employed to concentrate the sap and reduce both cooking hours and fuel consumption. Camp Aquila Pure Maple is a two-person "mom and pop" operation, supplemented by family members when schedules (and sap flows) permit. As Stu put it, "...Trees are not our limiting resource. We could tap five times as many on our property if we hired help and invested in bigger equipment. 1300 taps are about the limit of what the two of us can handle on our own... Everything is in balance now."

Following the 2001 St. Cloud MN convention, Stu and Corinne became active in the Minnesota Maple Syrup Producers Association. In 2005 he was elected to the MMSPA board and and served 6 years as the Association's secretary In 2011 he became president of the MMSPA,for another six years through 2016. Stu stepped down in 2017 to serve as Co-Chair of the Convention Planning Committee which prepared for Minnesota's hosting of the 2019 North American Maple Convention in Duluth MN.

In 2012, Stu Peterson led an effort to bring a maple syrup demonstration program to Maplewood State Park, just a few miles to the west of Camp Aquila. After four years with an outdoor flat-pan demonstration program, the Friends of Maplewood volunteer group, of which Stu served as Treasurer, had financed, constructed, and equipped a state of the art sugar house for public education and participation. The new facility, fondly called Maplewood's "Sugar Shack", held its dedication ceremony on September 14, 2017.

The MMSPA's historical practice was to select its delegates and alternates to the NAMSC Annual Meeting based on members who planned to attend. As the convention rotated annually throughout the maple states and provinces, Stu and Corinne soon fell into the practice of attending the conventions as fall road trips and vacations. They became regular attendees and soon could be called on to represent Minnesota when needed. They remember all the conventions with fond memories, but some highlights include:

• The 2002 New Hampshire meeting where the mountain tram got stuck in the snow and ice as it climbed up the "Old Man of the Mountain" hillside near Conway. It was on that tram

that Minnesota maple icon and Maple Hall of Fame member Carl Vogt (HOF 2011) hung out of the tram window as it teetered on the mountain side so he could get photos.

• The 2004 trade show in Lake George NY where Stu and Corinne purchased their Marcland automatic draw off after Susan and John Kroll (HOF 1996) advised the Petersons it was the best maple gadget they had ever invested in. It was also Stu and Corinne's first visit to the Maple Hall of Fame Museum in Croghan as a part of the convention tour program. reputation as either the "Fun Bunch" or the"Minnesota Rowdies".

• The 2007 meeting in Akron Ohio that was held in the historic Quaker Oats grain silo complex. It was at that meeting that Stu and Corinne attended their first IMSI Maple Grading School.

• The 2009 convention held in Bar Harbor Maine where "lobster-something" was enjoyed morning, noon and night.

• The 2010 meeting hosted by Ontario in Stratford, where Stu was appointed Minnesota's Alternate Delegate, supporting newly appointed Delegate, Ralph "Butch" Fideldy. It was at this meeting that Stu attended his second IMSI Grading School. He called it a remedial class.

• In 2011 Stu and Corinne attended a most memorable North American Maple convention held in the Bavarian town of Frankenmuth Michigan. It was at that meeting that Stu arranged for the IMSI Grading School staff (Kathy Hopkins - HOF 2019, Henry Marckres - HOF 2016,and Gary Graham - HOF 2022) to bring their traveling road-show school to Minnesota in the spring of 2012. The crew of three packed up in a University of VT staff car with three instructors and all the required equipment and supplies. They made the 1400-mile (2250 km) trek and conducted a most successful session. It was a valuable lesson in maple people sharing with other maple people!

• The 2013 Moncton New Brunswick gathering was a highlight when Stu and Corinne's Camp Aquila Pure Maple Syrup won first place in the Light category. It was a proud moment for the little producers from west central Minnesota.

• The 2014 meeting in Wolfville, Nova Scotia was memorable in that the Petersons were recognized for "traveling the farthest" making the 2000 mile (3300 km) road trip, and then having their syrup recognized again with a red ribbon. A stop on the way back west included a classic demonstration by Avard Bentley (HOF 2001) using his giant back hoe to prep land for his wild blueberry operation.

• 2015, 2016, 2017 and 2018 held in Seven Springs PA, Burlington VT and Levis Quebec and Concord NH, respectively, were all fall road trips where the Petersons began taking close notes on how to organize the industry's premier maple convention. "Celebrating Superior Sweetness" scheduled for Duluth MN in 2019 was like a locomotive coming down the tracks to run over the Committee Co-chair!

• Peterson remembers the 2019 NAM-

SC/IMSI meeting in Duluth MN as the culmination of years and months and weeks of planning by a great group of volunteers to put Minnesota Maple on display to the industry. It was also at that meeting Stu was appointed Minnesota's NAMSC Delegate, supported by Laurie Reddie who actively served as the NAMSC Alter-nate Delegate. Years before the MMSPA became a member of the IMSI, Stu became an individual producer-member of the organization. It was a wealth of industry knowledge, networking and relationship building. At the invitation of Dave Chapeskie (HOF 2012), IMSI's executive director, MMSPA became a formal member of the IMSI in 2015. Shortly thereafter, Stu was elected to represent Minnesota on the IMSI board.

In the midst of the Covid outbreak in 2020-21 Stu became a member of the NAMSC Strategic Planning Committee, charged with taking a deep-dive look at NAMSC's priorities, staffing and resources.

Out of that effort came a realignment of leadership, a new focus on priority objectives, revision of by-laws, and finally the resumption of in-person meetings. The conventions scheduled for Wisconsin 2020 and New York 2021 had been cancelled because of Covid. In 2022 at the rescheduledWisconsin event in la Crosse, Stu was honored with- and totally surprised by- a Special Recognition Award for his contributions to the NAMSC planning process.

In looking back on his 25 seasons in maple, Stu recalled the best part of his maple experience has been interactions with maple people. Peterson summarized with "...Meeting, working with, and building friendships with maple people-- including other producers, our customers, trade association leaders, equipment suppliers, researchers, educators and all the rest who produce, promote, protect, and enjoy pure maple syrup-- has been the best part of our maple experience. We have learned so much."

2024 Maple Hall of Fame Inductee
Yves Bois

Mr. Bois, a Montréal native, graduated from McGill University with a B.Sc. in agronomy in 1982. He completed his academic training obtaining a M.Sc. in biology (ecotoxicology) and partially completed an MBA at Concordia University,also based in Montreal. In his first 14 years of professional activities, Mr. Bois held many positions in contractual laboratories specialized in aquatic toxicology, chemistry, microbiology, and chemistry. His last assignment in this industry was as a general manager of a laboratory dedicated to the food and the pharmaceutical industries. During this period, he was a committee member of the Standards Council of Canada and of the Bureau de normalisation du Québec.

He pursued his career as a general manager of an applied research center specializing in membrane filtration and biotechnologies. During his tenure, he was an elected board member of the association of Québec community college applied research centers association. He was also a board member of Technopole Vallée du St-Maurice, a regional organization dedicated to industrial innovation. Yves joined the maple industry in 2008 as general manager of Centre ACER. He soon discovered an industry who, under its traditional and conservative image, is animated with a strong will to innovate and have an openness to new ideas and technologies. In his years of assignment, he emphasized Acer activities in applied research and technology transfer.

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While Mr. Bois was general manager at ACER many significant projects were completed. A major achievement was the development of the SpectrAcer that partially automate and speedup the grading of maple syrup. Major studies to identify the factors modifying maple syrup composition and taste were completed in collaboration with the Québec maple syrup producer's association. In addition, ACER developed various specialized books and products for the industry including a guide to evaluate the health status of a maple forest and a document to help the industry to comply with Cal Prop 65. In early 2020, ACER received a $1.8 M grant from the government to acquire a wide range of state of the art laboratory equipment. Such equipment is unique in the maple industry and allowed ACER to conduct innovative and unique research projects.

ACER scientists addressed important questions to the industry often proposing unique and innovative solutions. For example, the ACER team conducted an evaluation of antifoaming agents and technics effectiveness, developed novel and cost effective approaches to tubing sanitation, conducted comparisons and evaluations of spout and tubing in collaboration with the industry and the development of rapid and effective way of measuring sugar in maple syrup are only a few examples of ACER accomplishments.

In addition, ACER extension department began developing numerous practical education tools for the producers and their technical advisors.

These classes were held across Québec at numerous time each year and were always well attended.

Mr. Bois gave many talks at conferences most of them to maple syrup producers in Québec and was invited to present in other Canadian provinces and American states. He also introduced the industry to elementary grade student education material to promote maple syrup awareness.

In 2009, with the support of his board, he incorporated Acer Division Inspection, a team of 80 employees dedicated to grading maple syrup sold in bulk in Québec. As president of the organization, he focused on quality and on reducing the time between production and grading. He also documented the quality of the work performed by the team with numerous studies completed by the Agriculture Canada research center in St-Hyacinthe.

During his tenure at Centre Acer Mr. Bois was an active board member of the International Maple Syrup Institute. He was also an elected board member of Innovation Québec representing Québec's research consortium. This organization focused on promoting industrial research and innovation in Québec and included, among other players, rectors of Québec universities.

These achievements were possible thanks to the continuous support of the Québec maple syrup producers,
the Québec ministry of agriculture and ministry of economy and innovation, Agriculture Canada and ACER's indus-

industrial partners and a significant increase in autonomous revenues. Foremost, ACER's scientists and technicians were essentials to these realizations. This unique team of highly dedicated and competent personnel and the continuous support of his board ensured the success of ACER.

An Initial Assessment of the Frequency of Maple Crop Failure in the U.S.

Timothy D. Perkins – University of Vermont, Proctor Maple Res Ctr, Underhill, VT

Mark Isselhardt – University of Vermont, Maple Extension Program, Underhill, VT

Some seasons sometimes produce a bountiful crop of maple syrup. In other years producers are considerably less lucky. Periodic failures of the maple crop happen. Sometimes this affects only isolated operations when massive equipment problems or health issues intervene. Other times the shortfall in production can be more widespread. In years with extensive weather anomalies, crop failure can be extensive, affecting many states across the maple-producing region. These tend to happen in years when the winter and spring are abnormally warm or in years when the weather changes stays cold until late in the spring, then suddenly turns warm and remains that way.

Climate change has shifted the maple season towards a production window that occurs earlier and earlier in the calendar year. In addition, research points to the transition from winter to summer (the spring season) happening more quickly in some areas. Because maple production relies on a relatively small number of good production days, reducing the duration of the sap flow season has the potential to increase the possibility that crop failures might occur.

This study examines the frequency of maple crop failures over the past few decades in an attempt to understand how a changing climate might impact maple production. We used data from the U.S.D.A. National Agricultural Statistics Service (NASS). Crop failure was defined as years in which syrup yield (gal/tap) in a given year was 20% lower than the two seasons immediately before and the two seasons following the year being examined. This approach reduced the influence of growth in the number of taps over time. Because yield data is available starting in 2001, it resulted in an evaluation of the seasons from 2003-2021 (19 seasons). States included in the analysis included: CT, MA, ME, NH, OH, PA, VT, and WI. Collection of yield data for CT, MA, and OH ended in 2018, so analysis for those states covers the years 2003-2016 (14 seasons).

The frequency of maple crop failure for each state is shown in Figure 1. Over all states, crop failure occurs at a frequency of 15.1% (about one out of

every 6-7 seasons). ME, NH, PA and VT had the lowest crop failure rate at 10.5% (about one of every 10 seasons). CT and MA experienced crop failure 14.3% (about 1 of 7 years) of the time, and WI 15.8% of the time. NY had a crop failure frequency of 21.1% (about 1 of 5 yrs). OH had the highest crop failure frequency of assessed states with a rate of 28.6% (1 out of every 3 or 4 years). The cause of the differences in failure rates across states are unknown, but may be due simply due to natural variation, low sample size, the level of technology adoption, or something else.

The average loss in maple syrup production for each state in years of crop failure is depicted in Figure 2. Overall, the average loss in failure years across all states is 30.5%, nearly 1/3 of a crop. Several states show a tendency for losses in the 20-29.9% range (ME, NH, NY, OH, VT), while other states show higher average crop losses in the 30-39.9% range (CT, MA, PA) or even above 40% (WI). The reason(s) for different failure rates are unknown, but might simply be due to the short timeframe over which this analysis was completed. Examinations over a longer time frame would likely be more informative.

