



## In This Issue

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#### **Welcome to the 2018 Vermont Maple Conferences!**

A partnership between University of Vermont Extension and the Vermont Maple Sugar Makers Association

The 2017 crop was another near record. Many in the maple industry are concerned about overproduction, the decline in the bulk price of syrup, and how to reach more customers. Many are also concerned about the long-term health of the maple trees needed for syrup production. These conferences are designed to help provide the most up-to-date information related to these and other topics. The heart of this year's program are four "subject tracks": Maple Production, Maple Marketing and Business Management, Sugarbush Health and Climate and Maple Regulations. Attendees are welcome to follow the same track or mix and match classes. Many thanks to all the presenters for sharing their knowledge and expertise.

The days' program will begin promptly at 8:15 a.m. with three brief (~10minute) presentations. This will give all attendees the chance to hear the latest on the Asian Longhorned Beetle Eradication Program in Worchester, Mass. (from Program Leader Ryan Vazquez or alternate); what regulations such as Food Safety Modernization Act (FSMA) mean to sugar makers (from FDA Food Specialist Joe Frost); and a brief market summary from a director of the Federation Quebec of Maple Producers, David Hall. Later in the day, these presenters will dive deeper on their topic in a full session.

We are pleased to return to the School for International Training (SIT) in Brattleboro (January 20) and the Lamoille Union Middle School (January 27). There will be some slight changes to improve the experience: room rearrangements allow for a larger tradeshow in Brattleboro, and we will enter the Lamoille facility from the East Middle School entrance (stay right).

Registration is available online through the Vermont Maple Sugar Makers Association website www.vermontmaple.org/maple-conferences or by filling out the paper registration form included here.

Lastly, the past 12 months have seen the retirement of two longtime maple specialists. Vermont Agency of Agriculture Consumer Protection Section Chief Henry Marckres retired after 32 years of service, and UVM Extension Farm Safety/Maple Specialist George Cook retired after 39 years. Congratulations to Henry and George, and thank you for your dedication to the maple industry.

Hope you all can make it to the conference!

-Mark Isselhardt, UVM Extension Maple Specialist

## 2018 MAPLE CONFERENCES

### SATURDAY, JANUARY 20

School of International Training (SIT) **Graduate Institute** 

1 Kipling Road | Brattleboro, Vt.

## SATURDAY, JANUARY 27

Lamoille Union Middle School (LUMS) **East Entrance** 

736 Vt. Route 15 West | Hyde Park, Vt.

Registration Opens: 7:30 a.m. Welcome & short presentations: 8:15 a.m. Sessions: 9:45 a.m. - 3:30 p.m. \$10 VMSMA Members / \$40 Non-Members

Sponsored by UVM Extension & Vermont Maple Sugar Makers Association

#### **REGISTRATION:**

www.VermontMaple.org/maple-conferences

To request a disability-related accommodation to participate in this program, please contact Amanda Voyer at 802-858-9444 by January 2, 2018 so we may assist you.

#### **Directions to School of International Training**

World Learning Center, 1 Kipling Road, Brattleboro, Vt. From North or South: Take I-91 to Exit 3 (Brattleboro) to Route 5 South. Go south on Route 5 to Black Mountain Road on right. Take Black Mountain Road 0.6 miles; keep right at Y onto Kipling Road to World Learning Center at 1 Kipling Road. Follow "Maple Conference" signs.

From East or West: Follow usual routes to Brattleboro to Route 5. Then follow directions above. Note: Exit 3 is on north end of town.

#### **Directions to Lamoille Union Middle School**

**Fotal 8:** 

763 Vt. Route 15 West | Hyde Park, Vt. Follow Vt. Route 15, east or west, to Hyde Park. LUMS is #763, on the north side of Route 15.

www.VermontMaple.org/maple-conferences **BY MAIL** 

Save stamps & staff time!

REGISTER ONLINE

Make checks payable to VMSMA & mail to

189 Vermont Route 15 | Jericho, VT 05465

January 20 at SIT in Brattleboro, Vt. Which conference are you registering for?

January 27 at LUMS in Hyde Park, Vt.

