

# Maple Mainline

## Vermont Maple Conferences January 11, 18, 25, 2014

The University of Vermont Extension, Addison County Maple Sugarmakers Association and Vermont Maple Sugar Makers' Association are pleased to offer the 11th annual Vermont Maple Conferences on Saturday January 11th, 18th and 25th, 2014. The conferences are educational meetings held for the purpose of bringing the latest information and research findings about forest management, sap collection, syrup production, quality control, and marketing to sugarmakers in Vermont and surrounding regions. These all day meetings, which are designed to provide education for maple producers of all levels of skill and experience, are open to the public. Classes are taught by scientists, natural resource professionals and sugarmakers from around the state. Meetings also feature a trade show with vendors displaying maple related equipment and a lunch with a maple theme. These meetings are widely perceived to be among the best educational opportunities for sugarmakers in the US and Canada.

### *Please Note:*

The enclosed registration form has two parts. Please fill out the appropriate half, depending on whether you wish to attend the Jan. 11<sup>th</sup> meeting, or either the Jan. 18<sup>nd</sup> or 25<sup>th</sup> meetings. Note that the meeting day schedules are different, that the checks are made out to different organizations, and the forms are sent to different addresses. Attendees have the option to register and pay online for the Bellows Falls and Hyde Park Conferences at <http://vermontmaple.org/vermont-maple-conferences/>. There is also a discount for VMSMA members at those two conferences.

**Registration tables** will be set up from 7:00am (Middlebury) or 7:30am (Hyde Park and Bellows Falls) through noontime, with coffee & donuts &/or pastries. The trade show will also be open at that time.



### **Sat., Jan. 11, Middlebury Union H.S., Middlebury**

Location: off US Rt. 7 just south of the village. Lunch will feature roast pork with all the fixings

### **Sat., Jan. 18, Bellows Falls Union High School**

Location: off US Rt. 5, just south of Bellows Falls. Lunch will feature maple cured baked ham with all the fixings.

### **Sat., Jan 25, Lamoille Union High School, Hyde Park**

Location: West side entrance to Lamoille Union High School, US Rt. 15 in Hyde Park. Lunch will be catered by the Culinary Arts program and will feature Maple Bourbon Roast Pork with all the fixings.

**Pre-Registrations** must be **postmarked** by: December 27 (Middlebury) or January 7 (B.F. and H.P.). Thank You! Registrations postmarked *by these dates* will be assured of a meal, if selected and paid for. Lunch for walk-ins or registrations postmarked *after these dates* will be served on a first come, first served basis. Please help us by registering early.

**Special needs:** If you require an accommodation to participate in this program, please notify Mary Croft at 802-763-7435 for the BF or HP meetings, or Moe Rheume at 802-352-4556 for the Middlebury meeting.

**Please Note:** All conference sites are on school property. A strict **NO SMOKING** policy must be followed.

You are welcome to attend all of the various meetings. We have developed a very inclusive agenda, with classes for all levels. We sincerely hope this program will be beneficial to you and your maple operation. **A drop box for conference evaluations will be provided as you exit.**



University of Vermont Extension, 617 Comstock Rd, Suite 5

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## A Message From Matt Gordon

Another season is coming right up, seemingly fast on the heels of what was a hugely productive 2013. Maple syrup production continues to grow in Vermont and elsewhere, and it is important that producers be kept informed of the latest maple research and developments. With this in mind, we hope you can attend one (or more) of these maple conferences. Two of these conferences are a joint effort, with Tim Wilmot of UVM Extension planning most of the classes, and with the VMSMA handling the logistics. The third conference is put on by the Addison County Maple Sugarmakers Association. The schedule is full of great seminars on all aspects of maple production, on woods management, as well as information that will help you plan your maple business for the future.