When we look at when crop failures have occurred (Figure 3), we see that early in this time-series (2003-2012) crop failures were common in at least one of the states, occurring in 7 out of 12 years, with multi-state (regional) failures occurring in 3 of those years. In 2007, ME, NY, PA and WI were all affected. In 2010, CT, MA, NY, OH and PA all experienced crop failure. The widespread heatwave of 2012 resulted in crop failures across the maple production region, with CT, NH, NY, OH, VT, and WI all affected.

From 2013-2021 (9 seasons), crop failure was seen only twice (2016 and 2021). The 2016 failure involved only OH. The 2021 failure was more extensive, with NH, VT, and NY all experiencing significant drops in syrup production.

While OH appears to suffer from a higher frequency of maple crop failure, a lack of data from more southern regions (IN, KY, NH, TN, VA, WV) precludes the ability to determine whether crop failure is more common in those areas peripheral to the dominant maple producing states.

The fact that crop failure frequency appears to be LESS common than in the past is interesting. While we might expect that climate change would result in more uncertainty about when to tap and might produce warmer prolonged temperature periods earlier in the season, that doesn't appear to be the case, at least over the short period of investigation in this study. It is possible that heightened awareness and flexibility on the part of maple producers on when to tap along with improved application of technology (better spout/drop sanitation, better vacuum) has managed to offset any reductions in yield.

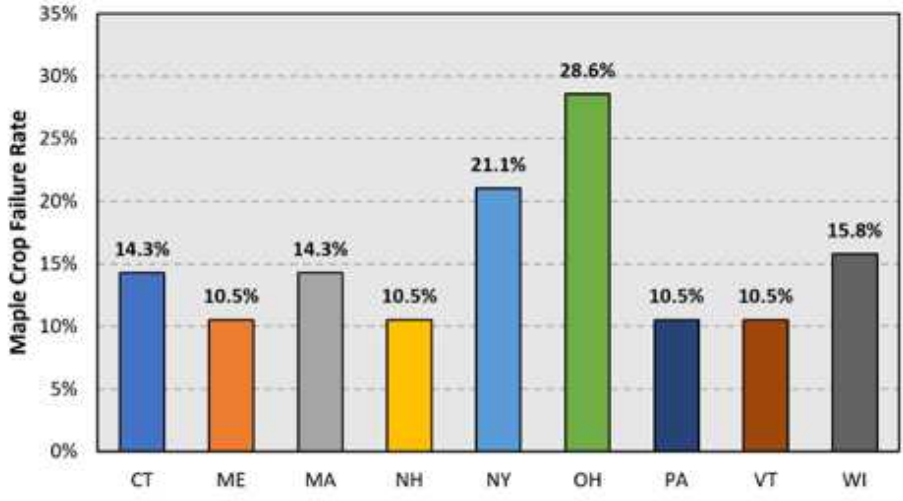

Figure 1. Maple crop failure (> 20% reduction in yield from average of two previous and two post-season yields) by state from 2003-2021. The value above each bar represents the percentage of crop failure. Sample size is 14 years for CT, MA, and OH, and 19 for the remaining states.

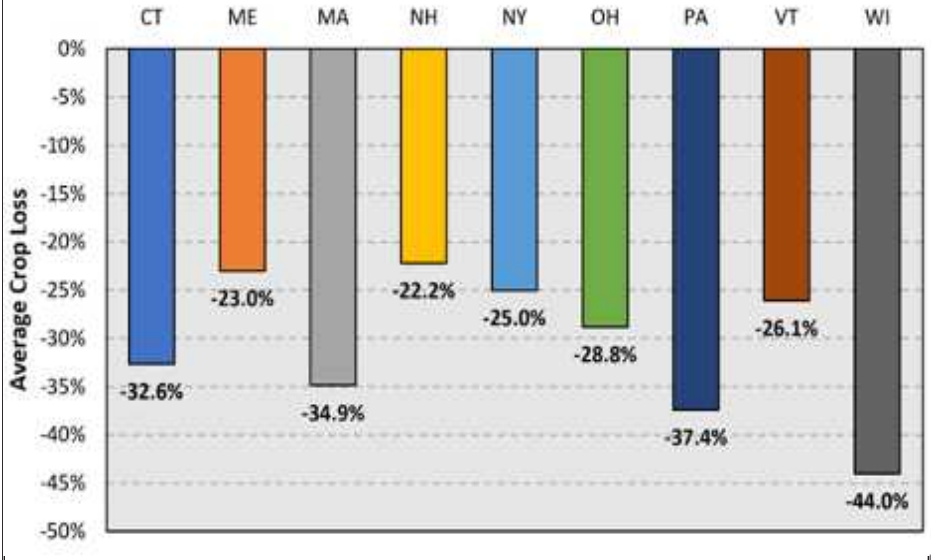

Figure 2. Average crop loss in years with crop failure by state from 2003-2021. The value below each bar represents the amount of average percentage reduction in maple syrup production.

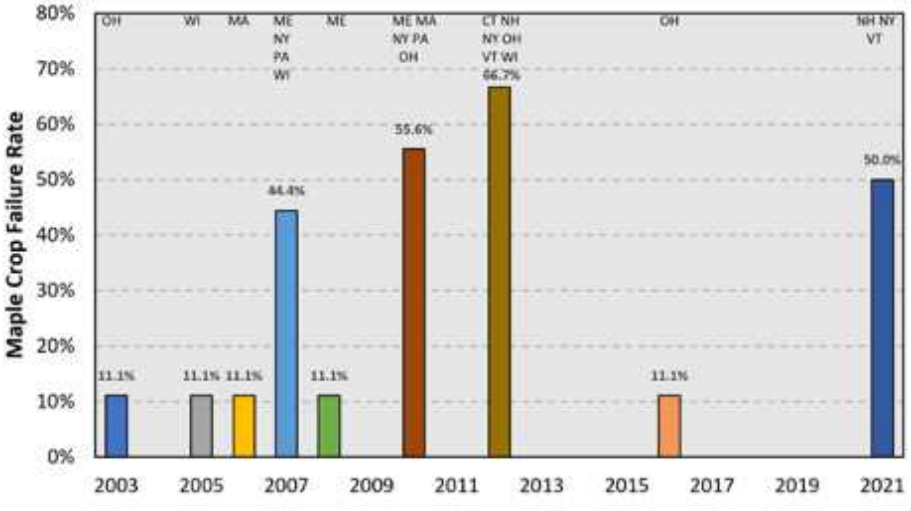

Figure 3. Percentage of states experiencing maple crop failure (> 20% reduction in yield from the average of two previous and two post-season yields) by year from 2003-2021. The value above each bar represents the percentage of crop failure for that year. Initials across the top indicates the state(s) in which failure occurred that year. Sample size is 19 years from 2003-2016 and 14 years from 2017-2021.

The Maple Syrup Bottle with the Odd Little Handle: A Closer Look at its History

Matthew M. Thomas

A popular maple history topic circulating on the internet claims to explain the origins of the iconic flat jug or oval flask-shaped glass maple syrup bottle with the small handle on the neck. These articles argue that the appearance of the seemingly useless handles on this syrup bottle are an intentional design element meant to be a stylistic representation reminiscent of the handles on ceramic jugs used in the past to package maple syrup. As quaint and fanciful as this idea may be, research into the history of the design of this particular bottle, combined with an understanding of the history and evolution of the use of glass bottles in the maple syrup industry, presents a more accurate and evidence-based storyline.

It is certainly true that ceramic jugs were used for holding all sorts of liquids in the past and could have held maple syrup. However, taking it further than accepting that they could, it is important to ask what is the evidence that ceramic jugs were used for storing syrup? What is missing are written accounts and examples of images showing the use of ceramic jugs by maple syrup makers. There are little to no archival or photographic records, nor verifiable evidence from collections of maple industry antiques and artifacts of significant use of ceramics jugs for storing maple syrup. The maple industry does have a tradition of selling syrup to tourists in miniature gift-sized ceramic containers and jugs, but these containers were only introduced in the 1950s. Instead, the use of ceramic jugs for holding maple syrup is more of a romanticized image of the past as opposed to a demonstrated fact.

One important reason that we do not see references to or the appearance of ceramic jugs for maple syrup is that during the 1700s and most of the 1800s, the era when ceramic jugs were in greatest use for holding liquid products, maple sugar, not maple syrup, was the primary product of the sugarbush. If one wanted maple syrup you could reconstitute maple sugar by adding water and heating it in a pan to form syrup. It was not until the 1890s and after that we begin to see a significant shift from producing maple sugar to maple syrup, and by that time glass bottles were being mass produced and readily available for storing syrup.

A careful examination of advertisements for the sale of maple syrup and glass bottle manufacturers' catalogs dating back to the 1880s shows that maple syrup was packed in metal cans and glass bottles, but not ceramic jugs. The glass containers were in shapes and designs similar to round and square long

neck liquor bottles, condiment style bottles, and short necked eight-sided bottles similar to water bottles. None of these bottle styles featured small loop handles on the neck the bottles.

Loop handles on bottles do not begin to appear in the catalogs of bottle manufacturers until the mid-1920s. The mid-1920s catalog from the Illinois Glass Company, who later merged with the Owens Bottle Company in 1929 to form the Owens- Illinois Glass Company, introduced a number of new glass containers with loop handles on the neck and a reinforcing ring of thicker glass at the juncture of the neck and shoulder. The loop on the handles of the bottles introduced in the 1920s are large enough that one can actually fit a finger through to lift up and hold the glass jar for pouring. The new loop handled food container bottles in the 1920s catalogs were referred to as jugs, cruets, and decanters, and quickly became very popular designs in the food industry.

One of the earliest clearly dated examples for packing maple syrup in a jug-style bottle with a loop handle on the neck comes from Vermont Maid blended syrup around 1925. At that time Vermont Maid Syrup was bottled by the Vermont Maple Syrup Company in St. Johnsbury, Vermont under the ownership of George C. Cary. At this same time, a few other maple companies began using the new Illinois Glass Company loop handled bottles, notably Boston's New England Maple Syrup Company and St. Johnsbury's Maple Grove Candies. Not surprisingly, both these maple companies had strong ties to George C. Cary and the Cary Maple Sugaring Company. The introduction and use of these early handled bottles set in motion the evolution of syrup bottle design that eventually led to the iconic oval shaped flask.'

Following on the introduction of earlier forms of the loop handled glass bottle in the 1920s, in 1933 a new circular, jug style bottle was introduced, with a smaller and more angular handle and similar reinforced neck ring as appeared a decade earlier. Designed and patented (USD89301) by Edwin W. Fuerst (1903-1988) of Toledo, Ohio for manufacture by the Owens- Illinois Glass Company, the design was proprietary in the United States to the Cary Maple Sugar Company, who used it bottle their Highland 100% Pure Maple Syrup in 2, 8, 12, and 24 ounce sizes. The bottle designer, Edwin Fuerst was an experienced commercial artist who worked closely with the Owens-Illinois and Libbey Glass companies.

Also in the mid-1930s, the Pacific Syrup Company out of San Francisco began using a bottle in with a small handle on the neck on a body of flatter jug-like flask,-featuring rounded shoulders and a shape that tapered to a splayed out base. Pacific Syrup used this design for their Tea Garden Syrup, a cane and maple blend. This exact design does not appear in the glass company catalogs and a design patent has yet to be discovered, but it is a clear precursor to the familiar oval-flask syrup bottle of the maple syrup industry.

In 1950, the iconic oval flask with the little handle, sometimes called a flat jug, was introduced to the maple syrup industry. Under the less that glamorous title of "JUG OR THE LIKE," the bottle was designed and patented (USD162147) by Brooks D. Fuerst (1905-1998) of Sylvania, Ohio, with the patent again assigned to the Owens- Illinois Company. Brooks Fuerst was the younger brother of Edwin Fuerst and like his brother, Brooks Fuerst was an experienced designer of glass bottles and jars for food and liquid packaging and worked extensively with the Owens-Illinois Glass Company and the Libbey Glass Company, both in Toledo, Ohio, a place that is sometimes called the Glass Capital of the World.