Address Name

Email

Phone

Attendee Name(s)

# VMSMA Members # Non-Members

x \$10 x \$40 x \$5

# Youth

# Meals

Extension, and U.S. Department of Agriculture, cooperating, offer education 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Burlington, Vermont. University of Vermont and employment to everyone without regard to race, color, national origin or familial status. Any reference to commercial products, trade names, or brand names is for information only, and no endorsement or approval is intended.

gender, religion, age, disability, political beliefs, sexual orientation, and marita

# 2018 MAPLE CONFERENCE WORKSHOP DESCRIPTIONS

#### **Tending to Your Sugarbush**

Rick Dyer (or alternate), Lamoille County Forester, Vermont Department of Forests, Parks & Recreation

Focusing forest management efforts on growth of crop trees is best done before tubing is installed. This allows for easier movement and better results. Trees continue to grow after the system is in place, so the work to grow healthy, productive trees must also continue. This presentation will focus on how to grow trees for sap production and how to avoid damage to residual trees.

#### **Vermont Wetland Rules & Maple Operations**

Julie Follensbee, District Wetlands Ecologist, Department of Environmental Conservation

Choosing the location to install maple equipment and infrastructure is important to avoid impacting wetlands and waters. This talk will discuss the Vermont Wetland Rules and ways producers can prevent mistakes and costly delays in their operations. The focus will be on wetlands with some discussion of stream and river setbacks.

# Welcoming the Public to Your Sugarhouse: Panel Discussion (Brattleboro location only)

Lisa Chase, UVM Extension Natural Resources Specialist, Vermont Tourism Research Center; Peter Cooper-Ellis, Hidden Springs Maple; Steve Cook, Deputy Commissioner of the Vermont Department of Tourism & Marketing

Maple sugarhouses are iconic Vermont places and favorite stops for visiting tourists. Welcoming the public can help producers increase sales, build a brand, and educate the public. This panel discussion will cover marketing, safety, liability and other issues.

#### Sugar Maple Risk Mapping

Jennifer Pontius, Research Assistant Professor, UVM Rubenstein School of Environment & Natural Resources

Climate change, a legacy of acid deposition and development pressures, is likely to impact sugarbush differentially across Vermont. We will explore a new decision support tool designed to combine mapping efforts from multiple projects in order to aggregate information on factors likely to impact sugarbush management, and identify where those factors are likely to converge.

# Asian Longhorned Beetle Eradication in Massachusetts: Overview & Strategy

Ryan J. Vazquez (Brattleboro location only), USDA-APHIS, Asian Longhorned Beetle Cooperative Eradication Program Director; Timothy Barwise (Hyde Park location only), Massachusetts Dept. of Conservation & Recreation, Asian Longhorned Beetle Eradication Program

The Animal and Plant Health Inspection Service (APHIS) and its partners have been making steady progress towards the eradication of this destructive tree pest since its detection in New York in 1996. The outbreak closest to Vermont is the 110 square miles in Worcester County, Massachusetts under quarantine (35% of all the quarantined areas in the country). This presentation will cover the latest news regarding invasive pest and the efforts underway to eradicate it from the U.S.

#### Thriving or Surviving? Maple Business Strategy in 2018

Mark Cannella, Farm Business Management Specialist, Director of UVM Extension Agricultural Business Program

This workshop will review basic business planning concepts, and discussion will encourage participants to assess if their current strategy will be able to perform in today's business environment. The workshop will include discussion on marketing, developing a business, scale, labor, succession planning and policy.

#### Maple Financial Benchmarks 2013 - Present

Mark Cannella, Farm Business Management Specialist, Director of UVM Extension Agricultural Business Program

This workshop will include the most recent observations from 2016 maple cost analysis projects. We will share data on sales, costs, investments and profitability for producers with 2,500 taps to 20,000 taps, from market highs in 2013 to the current situation. This is a good workshop for prospective or expanding maple owners who are wondering what to expect for financial performance at different scales. The workshop will also discuss how to conduct financial analysis.

#### State of the Maple Market: Panel Discussion

David Hall, Bruce Bascom, Mark Cannella, Mark Isselhardt (Moderator)

Where is the industry headed? Where are bulk prices headed? Is the global market demand for syrup keeping pace with the expansion in production? Bring your questions for this panel of experts.

#### **Best Management Practices (BMPs) & Maple Operations**

Patrick Fry, Agricultural Engineer, Vermont Agency of Agriculture, Food, & Markets (VAAFM)

Some maple operations are being looked at for possible water quality issues. This presentation will discuss easy (and cheap) solutions to mitigate most concerns the VAAFM and Vt. Agency of Natural Resources (ANR) may have. The talk will cover VAAFM grant programs and how/when they may be applicable.



# 2018 MAPLE CONFERENCE WORKSHOP DESCRIPTIONS

#### Running a Producer Co-op (Hyde Park location only)

Joël Boutin, Agricultural Technician & Advisor for CETAA Making maple syrup is wonderful, but sometimes producers feel alone. Being part of a group means that you can share your questions. Moreover, if a technician has the responsibility of finding technical solutions well adapted to your needs, that moves you further away from isolation. Here is a little about how a technical club works. Joël Boutin is an advisor for the Quebec Maple Cooperative Club d'encadrement technique acéricole des Appalaches (CETAA), which has 2 million taps among its 200 members.