Considering the scale of the 2013 crop and that production is up everywhere, VMSMA is putting more resources into our marketing and promotion—seeking an ever-bigger impact beyond Vermont. To help fill the need for marketing classes, we are planning a workshop later in 2014 to address the many issues associated with marketing maple syrup and value-added products. Look for more information in early 2014 about a date and location for this workshop. I am looking forward to showcasing our plants throughout the year.

Good luck in 2014 and happy sugaring!

-Matt Gordon, Vermont Maple Sugar Makers' Association Executive Director

## Daily Schedule for Bellows Falls and Lamoille Union H.S. —Jan 18 & 25

7:30 ~ Registration opens; Coffee and Donuts  
8:30 – 8:45 ~ Welcome (Auditorium)  
9:10 – 10:00 ~ Session I  
10:10 – 11:00 ~ Session II  
11:00 – 11:50 ~ Session III  
12:00 – 1:15 ~ Lunch  
1:30 – 2:20 ~ Session IV  
2:30 – 3:20 ~ Session V  
Turn in evaluations; have a safe trip home.

## CLASSES OFFERED AT BOTH BELLOWS FALLS AND HYDE PARK:

**The Market Outlook for Maple ~ Panel Discussion.** Come with your questions, and hear industry leaders share their insight into the future of US and Canadian maple production, prices, and the world market for maple. Panelists will include Bruce Bascom, President of Bascom Maple Farms, Matt Gordon, Executive Director of the VMSMA, Mark Bigelow, Plant Manager of Maple Grove Farms of Vermont (Bellows Falls) Gary Gaudette, President of Leader Evaporator (Hyde Park), and David Marvin, President of Butternut Mountain Farm (Hyde Park).

**Remote Vacuum Monitoring ~ Panel Discussion.** A panel discussion to illustrate the concept and advantages of remote vacuum monitoring in your woods. Panelists representing different companies will include Martin Carrier of Smartrek, Bob Crooks of Marcland Instruments, and Jason Gagne of Taptrack (Jason will be at Hyde Park only). Moderated by Dr. Tim Perkins of the UVM Proctor Center, where an additional monitoring system was installed by UVM engineering students.

**Replacement and Cleaning: Effects on Sap Yield and Net Profit ~ Dr. Tim Perkins, Director, UVM Proctor Maple Research Center.** This presentation will explore results of studies investigating the effects of different replacement and cleaning strategies on the amount of sap producers can expect to get out of their woods, as well as the projected net profits they can put in their pocket, based upon the strategy used, and will introduce a tool to help producers choose the approach that best fits their operation.

**Finance and Business Planning for Maple ~ Mark Cannella, UVM Extension Farm Business Specialist.** In the fall of 2013, UVM Extension launched a Maple Business Benchmark program. We will explain how producers are working one-on-one with farm business advisors to evaluate their own finances and make improvements through this program. This presentation will provide an overview of best practices for business planning for a maple operation and will cover various tools that producers can use to evaluate budgets, investments, marketing plans and to complete business plans.

**The Vermont Grading System as of 2014, and the VMSMA Voluntary Certification Program ~ Henry Marckres, (Bellows Falls) and Marc Paquette (Hyde Park), VT Agency of Ag.** Here is a chance to ask questions and get explanations about the new grading laws, as well as the inspection process for the Vermont Maple Sugar Makers' Association certification program.

**Remaking Maple – A Potential High Yield Method of Sap Collection ~ Dr. Tim Perkins, Director, UVM Proctor Maple Research Center.** Development of high-yielding sugarbushes with traditional methods is both a long-term endeavor and fairly costly. This presentation will outline a new method of collecting sap that can be applied to both naturally regenerating dense maple stands as well as plantations of maple saplings that require less land and has yields greatly exceeding those possible with current methods.

**High Vacuum and High Sap Yield with Gravity Tubing ~ Tim Wilmot, UVM Extension Maple Specialist.** Sap collection by gravity can be very successful given the right materials and installation techniques, and on land with some slope. Learn the principles of gravity collection and the latest methods gleaned from 4 years of research at the UVM Proctor Center and from sugarmakers around the Northeast who are experimenting with new materials.

