Minnesota Maple News

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Minnesota's First Maple Syrup Researcher

Matthew M. Thomas

Maple syrup researchers can be found at universities and government facilities in nearly all the states and provinces that produce maple syrup. In Minnesota, the first maple researcher came from a different background, namely his backyard. As a self-described hobbyist, Leroy Vincent "Rex" Alwin was neither a professor with a Ph.D. or working on behalf of a commercial equipment manufacturer. Instead, he was a man with a curious and creative mind that wanted to understand and improve on every detail of the maple syrup making process (Fig 1).

Born in Minneapolis in 1931, Rex Alwin was a life-long resident of Mound, Minnesota. After graduating from the University of Minnesota in 1958 with a mechanical engineering degree, he soon began work as an engineer

with Honeywell. Fresh out of college with a mind of an engineer looking for problems to solve, he promptly went to work updating and expanding the maple syrup operation on the family farm near Lake Langdon. Starting with the 1959 season, Alwin replaced the 60 pails used by his grandfather with 300 taps on 7000 feet of 3M's new and innovative Mapleflo flexible plastic tubing. In addition, he hung 200 of the G.H. Soule Company's King plastic vinyl sap bags. It is not known for sure, but it is likely that Alwin was the first Minnesota syrup maker to use plastic tubing. In the first couple of seasons Alwin produced around 30 gallons of syrup. As syrup makers are wont do. he expanded operation to 430 trees on tubing in 1963, adding vacuum to the

tubing lines and using an automated pump to draw sap from the collection tank to the sugar house. That year he collected 5000 gallons of sap and made 130 gallons of syrup (Fig 2).

Right out of the gate for the 1959 season, he designed and manufactured his own evaporator and arch modeled on commercial evaporators available at the time. It consisted of a pair of identical wood-fired evaporators, each 45 inches wide and 12 feet long, set back to back with a shared single chimney stack. The evaporators were covered with steam hoods and built with drop flues on the back pans and baffled front syrup pans. At the time, Alwin's sugarbush was arguably the most sophisticated operation in the state of Minnesota.



Figure 1. Rex Alwin enjoying pancakes and maple syrup on his collection tank in front of his Maple Wood Farm sugarhouse. Photo originally appeared in Alwin's 1960 research report titled "Report No. 1: The Sugar Wood Farm Maple Products Activity".

Alwin named his operation "Sugar Wood Farm" and set up his sugarhouse in a converted chicken coop. With barn red paint, white trim, and a row of windows, the quaint building later caught the eye of popular outdoor artist Terry Redlin. Redlin made two paintings of the Sugar Wood Farm sugarhouse, both of which can be seen at the Redlin Art Center in Watertown, SD (Fig 3).

In 1960 Alwin published a report on activities and innovation he had installed at his Sugar Wood Farm. He sent out 15 copies to various libraries, researchers, and equipment company leaders in the maple syrup industry at that time. He was in contact with such notable names as G.H. Grimm, Leader Evaporator, A.C. Lamb & Sons, 3M, the Vermont Evaporator Company, C.O. Willits at USDA, James Marvin at the University of Vermont, Putnam Robbins at the University of Michigan, and Robert Morrow at Cornell University. As this report showed, Alwin was unique in his independent approach to experimenting in his sugarbush, outside of the usual university or government funded research programs. Although his operation was relatively small in scale, his questions and attention to rigorous investigation and detail were as sophisticated as any of the large maple research studies.

Confident in his approach and results, Alwin made recommendations based on his experiences and experiments that showed a clear understanding of the best ways forward for the improved use of the not yet proven plastic tubing. Alwin recognized the importance of drop lines, elevated laterals and main lines, in a closed unvented system, as well as the value of adding vacuum to the tubing system. His report included a description and drawing of a die-cast zinc spile of his own design to go with the tubing and his own calculations for optimal baffle configuration and sap depths in the syrup pan for improved continuous flow of sap to syrup. Rex's experiments continued in 1971 with the use of an early reverse osmosis (R.O.) system for concentrating sap, reporting on the results of his R.O. tests later that year at the 8th Conference of Maple Products in Boynton, Michigan.

In addition to his research and experimental contributions to the maple industry, Alwin was one of the earliest Minnesotans to take a leadership role in the North American maple syrup industry. As president of the Minnesota Maple Syrup Producers Association,

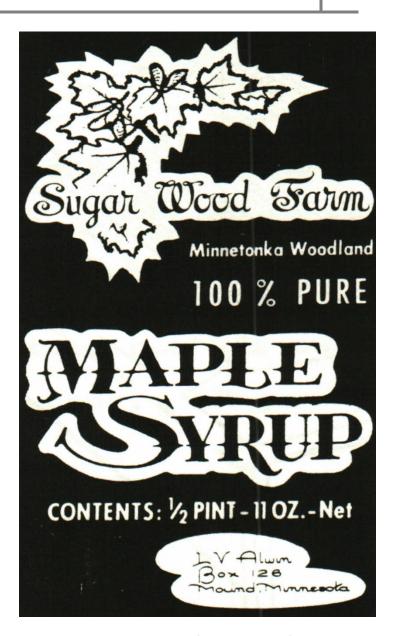


Figure 2. Maple syrup label from Rex Alwin's Maple Wood Farm sugarbush. (Note: 11 oz refers to the syrup weight)

combined with his attending the national meeting in Michigan in 1971, he was persuaded to join the Board of Directors of the North American Maple Syrup Council (NAMSC). He then accepted nomination to become the Vice-Chairman of NAMSC in 1973. Following his two years as Vice-Chairman, in 1975 he began a two-year role as the chairman of NAMSC, a role never before filled by a representative from Minnesota. Rex continued to make maple syrup for many more years serving as a leader in the Minnesota maple syrup community before retiring from syrup making. Rex Alwin passed away in Minnetrista. Minnesota in 2014.