#### **Intro to Creating Maple Content & Digital Media Tips**

Amanda Voyer, Administrative & Communications Coordinator, Vermont Maple Sugar Makers Association

Developing website and social media content can be daunting if you don't know where to begin. This presentation targets those who may have a website and/or Facebook page, but are in need of updating content to keep it fresh and current. You will learn some helpful tips, working within time and budget constraints, for effective online marketing of your sugarhouse including using your phone to capture the images you need.

# Advanced Skills for Creating Maple Content & Digital Media Katie Webster, Maple Producer, Content Developer & Cookbook Author

This presentation is for those who already have some skills using social media to market products and builds on the introductory class. You will learn details regarding generating high quality digital images and how to use them to tell the story of your product. The program will also cover Instagram and Facebook algorithms: how to make them work for you in connecting with your customers and selling your products.

#### **Inside the Federation**

David Hall: One of 13 regional Directors for Federation of Quebec Maple Producers (FPAQ)

The Federation of Quebec Maple Producers (FPAQ) was founded in 1966 to help Quebec producers bring maple syrup to market. Today, FPAQ represents 13,500 producers who collectively make ~72% of the world's maple syrup crop. David Hall is one of the 13 directors in the organization. He will provide an overview of the organization and its various marketing efforts.

#### **Bulk Syrup Quality/Drum Condition**

Jason McFarland, Production Manager, Maple Grove Farms
A look at acceptable syrup quality and storage containers
considered for purchase at Maple Grove Farms, food safety
within the syrup industry, as well as some examples of syrup
rejected for these reasons. We will have time for your questions
and comments along with a recommended drum cleaning and
filling procedure.

#### What's up at UVM PMRC?

Tim Perkins, Research Professor & Director, University of Vermont Proctor Maple Research Center

A summary of the variety of ongoing projects at the UVM Proctor Maple Research Center. Ask questions about our operations, provide feedback, and suggest research directions.

# From 8° to 35° Brix – Research on Reverse Osmosis & Syrup Flavor and Quality

Abby van den Berg, Research Associate Professor, University of Vermont, Proctor Maple Research Center

A synthesis of the results from the University of Vermont Proctor Maple Research Center in their investigation of the use of standard and high-Brix RO systems, and how they affect the composition, properties, and flavor of the maple syrup produced.

#### **Current Research on Sustainable Tapping Guidelines**

Abby van den Berg, Research Associate Professor, University of Vermont, Proctor Maple Research Center

A summary of recent and ongoing research conducted by the University of Vermont Proctor Maple Research Center to assess the sustainability of current tapping and sap collection practices. We also investigate the impacts of tapping on tree growth and health.

#### Forest Tent Caterpillar Update

Josh Halman, Forest Health Specialist, Vermont Department of Forests, Parks & Recreation

2017 was the second year of the current outbreak. Caterpillars defoliated more than twice as many acres in 2017 compared to the previous year, and the area affected has expanded as well. This presentation will discuss the extent of the outbreak statewide as well the insect's biology, life cycle, detection and potential for control.

# 2018 MAPLE CONFERENCE WORKSHOP DESCRIPTIONS

#### **Strategies for Online Marketing of Maple Products**

Peter Cooper-Ellis, Owner, Hidden Springs Maple

The Internet has made it possible for maple farms to sell direct to customers everywhere. However, the online market is crowded and it's not enough just to put up an e-commerce website. This session will cover strategies and pitfalls for using the Internet to market maple products. In particular we will discuss the impact that Amazon is having on the online market and strategies for selling on Amazon.

# Biological & Environmental Control of Sap Flow & Sugar Content

Tim Perkins, Research Professor & Director, University of Vermont Proctor Maple Research Center

How do dry summers or heavy seeding affect the amount of sap and the sap sugar content flowing from maple trees each spring? This presentation will describe ongoing work aimed at teasing out some of the relationships among climate and stresses on maple stand productivity, and how climate change might impact future maple production.

#### Food Safety Plans, FSMA & Maple

Kathy Hopkins, Extension Professor, University of Maine Cooperative Extension

What does the passage of the Food Safety Modernization Act (FSMA) mean for your operation? Will you have to comply with new and difficult practices since the final rule was announced? Do you need a food safety plan? Want to write and take home a food safety plan using easy-to-access forms? Find out in this session.