**Re-evaluation of Tapping Guidelines Based on New Research ~ Tim Wilmot, UVM Extension Maple Specialist.** In recent years, researchers at the UVM Proctor Center have been examining several aspects of our tapping practices, such as the yield from tapholes of different depths, from adding additional taps in a tree, as well as the potential negative effects that some practices might have on the accumulation of non-functional wood in the tree. This presentation will summarize work toward the goal of research-based tapping guidelines appropriate for today's high vacuum sap collection methods.

**Birch Syrup Production - Can It Be Profitable For Maple Operations? ~ Dr Abby van den Berg, (HP) and Mark Isselhardt (BF) UVM Proctor Maple Research Center.** Adding birch syrup production could be a relatively simple way to increase the revenues of an existing maple operation. This study determined the typical yields from birch trees in VT,

and used these values to conduct financial analyses to assess whether adding birch production to a typical maple operation is likely to be profitable, or may result in net losses.



**Researcher Mark Isselhardt of the PMRC prepares a sensor to measure sap pressure in birch.**

**Sugarbush Health ~ Nancy Patch, Vermont County Forester for Franklin County.** Forest health is sugarbush health. Learn how to identify forest health indicators and to mitigate stress that could diminish productivity.

**Sugarbush Management Techniques ~ Nancy Patch, Vermont County Forester for Franklin County.** A description of forest management techniques to apply to sugarbushes, including intermediate treatments and improvement cuts, even-aged, and uneven-aged management; as well as harvest operation and contracts.

**A Moderate Sized Tubing Installation ~ Brian Stowe (HP) and Mark Isselhardt (BF).** This presentation will cover, with pictures, the basics of tubing installation, including layout of mainlines and running laterals. Hear from personal experience some of the do's and don'ts that can make tubing installation a job that anyone can accomplish.

**Techniques for the Beginning and Backyard Sugarmaker ~ George Cook, UVM Extension Maple Specialist.** A 2 hour presentation; Part 1 will cover topics from identifying the crop trees in the woods to the selection of the fuel to fire the arch. In the mix, you'll find sugarbush management, tapping

practices, and collection and storage of sap, along with tools, building and equipment needs. Part II will cover the evaporation and processing of sap to the final finishing of maple syrup, including filtering, grading and packing and a discussion of off-flavors



**Vermont County Forester for Franklin County Nancy Patch.**

## **CLASSES OFFERED AT BELLOWS FALLS ONLY:**

**How Should We Run the Evaporator to Maximize both Performance and Pleasure ~ Joel Boutin Quebec Extension Specialist.** Joel Boutin is a sugarmaker and an agricultural technician who specializes in maple, serving as a consultant to over 100 producers in his part of Quebec, many with large operations. He will discuss the most important parameters for successfully operating any type of evaporator.

**New Types of Evaporators ~ Joel Boutin Quebec Extension Specialist.** Joel Boutin, sugarmaker and an agricultural technician will discuss new evaporators that use a variety of fuel types, such as wood, wood pallets, wood chips, electricity, and oil.

**RO Membrane Principle and Cleaning ~ Helene Lapierre.** Helene Lapierre is in charge of the cleaning of thousands of membranes at the Lapierre plant in Canada. She will discuss RO membrane principle, testing and performance, troubleshooting, and membrane do's and don'ts.

**Advanced RO Operation ~ Carl Lapierre.** Learn about performance tests and RO related calculations from one of the leaders of the Lapierre Equipment company of Canada.

**Packaging Syrup ~ Carl Lapierre.** A discussion about good bottling procedures, instrumentation for packing, and Do's and Don'ts of packaging syrup.

**Selling Retail Beyond the Farm Gate ~ Pam Green and Amy Turco, Rutland County Sugarmakers.** While many producers make all their retail sales of syrup and maple products at their farm, additional retail profits can be realized from other venues. Come learn about sales opportunities at farmers markets and specialty fairs, from two veteran retailers.