Figure 3. Terry Redlin painting of Rex Alwin sugarhouse titled "Spring Mapling". Used with permission of the Redlin Art Center.

Originally from St. Cloud, Dr. Matthew M. Thomas is a historian of the maple industry who shares his research and writing at the website www.maplesyruphistory.com. He is the author of the recent book "A Sugarbush Like None Other: Adirondack Maple Syrup and the Horse Shoe Forestry Company", available for sale on eBay and the book Maple King: The Making of a Maple Syrup Empire, available on Amazon.com. He can be reached at maplesyruphistory@gmail.com.

Some Websites of Interest – recommended by Maple Digest

- Coronavirus Food Assistance Program 2 https://www.farmers.gov/cfap
- University of Vermont Extension's Maple Workshops https://www.uvm.edu/extension/agriculture/maple
- <u>Creating Virtual Farm and Food Experiences</u> <u>https://uvmextension.zoom.us/webinar/register/WN_w-16ssXoTd2QPmtkQAloRw</u>
- Agritourism during COVID https://smallfarms.cornell.edu/resources/farm-resilience/best-management-practices-for-agritourism-covid/
- Educational handouts for your sugarhouse https://nysmaple.com/educational-resources/
- Online library of maple resources <u>mapleresearch.org</u>
- Consumer interest in premium ingredients is growing https://www.cnbc.com/2020/11/12/shoppers-turn-toward-premium-foods-instead-of-staples-amid-covid-rise.html
- Maple Syrup Digest http://www.mapledigest.org/

Updating our Logo – Help us choose!





#2



Over the last several months your board of directors has been working with a graphic artist to update the MMSPA logo. From approximately 30 variations, the board reviewed and adjusted the possibilities, narrowing the field down to three finalists. We now invite MMSPA members to go online and express your preference.

Single MMSPA memberships may vote once, twoperson memberships may both vote, but will need to log in separately under each member's name.

Step 1. Log on to the following link:

https://mnmaple.org/logo-selection

Step 2. Enter member name.

Step 3. Click to select your preferred logo.

Step 4. Answer the following question either YES or NO:

Would you like to see the tag line "Home of Superior Sweetness" included as a part of the logo and wrapped just under the circle?

The logo voting will conclude on Monday, February 15, 2021 and the new official logo will be announced in the next issue of the MMSPA NEWS.

Don't delay. Vote today!

President's Message

Chris Ransom, MMSPA President

Hello all!

I hope you are all weathering the current state of the world, nation and our state. It's been trying, to be sure, but we all learn to adapt and to innovate and to pivot when times change. None of us, I am sure, is sitting back saying "oh well" and resting in the armchair waiting for the bell to ring so we can go outside. We get up and do what needs to be done — for our families, for our livelihoods, for our communities and for our maple! One of these adaptations is the use of remote communication via ZOOM or WebEx or other application. None of us a year ago would have even imagined relying on this technology for things as simple as saying hello to friends and family or conducting business. I should have bought their stock.

One pivot/adaptation you will see in this newsletter is an invite to participate in the Michigan annual winter meeting via a web application. They have speakers and technical sessions and fun times planned for all. I encourage you to attend if you can to help you stay engaged and sharp in your craft. They are also planning some weekly webinars throughout the winter.

We hope (hope) we will be able to meet in person for our Spring meeting, but we are trying to find ways to keep you all in the forefront of the Minnesota Maple Experience. We, as a board, will be considering ways to emulate the Michigan program in lieu of our annual meeting but as of now we are not sure how to do that. I, personally, would welcome any suggestions or ideas on how to pull that off.

Also, our MMPSA logo was designed about 15-20 years ago, we cannot find the original artwork, and we've been making copies of copies — it's time to freshen it up. Stu Peterson led the charge and the board has been bouncing new design ideas off one another all summer. We think we have it narrowed down to a manageable three versions for your consideration. See the previous page (p 4) for voting instructions to help us decide what our new logo should look like.

In the meantime, take care and have a blessed Holiday Season. I miss you all and think of you often.





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Maple News

Norway Maple are Weeds

Though beautiful street trees, Norway maples can be weeds in our forests. For more information, check out this interesting article about the "Weed of the Month" at https://www.morningaqclips.com/ november-weed-of-the-month-norway-maple/.

Sweeteners and Health

An interesting paper has been published by *Ipsos* that outlines the context and challenges around reducing sugar consumption. It also provides a framework for intervention. For more information, visit: https://www.ipsos.com/sites/default/files/ct/news/documents/2017-11/ipsos-sugar-what-next-full-report.pdf

Michigan Maple Association Winter Meeting – January 23, 2021; 8:45am - 4:30pm

The Michigan Maple Association Winter Meeting will be virtual this year. The presenters and times are:

9 AM – Farm Estate Planning – Jared Schmidt (Farm Financial Inc.)

10:15 AM - Specialty Crop Lending: Understanding the process - Andy Larson

11:30 AM - Small RO systems: The good and the bad of DIY - Chris Evans & Jesse Randall

1 PM - Sugarbush Management - Adam Wild (Cornell University)

2:15 PM – Invert sugar levels – Eileen Downs (Merle Maple)

3:30 PM – **Organic Certification: What is it all about!** – *Eric Pawloski* (Ohio Ecological Food & Farm Association)

For more information and to preregister, contact the MSU Forest Biomass Innovation Center. Their website is: https://www.canr.msu.edu/fbic/.



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*Given the cancellation of the 2020 Annual Meeting, the directors up for election accepted extensions of their terms to serve through 2021



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