#### FSMA and Maple: Understanding Regulations & Maple

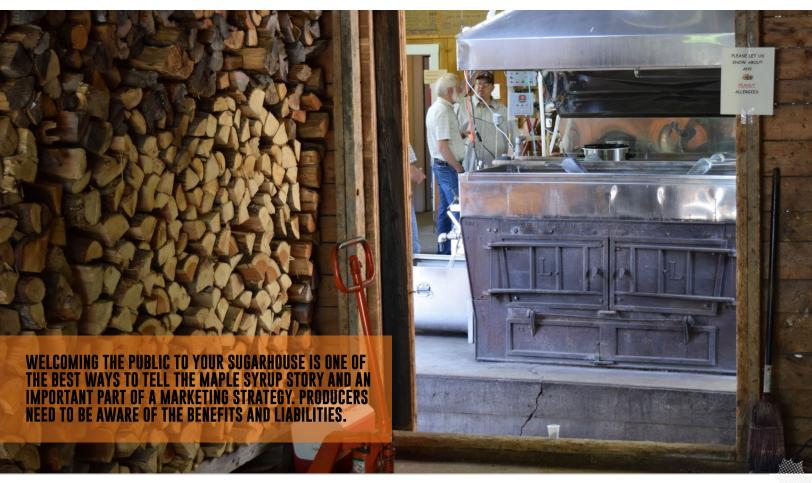
Joe Frost, MPH Commander, U.S. Public Health Service Investigator & Food Specialist (Brattleboro location); Alternate speaker (Hyde Park location).

Implementation of the Bioterrorism Act of 2003 and the Food Safety Modernization Act (FSMA) of 2011 has generated confusion among maple producers about registration and inspection of sugarhouses. This presentation will explain FDA requirements and help answer sugar maker questions.

#### The IMSI Social Media Program

Brad Gillian, IMSI Director

The International Maple Syrup Institute (IMSI) recently launched a social media program to promote and market real maple products. Learn how maple associations, packer/processors and others can be part of this exciting new inititive.



## 2017 VERMONT MAPLE HEALTH HIGHLIGHTS

#### By Vermont Department of Forests, Parks, and Recreation

Forest Tent Caterpillar (FTC) populations grew and expanded in area this year. While still centered in north-central and northeastern Vermont, the insects were observed in all counties of the state. Defoliation was mapped on 60,588 acres – more than twice what was mapped in 2016.

Trees typically respond to the relatively early-season feeding by FTC by sending out a new flush of leaves. However, in both 2016 and 2017, some defoliated areas remained noticeable all summer because of a lack of refoliation. On some sites, the only visible refoliation was on ash. On sugar maple, refoliated leaves were small. The exact mechanism by which trees did not refoliate is unclear, but factors that may have contributed to this include the lingering effects of 2016 drought, heavy seed on sugar maple in 2017, and a late start of feeding this year due to wet weather. Infection by leaf fungi (Anthracnose species were identified in bud tissue) and dry midsummer conditions may also have played a role. With a burst of rainfall, and continued warm temperatures, some defoliated sugar maples attempted another refoliation in late October.

Weather conditions: Despite the wet start to the growing season, dry conditions were present in many locations by mid-late summer in 2017. This coupled with dry/drought conditions present in 2016 almost certainly affected carbohydrate production, and will reduce wood growth, taphole closure and foliage density next year. Prevent avoidable stress in defoliated stands by delaying thinning one to three years, using conservative tapping rates, and limiting vehicle use near crop trees.

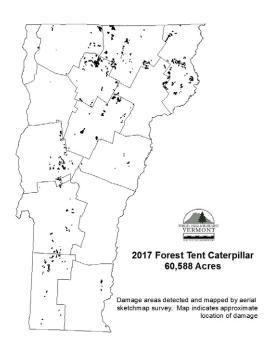
**Defoliation from moths** is expected to continue in 2018, as moth catches have increased once again this year. By request, the Department of Forests, Parks, and Recreation will conduct winter egg mass surveys in sugar-

bushes to indicate the risk of defoliation next year, or you can do it yourself. Where the risk is high, consider making arrangements to have the sugarbush sprayed in May. If you may be interested in participating in a state-coordinated spray program, contact the Vermont Department of Forests, Parks, and Recreation as soon as possible to request an egg mass survey. The deadline to sign up is February 1. A state-coordinated project would use a certified-organic biological insecticide. Areas to be sprayed would need to be actively tapped, at least 10 acres and more-or-less rectangular in size. The cost to landowners will be unknown until details are finalized.