Although the design patent was submitted in 1949 and awarded in 1951, the Cary Maple Sugar Company began using the oval flask bottle as early as 1950 with the release of its the most popular glass container in use in new brand of Cary's 100% Pure Maple Syrup in 2, 8, 12 and 24 ounce sizes. With the introduction of the Cary's brand of pure maple syrup, the Cary s brand of pure maple syrup, the Cary Company's older label of Highland Syrup was converted into a blended maple and cane, syrup, but also bottled in the new oval flask. Along with the Cary Company, Pacific Syrup Company also began to sell their blended Tea Garden Syrup in the early 1950s in the new small-handled bottle.

Use of the bottle appears to have been limited to branded syrups in the 1950s and 1960s. Sale of the oval flask for use by individual producers picked up significantly in the 1970s and by the 1990s the glass oval flask had becomethe most popular glass container used in the United State maple industry. The fourteen-year window protecting the design patent has long since expired. With the design no longer protected and in the realm of free-use, the original angular loop handle with two sharp corners has been replaced with a more rounded handle. As a design that was specifically introduced for bottling maple syrup and saw near- exclusive use by the maple industry, over time the glass oval flask with the little handle on the neck developed into unmistakable and iconic symbol associated with maple syrup.

Matthew Thomas is a historian who researches and writes about all aspects of the history of the maple syrup industry. You can contact him and read more of his research at the website www.maplesyruphistory.com.

Image 1
Two examples of early loop handled syrup bottles from the 1920s and 1930s. Note the larger size loop.

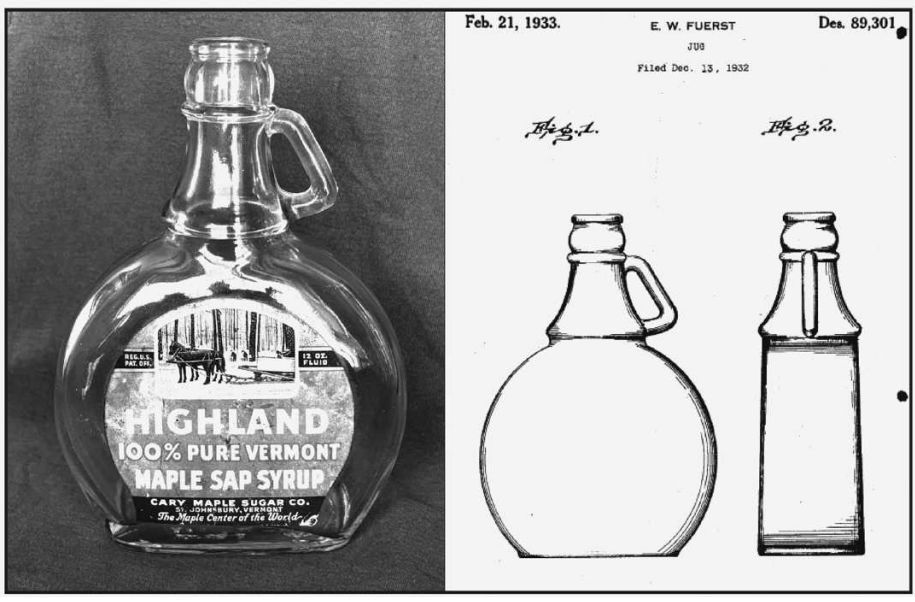

Image 2

E.W Fuerst design for circular syrup bottle from 1933 that was precursor to the oval shaped flask or flat

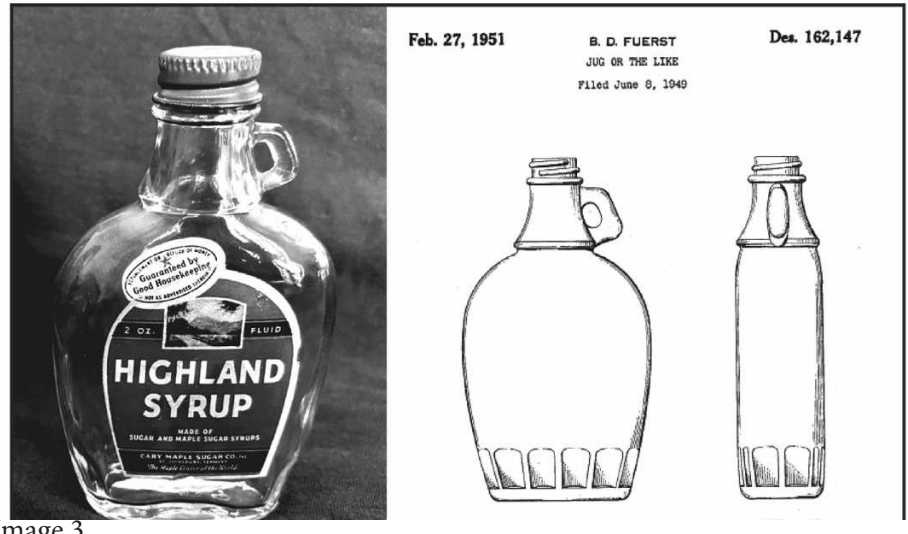

Image 3

Early example and 1951 patent design for the maple syrup industry's iconic oval-shaped flask with the small handle. Note the angular shape to the handle which was later replaced with an even smaller rounded handle.

Effects of the January 1998 Ice Storm on Stem and Root Carbohydrate Reserves, Radial Growth and Tree Vigor in Two Vermont Sugarbushes

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Introduction

The ice storm of January 1998 damaged well over 17 million acres of forest in the northeast, including nearly 1 million acres of forests in Vermont (Figure 1, Miller-Weeks and Eagar 1999, Vermont Department of Forests, Parks & Recreation 2000). Many of the areas which experienced damage were active sugarbushes, with severe damage to tubing systems in affected zones.

It was expected that trees which suffered severe branch loss would produce less foliage in subsequent growing seasons, and thus would be unable to accumulate as much carbon as less-damaged individuals. Several studies have shown a relationship among crown dieback and carbohydrate reserves in sugar maple (Gregory and Wargo 1986, Renaud and Mauffette 1991), and carbohydrate depletion was proposed as a factor involved in dieback and decline of sugar maple (Gregory et al. 1986). Therefore, trees severely affected by the ice storm might also show reduced sap yield, growth and lower rates of survival. In an Ontario study, Noland (2003) found that, "…ice-storm-damaged sugar maple crowns tended to have less syrup productive capacity and lower root starch levels, especially in trees with more than 50% crown damage. The effect of the damage lasted up to three years after the ice storm." In New York, reduced radial growth was found in the season following the damage, but recovery was evident in subsequent years (Bevilacqua et al. 2021). Survival rates of even highly damaged sugar maple over the next four years tended to be high, although stem growth and wound closure rates were reduced in trees with higher levels of crown damage (Shortle et al. 2003).

We investigated the effects of the January 1998 ice storm on the levels of root and stem carbohydrates in trees across varying levels of damage in two sugarbushes in Vermont at the end of each growing seasons from 1998 through 2001. Basal area (radial growth) and vigor (crown regrowth) of trees were also assessed at the beginning and end of the study period.

Methods

Two ice storm damaged sites were

selected for study, one in the Champlain Valley (Guillemette, Shelburne, VT) and the other in southeast-central Vermont (Rose, Reading, VT, Figure 1). Both stands were heavily dominated by mature sugar maple and had been actively managed for maple production for several decades. Overall ice storm damage was moderate, although a range of damage to individual trees was present at both sites (Figure 2). The Guillemette site was located atop a calcium-rich ridge, whereas the Rose site is in the foothills of the Green Mountains with coarse, stony loam soil.

Five trees were selected at each site in each of the following five damage classes based upon a visual assessment of broken and missing branches:

0 = 0-10% crown loss,

1 = 11-25% crown loss,

2 = 26-50% crown loss,

3 = 51-75% crown loss, and

4 = greater than 75% crown loss.

This resulted in a total of 25 trees at each site.

In the summer of 1999, we revisited these sites to confirm that damage classes with regrowth with leaves present corresponded to damage classes with leaves missing. In November 1998, 1999, 2000, and 2001, approximately 1" cores were extracted from two different major roots and from the stem of each tree using a tree borer or increment hammer. Samples were immediately placed into plastic straws and transported to the lab in an ice-filled cooler, then stored in an ultra-low freezer (-80°C) prior to analysis.

Cores were homogenized in 80% ethanol and separated into soluble and insoluble carbohydrate fractions. The soluble fraction was analyzed using high pressure liquid chromatography (HPLC) for individual sugars and total sugar concentration. The insoluble wood pellet was then hydrolyzed with amyloglucosidase to break down the starches into sugars and assayed colorimetrically in a spectrophotometer for glucose. Starch concentrations were then calculated from those readings based upon standard curves.

Vigor of trees was visually evaluated in 2002 to compare with original 1999 assessments. Study trees were cored in May-June 2002, mounted into blocks and sanded smooth, and ring-widths measured to the nearest 0.01mm on an optical measuring bench. Basal area increment was calculated from ring-width and tree diameter, and the average post-ice storm basal area (1998-2001) compared with annual growth for the years immediately prior to the ice storm (1995-1997).

Results were analyzed for differences among crown damage levels within a site for each year using a one-way ANOVA. Rejection level for significant differences was set at alpha = 0.10.

Results & Discussion

Levels of root starch were significantly lower with increasing crown damage at both sites in the first year, with trees in the highest damage classes having 58% lower root starch than undamaged trees in 1998, and 36% lower in 1999 (Figures 3, Figure 4). There was a tendency for root starch to be lower with increasing levels of damage in subsequent years, however these did not often achieve significance. Stem starch was lower at the Guillemette site in 1998, but this did not persist beyond the first growing season. Conversely, stem starch at the Rose site was not significantly different in 1998, but was in 1999. Root total sugar was not significantly different among damage classes at either site in any year. Stem total sugar was not different for any damage class in any year at the Rose site, but was different for all years except 2000 at the Guillemette site, although these differences were marginal.

In general, there was a tendency towards higher levels of starch or sugar in less damaged trees. This was more the case for root starches than stem starches, and more the case for starches than sugars.

Interestingly, year-to-year variation in levels of starches and sugars tended to be considerably higher than differences related to crown damage. Accumulated root starch in 1999 and 2001 at both sites was much lower than the 1998 and 2000 levels (approximately about one-third as much) at both sites: stem starch in 1999 was lower than 1998 by nearly half **(Figures 3 and 4).** We suspect that the differences found in carbohydrates between the different years were highly influenced by the conditions prevalent during the growing season of each year. The growing season of 1998 was very good, with adequate rainfall and sunshine allowing for rapid crown regeneration. In contrast, June through August of 1999 were very dry. This likely limited photosynthesis during much of that growing season. The growing season of 2001 was similarly dry, with similar patterns in carbohydrate reserves. Large reductions in fall carbohydrate levels from sites in New York were noted when 1999 levels were compared to 1998 levels (K. Baggett, unpublished). It is interesting that these year-to-year differences are much larger in magnitude than the effects of ice storm damage on starch accumulation, which calls into question the physiological and ecological significance of the ice storm on long-term tree growth and survival on surviving trees. Had the growing season immediately after the January 1998 storm been less conducive to recovery, or other stresses been present at high levels, the impacts on carbohydrate levels, vigor, growth and survival might have been profoundly different.

Post-ice storm basal area growth of trees showed a decreasing trend with increasing levels of damage in both study sites (Figure 5), although due to high variability the effect was not significant. Basal area increment tended to be lower than in the years immediately preceding the ice storm at the Rose site with less fertile soils, but higher at the Guillemette site with calcium-rich soils.

Sugar maple is widely recognized as a calcium-demanding species (Wilmot 2000), so radial growth may have recovered faster at the Guillemette site because of higher levels of soil calcium

Tree vigor was significantly lower with increasing levels of crown damage in 1999 at both sites (Figure 6). When reassessed five years later (2002), vigor was still significantly lower with higher levels of crown damage at the Rose site, but not at the Guillemette site, again suggesting that recovery was mediated to some degree by soil nutrition.

There was no mortality of any of the study trees at either site up to five years following the ice storm.

Summary

•Carbohydrate storage, especially root starch, was reduced according to the level of crown loss following the first growing season after the ice storm.