**Preventative Maintenance ~ Nick Atherton, CDL USA and Mark Isselhardt, UVM Proctor Maple Research Center.** Losing one day of production can have a major impact on a season's total yield. A discussion with Nick Atherton, who for many years acted as service manager for CDL USA, will cover ways to avoid costly down time and keep essential equipment like pumps, releasers and ROs running smoothly.

## **CLASSES OFFERED AT HYDE PARK ONLY:**

**Growth Rates Of Trees Tapped With High-Yield Sap Collection Practices – Are Conservative Tapping Guidelines Sustainable? ~ Dr. Abby van den Berg, UVM Proctor Maple Research Center.**

Are existing tapping guidelines appropriate to use with current sap collection practices that enable the collection of much greater amounts of sap? This study examined the growth rates of trees from 18 VT sugarbushes that were tapped with high-yield sap collection practices, developed an interactive model of the tapping zone, and investigated whether the current Conservative Tapping Guidelines are appropriate to use with these practices.

**Tubing—Part 1 ~ Dan Crocker, Putney Vermont.** Crocker, tubing installer, innovator, and owner of 25,000 tap Sidelands Sugarbush, will discuss the theories and economics which have dictated how we install tubing and run vacuum systems.

**Tubing-- Part 2 ~ Dan Crocker.** In this presentation, Dan will share the methods and tools, some of which are unusual and even unique, that he uses for installing and maintaining vacuum tubing systems. A must for the inquisitive sugarmaker.

**Instrumentation for Sugarmakers ~ Bob Crooks, Marcland Instruments.** Bob Crooks will discuss the latest developments of his controls and accessories for maple production.

**Vacuum Releaser Operation and Troubleshooting: Panel Discussion.** Many producers report that their vacuum releaser is the most problematic piece of equipment in their vacuum system. Come listen to the tales of some veteran producers and join in the discussion of various releaser issues and how they can be dealt with.

**RO: 16" Posts and High Efficiency Units ~ Daniel Lalaine, General Manager, CDL USA.** A presentation about some of the latest innovations in maple RO technology.

**Boiling Sap ~ Glen Goodrich, Washington County Sugarmaker.** Learn the essentials of boiling from one of Vermont's most popular teachers: Glen will cover boiling for efficiency, for ease and for safety. He will discuss boiling raw sap, as well as boiling sap concentrated to different levels.

**Filtering and Packing Syrup ~ Glen Goodrich Washington County Sugarmaker.** A presentation about good filtering practice, and packaging syrup in containers from glass to barrels.

**Business Planning and Processing Services: Introduction to the Vermont Food Venture Center ~ Connor Gorham and Annie Rowell – Venture Center Production Staff.** In 2011 the Food Venture Center re-opened in Hardwick, and has been developing a suite of business, food safety and processing services which are available for producers of maple syrup and maple value-added products. Come learn more about our workshops, classes, and the filling and food service equipment available in our multi-use kitchens.



**Tim Perkins, Director of the UVM Proctor Center, will discuss a new method for collecting maple sap.**

## **Daily Schedule For Middlebury High School—January 11**

7:00 – 8:45 ~ Registration opens; Coffee and Donuts  
9:00 – 10:15 ~ Welcome (Auditorium) ~ State of the Industry Panel—Economics and Concerns about a Growing Industry.

10:30 – 11:45 ~ Session I

11:45 – 1:30 ~ Lunch & Trade Show

1:30 – 2:45 ~ Session II

3:00 – 4:15 ~ Session III

Turn in evaluations; have a safe trip home.

**Voluntary Sugarhouse Certification ~ Henry Marckres, VT Agency of Agriculture, Matt Gordon, VMSMA Executive Director, Kurt Kling and Tom Gadhue, Addison County Sugarmakers.**

Learn how to become certified, whether your operation is large or small. Henry and Matt will discuss the guidelines and criteria for certification. Kurt and Tom will offer input as to their experiences and what they had to do to meet the certification standards. Kurt has an established traditional operation and Tom's operation has been recently established.