Pear thrips damage was observed on trees throughout the state in 2017. Trap catch numbers increased this year as well, suggesting that foliar damage may occur again in 2018. This can be seen early in the season, as leaves are emerging from buds. Evidence of pear thrips feeding includes smaller and irregularly shaped leaves, and discoloration (browning) around leaf edges.

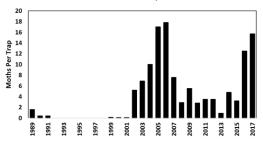
Other defoliators observed in 2017 included maple webworm which often lays eggs in leaves rolled by pupating forest tent caterpillars. There were also reports of significant populations of maple leafcutter and lesser levels of injury by maple trumpet skeletonizer and orange-humped mapleworm.

Premature leaf drop: While most hillsides remained green going into October, premature leaf drop of sugar maple was reported from locations throughout Vermont, and throughout the Northeast. Most commonly observed on roadsides, openings, river corridors and edges, the leaf drop has been attributed to a "perfect storm of factors" including the drought in 2016, an abundant seed crop in 2017, wet early season conditions in 2017, fungal infection, and dry late season conditions. Anthracnose and an abundance of Phyl-



The number of forest tent caterpillar moths caught in 2017 increased from the previous year, indicating that defoliation is likely to continue and be more widespread in 2018. Detailed maps are online at http://anr.vermont.gov/maps/nr-atlas. Find the Forest Tent Caterpillar Damage layer under Forests, Parks and Recreation > Trails.





losticta leafspot on fallen sugar maple leaves were identified, and symptoms resembling Septoria leafspot have been reported. Once leaves are compromised by disease they are more likely to brown and drop early under dry conditions. Sometimes this is a direct result of disease, but often it is indirect, as the tree drops leaves to recycle nutrients and conserve a limited water supply for tissues that are still healthy.



For additional Vermont forest health information, visit *fpr.vermont.gov*. To receive literature by mail, 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.



have been making steady progress towards the eradication of this destructive tree pest since its detection in New York in 1996.

"The goal is to eliminate this non-native, tree-killing pest, from the United States," said Josie Ryan, APHIS' national operations manager for the Asian Longhorned Beetle Eradication Program. "We are confident that we can remove the beetle using the strategies we have available to us."

Program officials survey tree species preferred by the beetle, called host trees, within the regulated areas. Surveys are conducted yearround by specially trained federal, state and contracted ground survey crews and tree climbers. As infested host trees are detected, they are removed, and high-risk host tree removals evaluated as needed. Program officials are not applying insecticide treatments this year because surveys and infested tree removals remain the priority. The use of insecticide treatment applications is evaluated annually. The insecticide treatment study that began in 2016 in Clermont County, Ohio, continues for its second of three years. Program staff continue to monitor for the beetle's presence inside and outside the regulated areas, respond to service calls, conduct training sessions for compliance agreements, and perform outreach.

Currently, 308 square miles are under quarantine for ALB in the United States: 137 square miles in New York, which includes the New York City boroughs of Brooklyn and Queens and a portion of central Long Island; 110 square miles in Worcester County, Massachusetts, which includes all of the City of Worcester, West

Boylston, Boylston, Shrewsbury and a portion of the Towns of Holden and Auburn; and 61 square miles in Clermont County, Ohio, including East Fork State Park, Tate and Islip (2011) in New York; and Boston (2014) in Massachusetts.

To avoid spreading the beetle, people and businesses may not move regulated items out of an ALB quarantine area without a compliance agreement, permit, or certificate according to federal and state laws. If businesses or individuals conduct commercial work on regulated articles such as firewood (all hardwood species), nursery stock, logs, branches, etc., in any quarantine area, they must enter into a compliance agreement with the ALB eradication program in their state to move items to approved sites. Before entering into an agreement, they need to attend free compliance training. To register for the training in your work area, please call:

- 631-288-1751, New York
- 508-852-8110, Massachusetts
- 513-381-7180, Ohio

USDA and its partners are conducting various research projects to learn more about the beetle, including regulatory treatments for wood and nursery stock, chip size and grinding techniques to deregulate ALB host materials, and traps to lure adult beetles. USDA APHIS is also studying how quickly the insect spreads on its own, its host tree preference and range, and is conducting DNA analysis and various behavioral experiments.

ALB is a serious insect pest of certain hardwood tree species, with the potential to cause significant economic and environmental impacts if allowed to establish and spread throughout the United

> States. Residents are encouraged to inspect their trees for signs of damage caused by the insect and report any suspicious findings.

ASIAN LONGHORNED BEETLE HOTLINE: 1-866-702-9938

www.aphis.usda.gov/pests-diseases/alb