•Root sugar, stem starch, and stem sugar tended to be less sensitive to the level of crown loss than root starch.

•The effects of the ice storm on root and stem carbohydrates largely disappeared by 2-4 years post-storm, perhaps reflecting a stimulatory effect caused by stand thinning allowing crowns of affected trees to expand into newly opened space.

•Large year-year changes in carbohydrate storage were evident, probably resulting from varying precipitation levels.

•There was no mortality of affected trees up to four years after the ice storm, regardless of the amount of crown damage.

•Radial growth rates after the ice storm were not significantly different than those before the ice storm, but tended to be somewhat lower in trees with increased levels of crown damage.

•Vigor of affected trees was lower in the second growing season following the ice storm at both sites, but on the more fertile site had recovered to match that of undamaged trees after five growing seasons, whereas on less fertile sites, the vigor of more highly crown damaged trees lagged behind those that had not been damaged or were less damaged.

These results suggest that sugar maple is rather resilient to even high levels of crown damage, but carbohydrate levels, vigor, and growth, and perhaps survival of affected sugar maple may be significantly modulated by stresses, growing season characteristics, and soil nutrition post-damage.

The lack of short-term mortality as well as the apparent strong recovery of growth and vigor in even highly-damaged trees suggest that maple producers and forest managers should not be overly hasty when considering a salvage cut in sugarbushes damaged by ice storms.

Acknowledgements

Our thanks to the Guillemette and Rose

families for allowing us to conduct this work in their sugarbushes. Grant funding was provided by the Vermont Department of Forests, Parks & Recreation as part of a Congressional Special Appropriation for Ice Storm Recovery.

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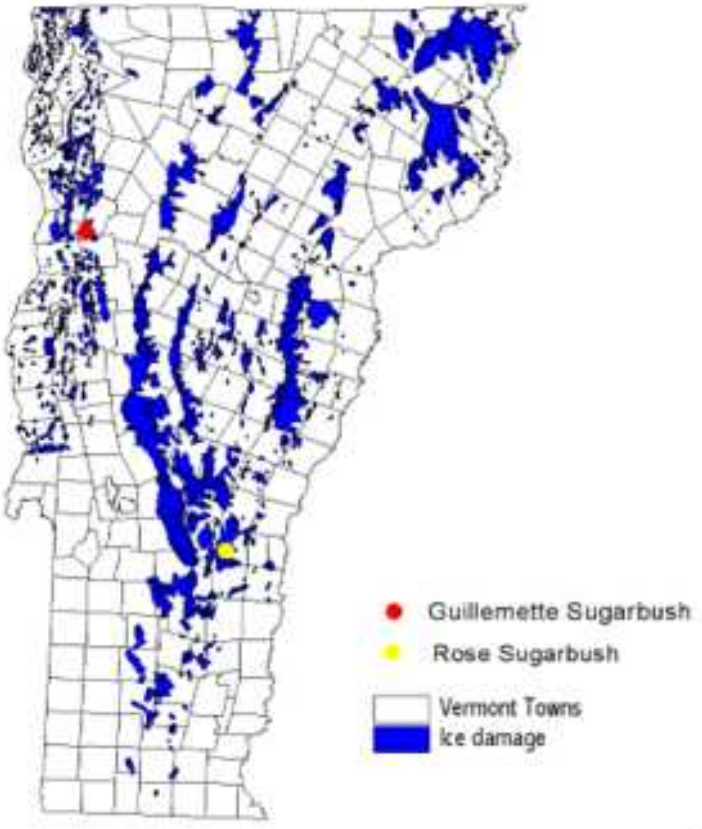


Figure 1. Vermont forestland damaged by the ice storm of January 1998 and location of two sugarbushes sampled for wood carbohydrate reserves in November 1998, 1999, 2000, and 2001 mapping of ice damage by Vermont Separtment of Forest, Parks & Recreation.

Figure 2. Damaged sugar maples at the Rose sugarbush in Reading, Vermont, on the morning of January 12, 1998. Photo credit: Sumner Williams, University of Vermont.

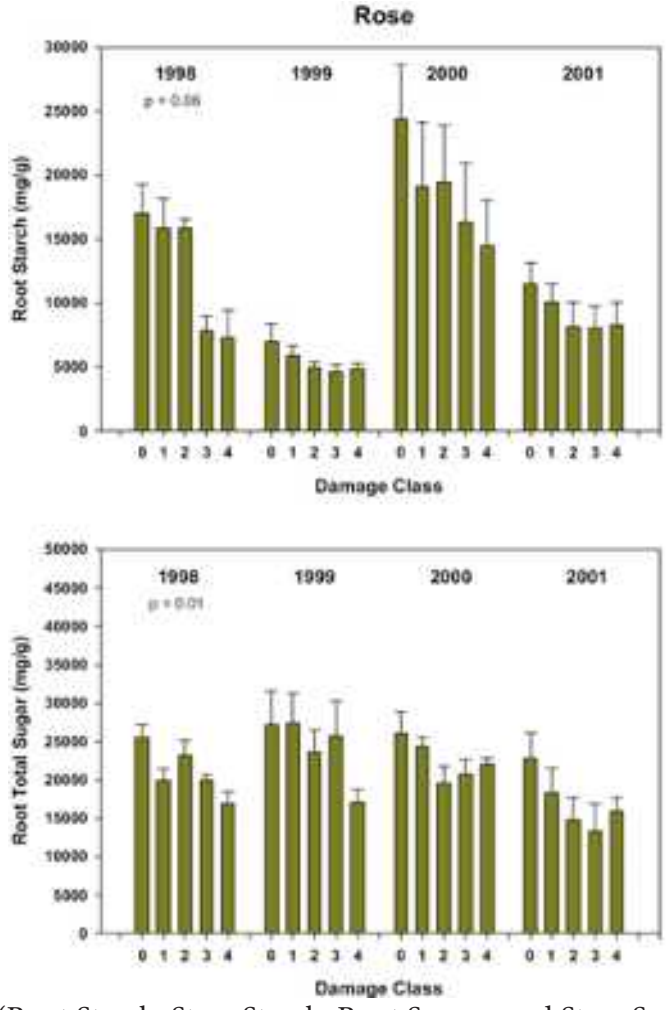
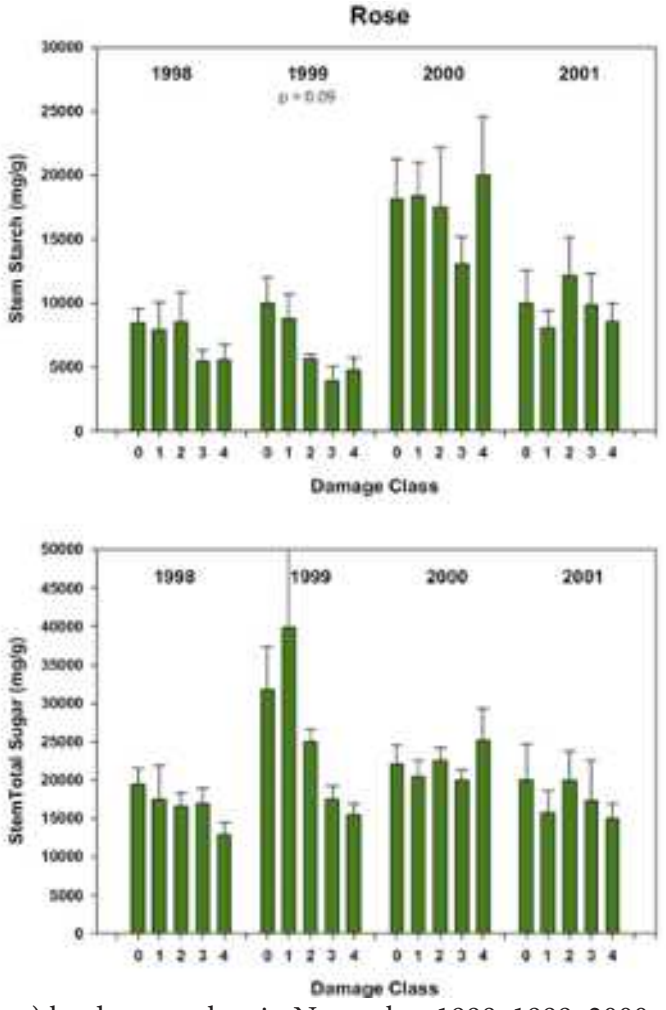


Figure 3. Carbohydrate (Root Starch, Stem Starch, Root Sugars, and Stem Sug
sugarbush. Significance values are shown for any variable comparison across



gars) by damage class in November 1998, 1999, 2000, and 2001, in the Rose
damage class achieving an alpha level < 0.10.

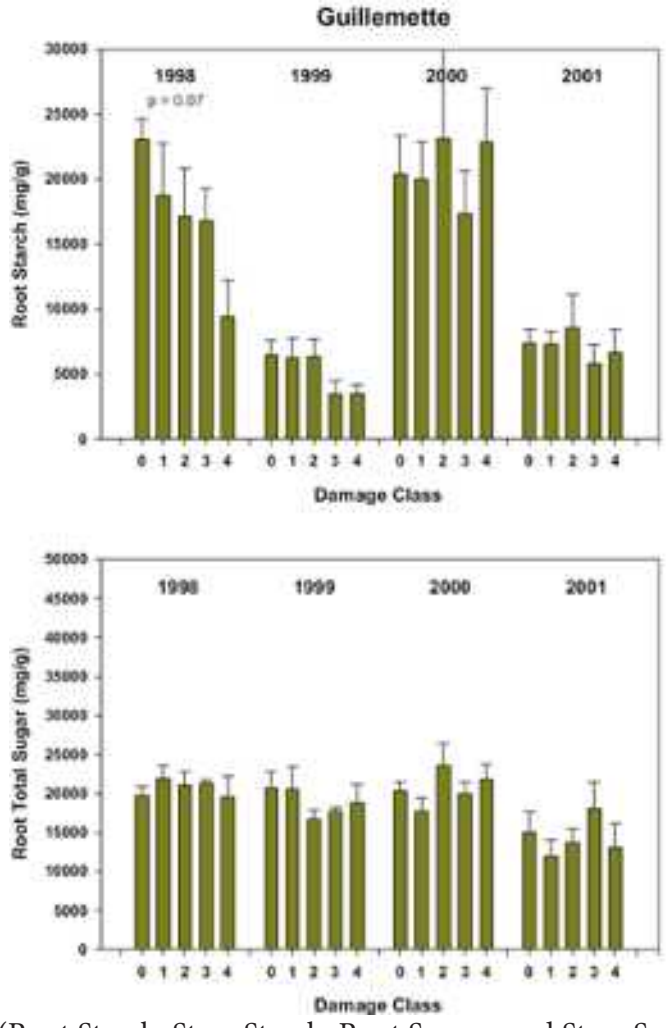
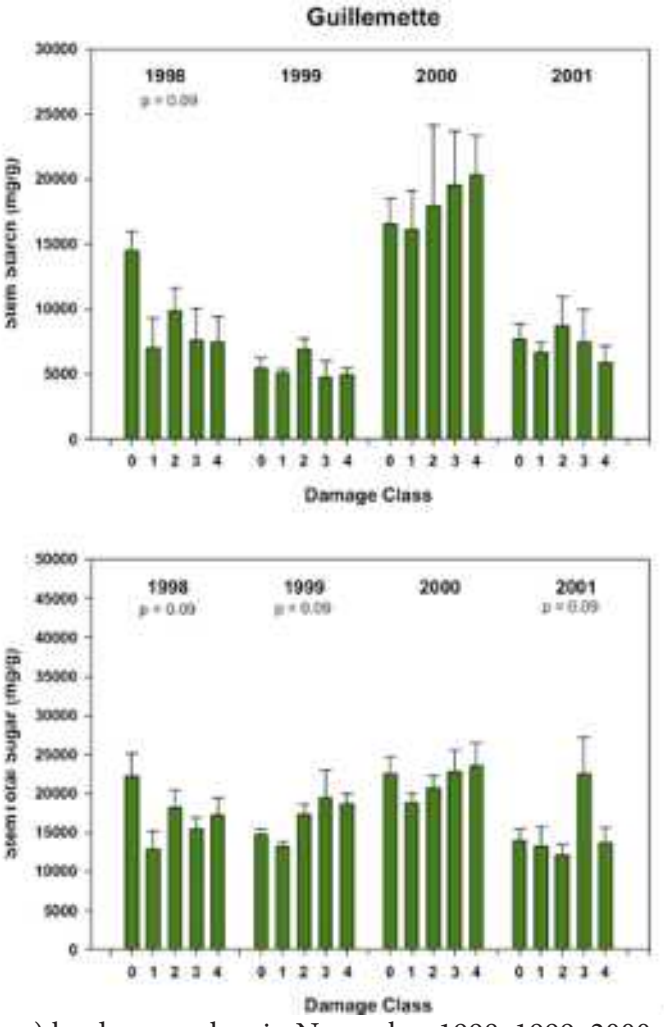


Figure 4. Carbohydrate (Root Starch, Stem Starch, Root Sugars, and Stem Sug
lemette sugarbush. Significance values are shown for any variable comparison



gars) by damage class in November 1998, 1999, 2000, and 2001, in the Guil-
n across damage class achieving an alpha level < 0.10.