**Effective Tubing Design and Setup ~ J. R. Sloan, Green Mountain Mainlines.** How to get the best out of your tubing set-up. From mainlines to drops, learn the best practices of how to set up an efficient tubing/vacuum system. Get tips whether your woods are flat, steep or somewhere in between.

**Remaking Maple – A Potential High Yield Method of Sap Collection ~ Dr. Tim Perkins, Director, UVM Proctor Maple Research Center.**

Development of high-yielding sugarbushes with traditional methods is both a long-term endeavor and fairly costly. This presentation will outline a new method of collecting sap that can be applied to both naturally regenerating dense maple stands as well as plantations of maple saplings that require less land and has yields greatly exceeding those possible with current methods.

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**New Grading System ~ Henry Marckers, VT Agency of Agriculture.** A discussion of the new proposed system—what it means to sugarmakers, consumers and packers, and the reasoning behind the proposed change. What are the next steps in making the change? How it might affect syrup prices?

**Is 3/16” Tubing the Answer to Vacuum Systems? – Roundtable Discussion ~ Andy Hutchison, Moderator.** New experimentation shows great promise in getting vacuum without pumps when using 3/16” tubing. Sugarmakers Art Kruger and Miles Tudhope, each having very different sugarbushes, will discuss how the tubing worked from them. Tim Wilmot, UVM Extension, will speak about his research at the Proctor Center.

**Replacement and Cleaning: Effects on Sap Yield and Net Profit ~ Dr. Tim Perkins, Director, UVM Proctor Maple Research Center.** This presentation will explore results of studies investigating the effects of different replacement and cleaning strategies on the amount of sap producers can expect to get out of their woods, as well as the projected net profits they can put in their pocket, based upon the strategy used, and will

introduce a tool to help producers choose the approach that best fits their operation.

**Beginning Sugarmakers ~ Bill Scott, FFA Emeritus.** In this two-part session, Bill Scott leads beginning sugarmakers from the tree to the sugarhouse, discussing tapping, tubing, filtering basics and other techniques. The second session reviews boiling techniques, best practices when it comes to drawing syrup off, filtering, grading and canning.

**Filtering for a Good Product ~ Brad Gillilan – Leader Evaporator.** Filtering is extremely important throughout the sugaring process. Whether filtering sap or syrup, learn what you need to do to make the highest quality final product for your buyers, be they consumers or packers. Brad will discuss the new clear filter press and have some demos.

**Boiling 101 ~ Glenn Goodrich, Cabot Sugarmaker.** Glenn will explore the best practices for boiling, no matter if you are the backyarder or a 50,000 tap operation, burning wood, oil or another fuel.

**Maple Confections ~ Ruth Goodrich, Cabot Sugarmaker.** Many producers sell their product in bulk, but there is a great market for value added products. Ruth will demonstrate some of the more interesting ways to use maple. Go beyond cream, candy and granulated sugar.



*The*  
**UNIVERSITY**  
*of* **VERMONT**

**EXTENSION**

Tim Wilmot

**UVM Extension Maple Specialist**

**Maple Conference at Middlebury Union High School  
Saturday, January 11, 2014**

~ Sponsored by the Addison County Sugarmakers Association ~

Name \_\_\_\_\_  
 Operation Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Name(s) Attending: \_\_\_\_\_

**Pre-Registration** is \$35 per person if **postmarked by Dec 27**; \$45 per person at the door. **Please Note:** Registration fee **DOES** include lunch. If you wish to just attend the meeting the cost is \$20 if pre-registered; \$30 at the door.