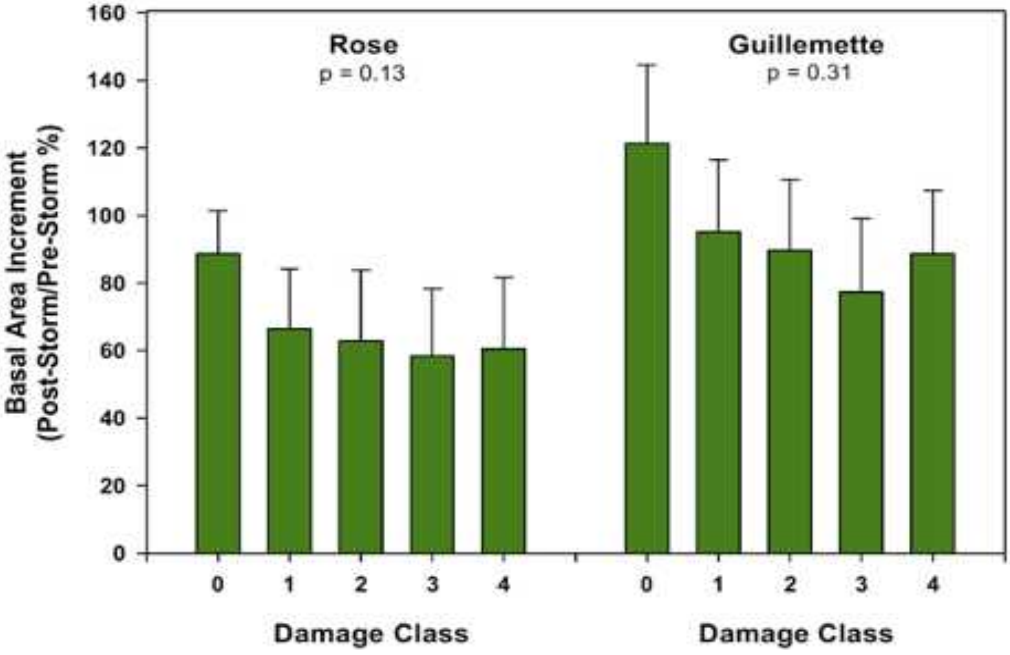
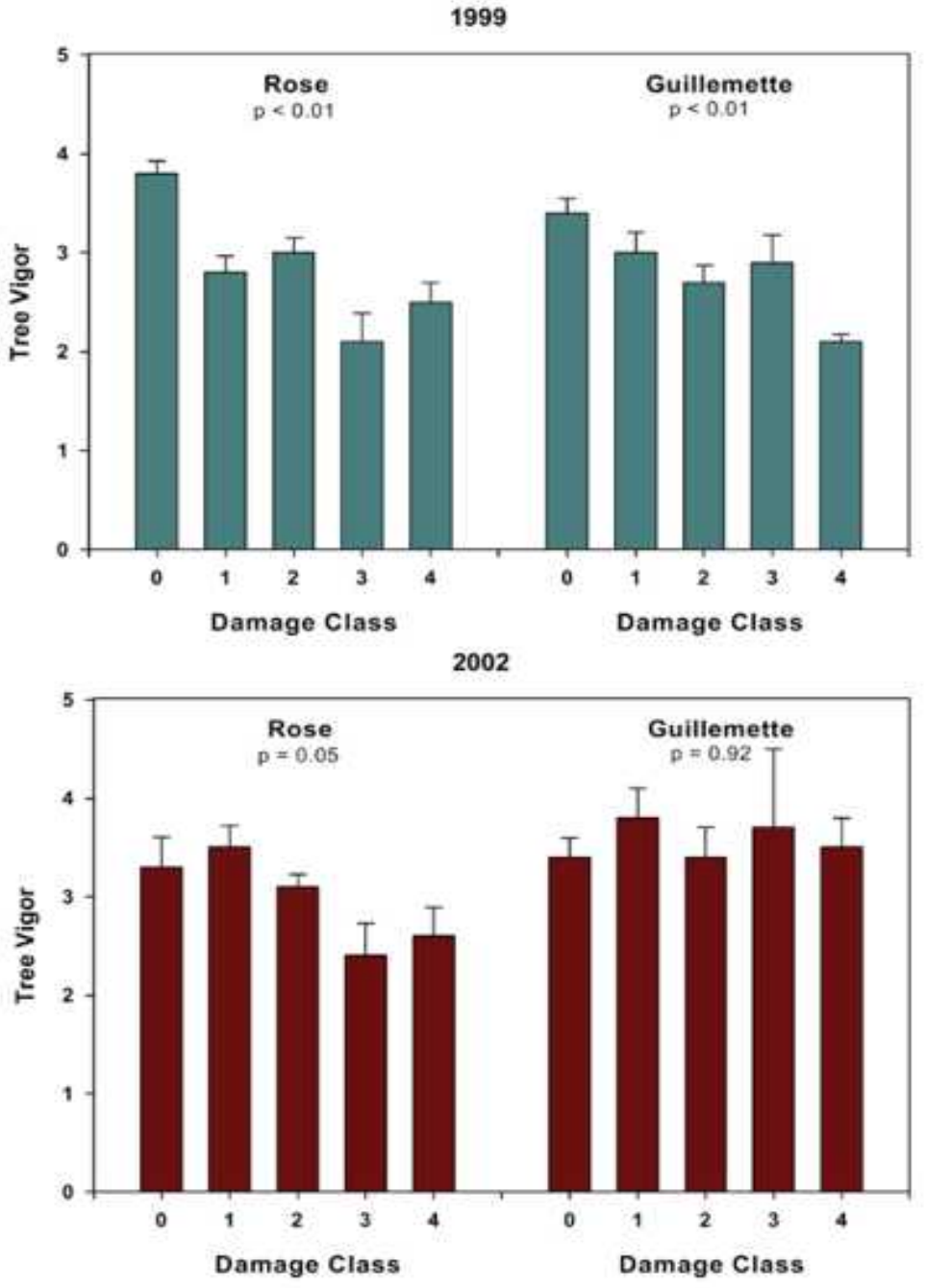


Figure 5. Radial stem growth expressed as post-ice storm basal area increment as a percentage of pre-ice storm basal area increment by damage class in two sugarbushes impacted by the January 1998 ice storm. Significance values are shown.

Figure 6. Vigor of trees by damage class in Vermont two sugarbushes two years (top) and five years (bottom) after the January 1998 ice storm. Significance values are shown. Figure 6. Vigor of trees by damage class in Vermont two sugarbushes two years (top) and five years (bottom) after the January 1998 ice storm. Significance values are shown. Figure 6. Vigor of trees by damage class in Vermont two sugarbushes two years (top) and five years (bottom) after the January 1998 ice storm. Significance values are shown. (page 35)


1999
Rose
p < 0.01
Guillemette
p < 0.01
Tree Vigor
0
1
2
3
4
5
Damage Class
2002
Rose
p = 0.05
Guillemette
p = 0.92

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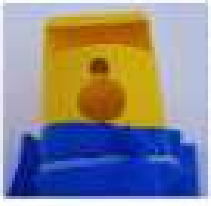

North American Maple Syrup Council 65th Annual Conference

October 21-24, 2024

Maine Maple Producers Association welcomes you to Portland, Maine

Maine Maple Producers Association welcomes you to join us for the 65th Annual North American Maple Syrup Conference. This will be located just inland from the beautiful coast of Portland, Maine at The Double Tree by Hilton. We are looking forward to seeing you all.

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Be Sure it's Maine Pure" Preliminary Schedule

Monday Oct. 21st, 2024

9:00am-4pm Vendor Set Up
9:00am Registration Set Up
9am-4pm Antique Room Display Set Up
TBD NAMSC Committee and Delegates Meetings as necessary
Noon Registration Open,Contest Entries- Syrup/Candy/Cream/Sugar/ Photo
Noon-4pm Silent Auction/ Auction Items Drop Off
3pm-6pm Informational Workshop/Round Table/Social/Cash Bar
Dinner on your own - 15 plus restaurants within 10 min.

Tuesday Oct 22nd.

6:30am- 8:30am Breakfast Buffet
8am-5pm Registration Table Open
Contest Entries- Syrup/Candy/Cream/Sugar/Photo
8am-6pm Trade Show
10am-4pm Antique Exhibit Room Open
Silent Auction Room Open/ Auction Items Drop Off
9am-3pm Companion Tour
9am-Noon Workshops- TBD
Noon-1pm Lunch-
1pm-3pm NAMSC Annual Meeting - Open to All
1pm-3pm Workshop-TBA
5pm-6pm Social/Tradeshow
6pm-9:30pm "Be Sure it's Maine Pure" Buffet, Music/Dance

Wednesday Oct. 23rd All Day Tours

6:30am- 8am Breakfast
7am - 8am Registration table/Syrup/Sugar/Candy/Cream
8am-Noon Morning Tours-Dunn Family Maple/Lone Pine Brewery/Merrifield Farm
1:30pm Afternoon Tours-Pineland Farms-Morgan Horse Farm /Sugarhouse/ Dairy barn
3:30pm Cumberland Fair Grounds- Farm Museum, Sawmill, Sugarhouse, Blacksmith Shop
3:30pm-8pm Social/Cash Bar, Dinner, Music, Head back to Hotel

Thursday Oct. 24th

6:30am- 8:30am Breakfast
8:00am- 3pm Trade Show
8am - 9am Entries last call Syrup/Sugar/Candy/Cream
9am-3pm Antique display
9am - 3pm Silent Auction Ends
9am - 4pm Technical Session-TBA
Noon-1pm Lunch
3pm Trade Show Break Down
5pm Social, Banquet Buffet, Award, Auction items

Friday Oct 25th and Saturday Oct 26 Grading School

NAMSC SEEKS EXECUTIVE DIRECTOR

The North American Maple Syrup Council (NAMSC) is excited announce an opportunity for a visionary and skilled leader to join our team as Executive Director. This critical role

offers a chance to work with NAMSC's members to shape the future of maple products and lead initiatives to improve and enhance our industry.

We are seeking candidates who have a genuine passion for agriculture and an ability to work well with a range of constituents to advance the interests of the Council and the broader maple producer community.The industry and NAMSC have made great strides in recent years, and the Council now seeks a permanent part-time Executive Director who can build on that momentum to lead NAMSC's continued success and growth.

Applications will be accepted until the position is filled, with those applications received by July 15 being given priority consideration. We hope to select a candidate in September to begin work in early October. To learn more about this opportunity and to apply, please visit NAMSC – North American Maple Syrup Council http://northamericanmaple.org

North American Maple Syrup Council, Inc. RESEARCH AND EDUCATION FUND REQUEST FOR MAPLE RESEARCH PROPOSALS

2024 Research Proposal Submission Guidelines

LOI Deadline: June 15, 2024
Proposal Deadline: September 1, 2024

The North American Maple Syrup Council, Inc. Research and Education Fund (NAMSC-RF) is pleased to announce a Request for Maple Research Proposals (RFP).

Qualified research institutions, state/provincial governmental research professionals and privately held research and development organizations (applicants) are encouraged to apply for funding consideration. Preference will be given to collaborative projects and those applicants documenting leveraged support from sources outside the NAMSC-RF.

To help ensure that proposals meet the requirements and interests of the Fund, we are asking applicants to
first submit Letters of Interest (LOIs). These should be no more than two pages, and should broadly
summarize the proposal the applicant intends to submit, including:

- Issues to be addressed and questions to be answered by the project.

• Qualifications of institution/principal investigators.
• Amount to be requested.

The NAMSC Research Committee will review the LOIs and communicate with applicants by July 15 to invite those selected to submit a full proposal.

1. The NAMSC-RF is soliciting and will be considering proposals which fall in one of two funding categories:
a. Traditional "seed funding" grants providing support up to $5,000 (with equal or greater institutional match).
b. Expanded grants of $10-35,000 (with equal or greater institutional match) in support of significant research projects.

2. The NAMSC-RF will consider proposals which address one or more of these industry related issues:
a. Sap & syrup production efficiency, alternative energy / sustainability / energy cost reduction for maple syrup production.
b. Sap, syrup and/or sugar production quality.
c. Methods and management of the sugarbush including: soil health, invasive species, maplediseases, and short/long term effects of chemical or other treatments.
d. Development of value-added products, or other projects designed to expand market opportunities for maple products.

3. Applicants are asked to submit requests to this RFP which clearly and concisely document:
a. Scope and duration of project (multiple-year projects will be considered, with interim reports
required)
b.Technical and scientific merit
c. Demonstrated need
d. In kind and partial support
e. Potential for continued support (if needed)
f. Application of research across industry
g. Outcome and best practice application
h. Collaboration
i. An adequately itemized, justified and documented budget (required)**.** Proposals requesting funds for specialized research equipment, supplies, hardware, software and the like will be given priority over proposals requesting funding for personnel, laboratory and technical assistants, or principal investigator stipends. Institutional overhead will not be covered by these grants. While the Research Committee understands the need for personnel
and institutional overhead, we have limited funding and request that applicants seek funds from other sources to provide for those expenditures. Overhead costs from other sources may
be used as matching funds.

4. The following criteria will be considered by the committee when reviewing proposals (no priority intended):
• Does the proposed project address the mission and objectives of the NAMSC?
• Does the proposed project have projected benefits which enhance the industry?
• Does the proposed project have projected benefits which exceed costs?

• Does the proposed project have support from the private sector?
• Does the proposed project demonstrate cost sharing for the research?
• Does the proposed project support equipment specific to this research (not basic 'cost of doing business' equipment)?
• Does the proposed project focus on targeted challenges facing the maple industry?
• Does the proposed project address gaps in support of production, food quality or safety, or packaging of maple products?
• Does the proposed project include innovation of pilot products or instrumentation in addressing research targets?
• Does the proposed project have industry support (includes equipment, packaging and process manufacturers)?
• Does the proposed project conform to standards and principles established for institutional research in both U.S. and Canada?
• Does the proposed project comply with federal, provincial and state environmental legislation?
• Does the proposed project enhance and support working relationships between research institutions, related agricultural or forestry business entities, or manufacturers of maple equipment, container and supplies?
• The proposed project should fund a minimum of direct income support.
• The proposed project should not constitute normal commercial expansion for private individuals.
• The proposed project should not include requests for funding of clerical or management costs.

5. Research Proposal submission format to include:
a. A narrative not to exceed five (5) type written pages (standard, double spaced, 12 point).
b. Literature citations are expected and will not count toward the page limit.
c. The accurate budget and justification may cover an additional two pages.
d. Submission of proposals in electronic format to khopkins@maine.edu on or before September 1st.

Researchers must be prepared to present their findings at the annual meeting of the NAMSC following completion of the project (held in October). NAMSC will reimburse up to $1,000 for travel expenses for each project to attend the meeting.

All applications will be reviewed by the NAMSC Research Committee, which, in turn, recommends their findings to the full council which makes the final decision on funding.

Final decisions for grant awards will be made by vote of the Delegates to the North American Maple Syrup Council, Inc. at its October annual meeting. Applicants approved for funding will be notified by December 1st. Prior to funding, grant recipients will be required to sign a General Agreement outlining-terms and conditions including, but not limited to, following standard research protocol in accordance with the civil jurisdiction of the NAMSC – RF, and a hold harmless / indemnity agreement between the grant recipient and

NAMSC.
Thank you for your interest in the maple syrup industry. If you have questions, please contact us.
Contact information:
Kathryn Hopkins, Chair
NAMSC Research Fund
PO Box 476
Norridgewock, ME 04957
Phone 207-634-3782
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Maple Syrup Taps, Yield, and Production – States and United States: 2022-2024

State	Acreage			Number of taps			Yield per tap			Production		
	2022	2023	2024 [1]	2022	2023	2024	2022	2023	2024	2022	2023	2024
	(acres)	(acres)	(acres)	(1,000 taps)	(1,000 taps)	(1,000 taps)	(gallons)	(gallons)	(gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)
Connecticut [1]	(NA)	(NA)	2,800	(NA)	(NA)	60	(NA)	(NA)	0.186	(NA)	(NA)	11
Indiana [1]	(NA)	(NA)	3,300	(NA)	(NA)	95	(NA)	(NA)	0.228	(NA)	(NA)	22
Maine	(NA)	(NA)	21,500	1,950	1,880	1,900	0.349	0.250	0.369	681	470	701
Massachusetts [1]	(NA)	(NA)	4,600	(NA)	(NA)	200	(NA)	(NA)	0.244	(NA)	(NA)	49
Michigan	(NA)	(NA)	11,300	640	620	650	0.336	0.330	0.308	215	205	200
Minnesota [1]	(NA)	(NA)	3,700	(NA)	(NA)	96	(NA)	(NA)	0.271	(NA)	(NA)	26
New Hampshire	(NA)	(NA)	11,200	560	490	520	0.308	0.303	0.286	172	148	149
New York	(NA)	(NA)	60,000	2,900	2,500	2,800	0.291	0.300	0.302	844	750	846
Ohio [1]	(NA)	(NA)	12,300	(NA)	(NA)	400	(NA)	(NA)	0.240	(NA)	(NA)	96
Pennsylvania	(NA)	(NA)	13,700	920	780	790	0.219	0.263	0.231	201	205	182
Vermont	(NA)	(NA)	141,000	8,500	8,100	8,400	0.384	0.322	0.370	3,264	2,608	3,108
West Virginia [1]	(NA)	(NA)	2,200	(NA)	(NA)	70	(NA)	(NA)	0.171	(NA)	(NA)	12
Wisconsin	(NA)	(NA)	31,100	1,270	1,120	1,140	0.481	0.408	0.402	611	457	458
United States	(NA)	(NA)	318,700	16,740	15,490	17,121	0.358	0.313	0.342	5,988	4,843	5,860

(NA) Not available.
[1] Estimates began in 2024.

Maple Syrup Price and Value – States and United States: 2022-2024

[Blank data cells indicate estimation period has not yet begun]

State	Average price per gallon			Value of production		
	2022	2023	2024 [1]	2022	2023	2024 [1]
	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Maine	34.90	31.50		23,767	14,805	
Michigan	37.10	42.80		7,977	8,774	
New Hampshire	52.20	50.30		8,978	7,444	
New York	37.50	35.40		31,650	26,550	
Pennsylvania	34.90	37.00		7,015	7,585	
Vermont	33.10	30.30		108,038	79,022	
Wisconsin	31.40	31.70		19,185	14,487	
United States	34.50	32.80		206,610	158,667	

[1] Price and value for 2024 will be published in *Crop Production* released June 2025.

Maple Syrup Sales by Type – States and United States: 2022 and 2023

State	Retail		Wholesale		Bulk		Value Added	
	2022	2023	2022	2023	2022	2023	2022	2023
	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)
Maine	32	32	80	67	567	354	2	17
Michigan	68	65	77	69	60	68	10	3
New Hampshire	57	34	85	80	24	27	6	7
New York	177	155	164	106	463	458	40	31
Pennsylvania	50	78	44	33	95	82	12	12
Vermont	302	221	250	125	2,675	2,209	37	53
Wisconsin	48	51	105	40	456	354	2	12
United States	734	636	805	520	4,340	3,552	109	135

Maple Syrup Retail and Wholesale Price – States and United States: 2022 and 2023

State	Retail		Wholesale	
	2022	2023	2022	2023
	(dollars per gallon)	(dollars per gallon)	(dollars per gallon)	(dollars per gallon)
Maine	63.00	69.80	39.60	41.90
Michigan	50.80	56.60	31.90	44.30
New Hampshire	59.60	64.90	54.90	53.70
New York	53.00	53.80	43.60	43.40
Pennsylvania	45.40	47.10	38.60	42.00
Vermont	54.00	57.10	37.30	40.80
Wisconsin	52.70	52.00	35.70	46.40
United States	53.60	55.70	40.00	44.40

Bulk Price – States and United States: 2022 and 2023

	Bulk all grades		Bulk all grades	
	2022	2023	2022	2023
	(dollars per pound)	(dollars per pound)	(dollars per gallon)	(dollars per gallon)
.....	2.96	2.37	32.60	26.10
.....	2.58	2.56	28.40	28.20
.....	2.33	1.97	25.70	21.70
.....	2.67	2.48	29.40	27.30
.....	2.51	2.30	27.70	25.30
.....	2.75	2.45	30.30	27.00
.....	2.56	2.46	28.20	27.10
.....	2.70	2.40	30.20	26.90

Grade – States and United States: 2022 and 2023

	Grade A		Processing Grade	
	2022	2023	2022	2023
	(gallons)	(gallons)	(gallons)	(gallons)
.....	630,791	413,136	48,209	39,864
.....	189,215	198,970	15,785	3,030
.....	152,720	137,052	13,280	3,948
.....	766,212	688,802	37,788	30,198
.....	175,014	176,016	13,986	16,984
.....	2,797,809	2,498,790	429,191	56,210
.....	572,460	436,100	36,540	8,900
.....	5,284,221	4,548,866	594,779	159,134

Maple Sap Sales and Price – States and United States: 2022 and 2023

State	Sap Sales		Sap Price	
	2022	2023	2022	2023
	(gallons)	(gallons)	(dollars per gallon)	(dollars per gallon)
Maine	(D)	(D)	(D)	(D)
Michigan	(D)	193,650	(D)	0.34
New Hampshire	60,000	260,000	0.27	0.28
New York	794,000	1,419,000	0.52	0.23
Pennsylvania	108,000	(D)	0.35	(D)
Vermont	4,634,000	8,447,000	0.90	0.31
Wisconsin	1,487,000	1,502,000	0.29	0.33
Other States [1]	104,000	172,000	1.55	0.22
United States	7,187,000	11,993,650	0.70	0.30

(D) Withheld to avoid disclosing data for individual operations.
[1] Includes data withheld above.

Crop Production (June 2024)
USDA, National Agricultural Statistics Service

2024 Crop Reports from NAMSC Members

Conneticut

The season started early. The producers who were ready in mid January did well. While the producer who tapped in mid February did not do as well.

The volume of sap came in a very short period of time. This made for a short season. The syrup on the average was quite dark with good flavor

Sales have been strong. While the producers who go to Farmers Markets are doing quite well.

Richard Norman

Indiana

As many have experienced this year, with the season being different,we in Indiana had the same experience.

We had one deep ,short freeze with the rest of the winter being mild. In the south producers started mid January. Which was a little early. They made 25-80 percent of a crop. One's on buckets and bag where the 25 percent.

In the mid to north of the state , some dipped below 25 percent with most about 80 percent. A few made a normal crop. Sugar content was lower this year across the state. On average about a half percent. This lead to darker syrup being made over last year. The flavor seems to be off a little also this year. Wondering if it is due to the warm weather,during the season.

We got together on May 11,to can syrup for the State fair. This is our largest fund raiser of the year. We have a building in the pioneer village area ,in which we sell out of. We can approximately 600 gallons. The day starts about 8:00 am and we are usually done around 1:30 pm. We also sell candy ,cream and sugar.

It is also a good way to educate the public about maple production and it 's uses. Even though production was down it was still a good year. We are looking forward to hopefully a better year in the future.

Dan Winger, Indiana.