Number of attendees (**meeting and lunch**) \_\_\_\_\_ x \$35.00 = \_\_\_\_\_  
 Number of attendees (**meeting only**) \_\_\_\_\_ x \$20.00 = \_\_\_\_\_

Checks payable to: **ACSMA**. Return to Barb Rainville, Sec/Treas. ACSMA 598 Browns Rd, Lincoln, VT 05443.  
 For more information contact: Moe Rheume ACSMA President, 802-352-4556 or Barb Rainville 802-453-5797.

To request a disability-related accommodation to participate in this program, please contact Moe Rheume at 802-352-4556 by January 4, 2014 so we may assist you.

Date Received: ____/____/____	Amount Paid: _____	Check No: _____
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**Maple Conferences at Bellows Falls H.S., Saturday, Jan. 18  
 and Lamoille Union H.S., Hyde Park, Saturday Jan. 25, 2014**

~ Sponsored by UVM Extension and the Vermont Maple Sugar Makers' Association ~

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Please Circle the site(s) you wish to attend:  
 Bellows Falls ~ 1/18 Name(s) Attending: \_\_\_\_\_  
 Hyde Park ~ 1/25 Name(s) Attending: \_\_\_\_\_

To request a disability-related accommodation to participate in this program, please contact Mary Croft at 802-763-7435 by January 11, 2014 so we may assist you.

**Pre-Registration** is \$20 for VMSMA members and \$30 for non-members if **postmarked by Jan 7, 2014**; \$35 per person at the door. Discount available for current FFA/4H member/youth (under 18). Lunch is \$18 at Bellows Falls or Hyde Park. **Please Note:** Registration fee **DOES NOT** include lunch.

<p><i>Make checks payable to: VMSMA</i></p> <p>VMSMA Members _____ x \$20.00 = _____          Non-Members _____ x \$30.00 = _____          Number of youth _____ x \$15.00 = _____          Number of meals _____ x \$18.00 (<b>Bellows Falls</b>)          Number of meals _____ x \$18.00 (<b>Hyde Park</b>)          Total Enclosed = _____</p>	<p><i>Mail to: VMSMA, c/o Mary Croft, 491 East Barnard Road          So. Royalton, VT 05068</i></p> <p><i>Credit Cards accepted. Provide information below:</i></p> <p>CC # _____          CIV # _____ (last 3 numbers on back of card)          Circle Type: <u>VISA</u> / <u>MC</u> only          Exp. Date: ____/____          Signature: _____</p>
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**OPTION: Register and pay ONLINE <http://vermontmaple.org/vermont-maple-conferences/>**

Date Received: ____/____/____	Amount Paid: _____	Check No: _____
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**The University of Vermont  
UVM Extension  
617 Comstock Rd. Suite 5  
Berlin, VT 05602-9194**

## **2014 Maple Conference Information Inside**

### **2013 Vermont Maple Health Highlights**

*Reported by the Vermont Department of Forests, Parks, and Recreation, November, 2013*

Populations of the **Saddled Prominent** caterpillar increased statewide and defoliation was observed throughout the state. Nearly 13,000 acres of defoliation were mapped during aerial surveys, mostly in northeastern Vermont. In our annual Sugar Maple Health Survey, foliage was particularly dense this year, except in areas experiencing light defoliation by saddled prominent

Sugarbushes should be monitored for this native insect in July and early August. Much of the early feeding occurs at the top of the tree, so listen for the raining of their droppings. The young caterpillars make “windows” in the leaves when they feed. Most caterpillars are predominantly green, with distinct markings on the head and “saddle.”

This is an insect to watch closely. Following the last outbreak (1979-81) hardwood decline was significant on some sites. Defoliation tends to start at upper elevations. If a ridge-top is infested, anticipate defoliation downslope in subsequent years. Outbreaks are unstable. Areas often sustain complete defoliation where no damage was observed the previous year, and infestations often collapse suddenly.

*For assistance in identifying pests or on-site evaluations, or further details, contact the Forest Biology Lab at 802-879-5687 or your County Forester.*