Maine

Maine saw a very interesting 2024 season, or at least what we now know as a season. We saw syrup being made in very early January through the very end of April. Certainly, we saw some

breaks between runs of sap, but with this being said many producers experienced a 4-month season of producing syrup.

Our larger producers in the North and North West of the State certainly saw huge increase of production over last year. Smaller producers across the entire State overall had a good season, but certainly had to take notice that producers on buckets and gravity tubing saw the weather to be not conducive to good sap flow. One comment the entire State shared was lower than normal sugar contents. The State seems to have ample supply of syrup for the 2024 season, quality being great in all table grades.

As producers moved through the season more than 100 producers started to prepare for the 41 st Maine
Maple Sunday Weekend. Unfortunately, much of the State saw some of the worst weather conditions through the weekend that we had seen all winter, reducing crowds and attendees at many sugarhouses by 50% or more and causing some to close up completely. Many producers opened the following couple of weekends and made the best of it.

Some producers are also participating in Maine's Fall maple event over Columbus Day weekend (Indignance) not nearly as many producers participate in this event but it does seem to be gaining some popularity with consumers.

Our annual association meeting normally held in mid-January at the Maine State Agricultural Trade Show was also postponed this year by a couple weeks due to poor weather conditions.The meeting was very well attended by membership and the day included, talks and educational sessions, luncheon, business meeting, electio of officers and syrup contest.

To conclude the Association actives for the year and to current we have been very busy putting together a 1 st
class program for the NAMSC 65 th annual meeting in Portland, ME Oct. 21 st -24 th 2024, we look forward to being your hosts and can't wait to see you all.

Lyle Merrifield
MMPA President
NAMSC-Delegate
IMSI-Delegate

Massachusetts

Massachusetts sugarmakers experienced an early start to the sugar season with some catching the runs in January. Most were ready in February with many still tapping earlier than they "usually do." The early start gave a very optimistic beginning but with the warm spikes many ended early around mid-March. As always there were a few that reported above average season, but the majority reported about 75 – 80% of an average crop with sap at lower sugar content and produced darker grades.

Our March is Massachusetts Maple Month kickoff was held Friday, March 1st in Northfield with the reading of the proclamation from Governor Healey declaring March to be Maple Month in Massachusetts. Commissioner, Ash

ley Randle tapped the ceremonial first tree with host Milt Severance of Severance Maple Products. There were over 75 attendees including legislatures, Ma Dept. of Ag. Resources, Ma Office of Travel & Tourism, fellow maple producers, friends, and 22 FFA students from the local technical school.

Ma Maple continues to promote sugarhouse and sugarhouse restaurant visits throughout the season. There were four legislative sugarhouse visits this year to highlight Ma Maple syrup across the maple producing counties. Maple Weekend was held March 16th & 17th with over 30 sugarhouses celebrating, mostly reporting nice turnout and sales. It was noticed in some areas that attendance was down where there were St. Patrick's Day events and parades. For 2025 Maple Weekend will be March 8th & 9th.

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Our annual meeting in January gathered over 120 producers to collaborate, visit with vendors, get hydrometers tested, and attend a workshop on the Spotted Lantern Fly.

We operated our booth in the Massachusetts Building at the 17-day Eastern States Exposition again. This year we did not have a full-time booth manager and had "manager of the day" approach with our previous manager available to help part time. The entire membership pulled together and made it happen! The professionalism, collaboration and dedication to the association was impressive and a job well done!!! In addition to outreach and education about the Massachusetts maple industry, the profit from this fair provides us with funds for the coming year. The booth sells candy, cream, and syrup, as well as cream cones, maple cotton candy, and maple slushies, which have proven to be very popular.

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We continue to use Facebook to promote the industry, encourage sales through our member directory, and post articles featuring maple syrup as an ingredient, as a way of demonstrating our product's versatility and encouraging more use.

Melissa Leab, coordinator
Massachusetts Maple Producers Association

Minnesota

Minnesota is approximately 400 miles (640 KM) from its southern border with

Iowa to the northern border with both Ontario and Manitoba. Maple syrup is produced from border to border, south to north. Typically, our southern producers are three to four weeks ahead of our northern producers. Southern producers frequently wrap up their season before those in the north have experienced their first boil.

The 2024 season followed this pattern, but because of a mild winter and lack of snow cover, the season began five to six weeks earlier "than normal", whatever normal is any more. Producers throughout the state, especially in the southern part of the state saw sap runs in January. Those with taps set early enough, enjoyed a long and productive season. Those who tapped by the calendar and historical averages, most likely missed the early season sap runs. By mid-February, most of the state's producers in the southern half of the state were off and running, with the northern counties predictively following thereafter

Overall, Minnesota maple producers experienced 2024 production results substantially above the challenging 2023 season. Those reporting at the spring membership meeting generally reported 2024 to be at least an "average" season, with many fortunate enough to report above average seasons. Overall, Minnesota maple producers experienced 2024 production results substantially above the challenging 2023 season. Those reporting at the spring membership meeting generally reported 2024 to be at least an "average" season, with many fortunate enough to

to report above average seasons. Many experienced a one to two week March freeze-up before sap flows resumed. Syrup grades were predominantly and consistently Amber and several producers reported higher sugar content at, and above, 3% which compensated for reduced overall sap production. For the most part, Minnesota maple producers were smiling at the end of the season.

The MMSPA has steadily recovered from the Covid shut down of 2020 and 2021.The traditional spring and fall membership meeting attendance has steadilyrecovered and memberships continue to slowly climb. The Association again hasa one-day presence at the Minnesota State Fair. And last, but not least, 2023 wasa proud moment for Minnesota when two of our members were called to the podium at the fall convention at Sturbridge MA. MMSPA producer Dave Dahl's syrup won Best of Show in the maple syrup contest, and it was announced that one of our own was to be inducted into the International Maple Hall of Fame in 2024. Stu Peterson was inducted into the Maple Hall of Fame on May 11, 2024 in Croghan New York, joining former Minnesota inductees John Kroll and Carl Vogt.Minnesota proud!

Based on producer reports at our spring membership meeting in May, Minnesota experienced a "down" year, with some positive exceptions which directly correlated to localized freeze / thaw cycles. As expected, our producers on vacuum typically better than those on gravity. Producers generally

reported lower than typical sugar content, (2- 2.25%) throughout the season. Producers also reported a crop comprised of quality amber/rich grade with reduced golden/delicate and dark/robust this season. Some producers in the south experienced mid-season high temps in the 70's F (21 C) which resulted in poor sap quality and some off flavored syrup.

In summary, it was a challenging season with disappointing results for many, but not all! At the association level, in January the MMSPA board made a special one-time offer for members to participate in a group purchase of the new 3 rd edition of the North American Maple Syrup Producers' Manual at half price. We purchased and distributed 70 manuals at a cost to the member of $25 per manual. The difference was subsidized by the MMSPA. The promotion was well received and demonstrated tangible value to membership in the association. We also picked up 33 new members as the offer was promoted on social media sites as a benefit of MMSPA membership.

In the fall of 2022 and spring of 2023 we were finally able to resume post-Covid in-person member meetings. Our recent spring meeting included an in-depth educational presentation by Jim Adamski of Roth/CDL Wisconsin on "Maple Flavors- The Good, The Bad and the Ugly". Winning entries from our annual maple syrup contest were compared with "Off-Flavor" samples (sour, buddy, and metabolism). It was the first time many of our producers had the opportunity to actually sample and compare quality syrup with not-so-good syrup. We knew the program was a success when the universal response to the off flavor samples was: "YUK, Where is my water?" Many thanks to the University of VT and the IMSI Grading School for the off-flavor examples shared during the presentation.

The MMSPA has experienced significant turnover on its board of directors with several veterans stepping down to make room for new ideas, energy and talents. Many thanks to outgoing president Chris Ransom, outgoing secretary Shelly Carlson and director / NEWS editor Steve Saupe for their many-many years of service to the MMSPA. Welcome as new members of the board: Mike Hofer, Tim Woodrow and Ben Carlson. On the plus side, Steve Saupe will continue in his role as editor of the MN Maple NEWS.

New Brunswick

The maple syrup production for New Brunswick for 2024 was a very successful year.Possibly the best one ever. Most parts of the province experienced little to moderate snowfall this year. Much of the snow we got in the south would start as snow and then change to rain. We seem to get a lot more above freezing weather early this winter giving us very little snow cover, in the lower elevations, and a moderate amount higher up. Little to no frost in the ground was also experienced. Our bush is in the south and tapping started mid February with about 2 feet of snow cover. Usually, the north starts the season a week or two later than the south but

but this year with lesser amounts of snow the season started about the same time. Due to the rainy summer last year the trees did not make a lot of sugar, so this year's sugar content was much lower than the year before. Even though the sugar was low in the sap, there seemed to be lots of it.

In the southern region many producers started tapping around mid February. If you waited until the first of March, you may have only experienced a fair season. For those who were tapped early got a full season and more. Most kept boiling until mid April, and possibly running low, or out of wood. The syrup grades this season were mostly Amber to Dark, with some Golden. Many producers went long enough to make some very strong flavoured, Very Dark syrup.

In the north the season started a lot earlier than usual. Many of the producers who were ready started early March and produced well into late April. Many saw the best season ever giving an average of 5.3 pounds per tap. Some producers set a production record and got just over 7 pounds per tap. The quality of the syrup varied from all grades, Golden to Very dark being made to very little off flavours.

Prices seem to be stable and not much higher than last year, however carbon taxes and the costs of doing business are affecting pricing more at the retail level as the bulk pricing is controlled more by the Quebec Federation. Most of the province's syrup is shipped out in bulk-with some being value added each year. Most syrup made in the south is value added while the north experiences more bulk sales.

David Briggs
Delegate Province of New Brunswick

New York

New York maple producers are pleased to report that their season, as usual, ended leaving some very well satisfied and others, not so much. If you were ready early in January and prepared for the season by watching weather patterns and some knowledge of recent climatic history rather than practicing tapping dates entirely by the calendar, you lucked out. Most areas of the State, especially those above the I-90 corridor and high elevation produced near record crops. Those to the south and especially those who waited until end of February, early March,to tap basically missed the crop. For most of those with success, the season was short (four weeks) but with copious amount of average to slightly below average Brix sap. Quality across the board was excellent with a shortage of darker grades being made. End of season sap/syrup proved challenging for many with sap spoiling quickly before it could be processed. Ropey syrup reports and difficulty filtering seemed to be the norm long before sap turned buddy. Late February high temperatures created nightmarish problems for many in the more southern and lower elevation areas. Those producers in the Adirondacks and higher Catskill Mountains enjoyed 6-8 week seasons similar to northern areas of the US and Canada.

Markets remain strong and continue to increase as consumers participated in the 29 th MapleWeekend. Uncharacteristically, most of the 170 sugarhouses open for the two weekends following St Patrick's Day, found themselves boiling just water, long after their season had ended. Across the State there seems to be an ample supply of excellent syrup available for retail and wholesale markets. Prices generally remain consistent with last year. Issues of concern among our maple producers include supply chain and delivery delays of packaging containers, timely return of wholesale drums prior to the start of the current season, availability of new food grade stainless steel packaging, and a growing concern (globally) of used non-food grade stainless steel drums or the knowledge/assurance of what those containers held prior to their use for syrup.

New York State Maple Producers will again host their midwinter Maple Conference and radeshow at the same venue as lastyear (Syracuse OnCenter) 10-11 January, 2025.

Eric Randall, NYSMPA Delegate

Ohio

If you are a maple syrup producer, how do you describe the 2024 maple season in one word. Early, different, weird, disappointing, average, surprising, long, short, exhausting, and the list goes on with some words that cannot be printed here. Many producers experienced the earliest start in the history of their sugarbush. This was followed by the earliest shutdown in the history of their sugarbush. Early tappers (NEW YEAR'S Day) were the fortunate ones, producing three quarters to a full season crop. There were some hardcore traditional Sugar makers that like to go by the calendar and for them it was two weeks and out. Others tapped in December and were still boiling in April, (obviously not Ohio, we were done on March 3rd.) The consensus on the 2024 season was we have never seen anything like it, and never want to see anything like it again.

From a metrological viewpoint this was as close to a record winter as you can get. Records were not set but December was the third warmest. January was average except for the lack of snowfall. You need snowfall to keep moisture in the ground and sap flowing out of the trees. February was one of the warmest on record. This was all predicted in NOAA's three month forecast. If you are a maple producer it was clear, you were warned. Waiting until the first week of February to tap was not a good move but it was better than waiting until Presidents Day (hardcore tactic). Even though January had an extensive cold period, those that tapped

in early January were ready when the big runs came at the end of month and into February. These were big runs with record amounts of sap. This gave the early birds a running start at an average to above average season. The downside of all was low sugar content in the sap. Despite getting record volumes of sap producers also got record conversion ratios, all on the high side. Sixty and even 80 to one were not uncommon. At the Maple Festival contest. The overall grade color was darker than last year and maybe darker than average. Flavor was decent and was representative of the color. In a year like this with an abundance of warm weather you would expect some off-flavor syrup in the contest but that was not case.

In the end what have we learn? We added one more year to the string of abnormally warm maple seasons that we have experienced over the last 5 years. For Ohio Producers tapped in January, many experienced a near normal season. They made some very good syrup that did not have quality issues. Their markets are covered. This also means that in 2025 when New Years Day rolls around they will be ready to tap trees. For many Ohio Producers taping late, this year will be a hard lesson. Those that tapped after Mid- February found out that you cannot trust Mother Nature, because she does not read the Calendar.

Les Ober, OSU Extension Educator in Geauga County, Ohio.

Ontario

Well the 2024 season came upon us early and left most of us the dilemma of when to tap according to the early weather or wait till the more traditional calendar dates. A late cold spell with accompanying snow the end of March early April extended the season resulting in overall at least an average or above average crop being reported throughout the province. As always some producers reported records while others had disappointing results but overall it was slightly better than an average year. A significant change from last year was that our Northern producers also reported above average yields after last year's extremely poor results. Again those that utilized technology (vacuum and monitoring) reported much higher yields. Sap sugar content was reported above 2.3 early in the season and remained fairly consistent around 2.0 until very late in the season. All grades of syrup were produced with Amber being the most produced. The challenge our producers face even with increasing taps going into provincial production Ontario cannot met its own consumer demand creating both a supply issue and an opportunity for expansion within ourprovince.

Brian Bainborough, Ontario
NAMSC President

Pennsylvania

Pennsylvania's Maple Syrup season started about the same time that we were all setting up or at the Pennsylvania Farm Show in early January. Some producers in Somerset County have told me that they started before that. Those producers that started their season by looking at the weather to determine when to tap, had pretty good yields. Those producers that started based on a date, didn't seem to fare so well. I heard of one producer outside of Erie that was still making syrup 9 weeks after he had tapped. I have been told that we are still making a lot of lighter syrup but not as much as last year. The most used term to describe this past Maple Syrup season in Pennsylvania has been "weird". There will always be the producer that just has a bad year and the sugar maker that just has it figured out.

The typical producer, had a typical year, it just happened a little earlier than is typical. Isn't that becoming more ...

Sales of Syrup is "maintaining". I haven't heard of any producers complaining that the syrup is sitting on shelves collecting dust but I also haven't heard of any producers bragging that they can't get enough syrup. I hear a lot of my customers commenting that they don't have as much money in the pocketbook as they did have but they are saying those words as they are buying a quart of the best syrup that money can buy (that's my syrup by the way). Here in PA at least, on average, we are doing pretty good.

All of us in PA hope that you all have an exceptional season next year, and that our season is a little better than yours.

Matt Fisher, Pennsylvania

Vermont

It is challenging to succinctly answer the frequent question “how was the season?” on behalf of Vermont’s sugar makers without lots of caveats. In 2024, the short answer is, “Pretty great, but it really depends.” In general, sugar makers are reporting a very good crop year across the state. Great news! During the pandemic, pure maple syrup sales increased rather significantly - more folks were cooking at home and reaching for comfort foods like maple as a kitchen staple. A good production year allows Vermont to meet the demand and work to stay on a growth trajectory.

We keep up with many of our members during the season and also plug into the Vermont Maple Bulletin, penned online by Mark Isselhardt, UVM Extension’s Maple Specialist, who checks in with a variety of producers around the state throughout the year. This year, the Association reached out directly to hear from members to enhance how we tell their stories to the media, the Board, and state and federal legislators

Per our survey responses, many sugar makers reported crops that were well above average (top 1 or 2 crop years); by the same token, some are reporting

a less than average year. I spoke to a sugar. maker in mid-April who brought in 50% of an average crop. Much of that is due to the location, temperature and micro climate of individual sugarbushes.

- One operation reported their first boil on December 11th and their last boil on April 9th. The average first boil was mid-February for producers who responded to our survey and the average last boil was early April.
- Overall, just over 70% reported having an average or above average crop yield with just over 25% of producers reported having a record breaking year (or in the top one or two of production years). In contrast, just under 30% reported having a less than average year.
- Producers shared a variety of stories where we saw some trends across the state:
  - Significant wind damage this year that affected yield as impacted producers were busy repairing lines at times they would have been collecting sap.
  - Uncertainty about the weather; while this is a seasonal story each year, this year Vermont experienced some warm spells, some late snow, lots of wind and everything in between.
  - Producers who implemented technology and equipment upgrades like vacuum systems, vacuum monitoring systems, increased reverse osmosis capacity, and new evaporators reported having good years and really appreciating the value of the upgrades.
  - Warmer weather for several days at a time during the season meant some sap spoilage for those who didn't have enough storage to keep it cool before boiling during large sap flows.

One producer summed up the season quite succinctly, "location, location, location". While overall we expect Vermont's production numbers to show that 2024 was a strong crop year, individual producer stories depend, in part, on the location and topography of their sugarbush - high elevation? on a slope? what direction is the slope facing? near the lake? southern or northern Vermont? These and many other questions offer up different stories of the season, even in our small state. In contrast to 2023, producers with cooler sugarbushes often fared well this year and those with warmer sugarbushes fared less well.

Climate change has been shifting the maple season earlier in the year; one expert noted that the season has shifted by a month or more since the late-1800s in Vermont. And in general, the maple season here is getting compressed. Much of the technology and innovation in maple production can have positive impacts on tree health, operational efficiency, food safety and overall crop yield. In addition, it has helped producers mitigate the effects of climate change in their operations and allowed them to reduce inputs like labor and fuel related to maple production.

Maple is similar to other businesses in that the costs associated with producing maple have increased, significantly in some areas, and the price of bulk or retail syrup has not risen at the same pace. Producers are feeling the squeeze as they consider upgrades or

expansion and reviewing funding and loan options, especially given current and projected interest rates. According to Farm Credit East's 2024 Maple Industry Outlook, "when adjusted for inflation, the "real price" received for syrup has been declining over recent years. U.S. maple prices have not increased enough to compensate for inflation and maple producers are forced to operate with less revenue and tighter margins."

All of these topics will continue to be at the forefront of VMSMA's work with producers and industry partners over the coming year with an eye toward climate change, quality and food safety, forest health, operational best practices informed by existing and ongoing research.

Allison Hope, VMSMA Executive Director

West Virginia

The 2024 maple season again presented challenges for many producers in West Virginia. For some areas of the state, the temperatures and conditions were more favorable than the last two years while others struggled. While this winter would not be considered normal, it was colder than the prior two years but there was a lack of snowfall again. Many areas in the state saw snowfall twenty to thirty times, but most of these were a light dusting to two inches or less. The lack of snowfall was replaced by an abundance of rain from December through March.

While there was no ideal time to tap this year, it seemed tapping the third week in January during the bitter cold temperatures and wind chills provided the best production for producers in West Virginia and Virginia. After this deep freeze up for over a week, conditions then turned favorable for many producers for the next four to six weeks and provided lots of sap. Tapping earlier in the season did not seem to provide much benefit and producers that missed the huge run after this deep freeze were also at a disadvantage.

The statewide average for most producers was below average, especially for producers in the warmer areas of the state. Producers in the moderate climates or colder areas along with producers in Highland County, Virginia reported an average to above average crop. The abundance of rain contributed to the worst sugar content for most of the state in the last 20 years. This seemed to be a common theme for most of the maple producers in the US. The lack of sun during prior growing season also contributed to the low sugar content, but with many freezing nights and thawing days, the trees produced lots of sap. One producer on vacuum in Preston County reported his sugar content average for the entire season was 0.7 brix.

In conclusion, 2024 won't be remembered as a record crop, but overall it was better than the 2023 season. With some producers having an average or above average season, other producers in warmer climates only made twenty-five to fifty percent crop. The climate

continues to present huge challenges most years for producers in the warmer areas with low elevation. Once again vacuum was a huge benefit to most as producers on gravity or buckets experienced very low production. As we get into summer and look forward to the 2025 season, we can hope and pray for a lot more sunshine as the growing season has already presented us with many days of clouds and rain.

Brandon Daniels, West Virginia

Wisconsin

The 2024 Wisconsin maple syrup season will be remembered for years to come. The winter in Wisconsin was very mild with little to no snow or rain. This was the first year that I can ever remember tapping trees with uninsulated work boots and no snowshoes. The mild weather started the clock ticking on the maple trees going from dormancy heading toward bud break. In central Wisconsin, the trees in Mid-February looked like it was the second week of April with buds appearing very early in the production season. The mild weather was accelerated at the end of January with very warm temperatures that started the season for many producers. The producers that tapped early started production from the last week of January to the first week of February. The early start of the season caught most producers off guard. Some producers were in complete disbelief and continued to put off tapping for several weeks saying that it was just too early to be tapping. The temperatures were 15 to 20 degrees above average for the majority of February and the first 2 weeks of March. The early start of the season was extremely unusual and the fact that the sugar content of the sap the last week of January was 2.5 brix coming out of a high vacuum tubing system.

The southern third of the state had a particularly good crop. Warmer weather conditions thawed the ground and started the season off very quickly. Production in this area of the state was good for most producers with the majority of the crop being produced in February. Large runs allowed producers to make a lot of syrup in a noticeably short time. The syrup quality was excellent with most of the syrup being in the Golden and Amber category. Production in the southern third of the state concluded for most producers by the second week of March.

The central part of the state made about 85% of a crop if they we in on the late January and early February runs. The production season started the last week of January for most producers in this area. Sugar content was good as well with brix readings around 2.5 for 75% of the season. Syrup quality was good in February with most of the syrup made in the Golden category. The first week of March most producers syrup color dropped from Golden to Dark in the matter of 1 day. The color fell off and did not come back until the crop went off flavor. 75% of the syrup that was made was in the Golen or Amber color category. The season across central Wisconsin ended the second week of March for most producers.

The northern third of the state started the same time as central Wisconsin. Producers in northern Wisconsin were caught off guard because of the early start. Unfortunately, the cool weather that came to Wisconsin the 3rd week of March was too little too late to help extend the maple season. The northern section of the state made the majority of their syrup in early March with the season concluding by the third week of March.

The Wisconsin Maple Syrup Producers Association has a very busy schedule with activities throughout the calendar year. The Wisconsin Maple Syrup Producers Winter Institute and Trade Show was held January 5th and 6th in Marshfield, Wisconsin. The event included clinics and Mark Isselhardt from UVM as a guest speaker on Friday evening and Saturday.

The next stop for the Wisconsin Association was the Roth Sugar Bush open house which was February 7th through the 10th in Cadott, Wisconsin.

The Association had its annual first tree tapping at Glenna Farms in Amery, Wisconsin, March 16th, 2024. The Association participated in the maple weekend at the Wisconsin Farm Discovery Center March 30th in Manitowoc, Wisconsin. The Association attended the PhelpsMaple Festival April 6th to promote the Association and the benefits of being a member.

The Wisconsin Association will have its annual meeting May 4th at Hotel Marshfield. This event will be the annual business meeting and syrup judging for the Wisconsin Association.
The Wisconsin Association will be at the Wisconsin State Fair August 1st through the 11th selling Wisconsin maple products and promoting the maple industry at the State Fair in West Allis, Wisconsin.

Jim Adamski, Wisconsin Maple Syrup Producers Association

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2024 NAMSC Maple Syrup Conference in Portland, Maine Oct.21-24, 2024 Watch www.mainemapleproducers.com for more information as it becomes available!!!!

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