

Maple Syrup Digest



Vol. 56, No. 3

October 2017



Maple Research and Extension Henry Marckres Retires



The Newsletter of the North American Maple Syrup Council



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Greetings from your President



Little doubt about it—these have been a challenging couple of years! Just when you figure that you have seen or heard about everything, along comes a weather event which dumps more than four feet of rain in just four days on coastal Texas. Our Great Lakes shoreline, home to many sugarmakers, is enduring record water levels and crops struggling to mature after a record wet growing season. There is a bit of irony in all of this especially when one recalls that ten short months ago our entire region was dealing with record drought. Little wonder our maples, forests, and agricultural crops are exhibiting stress, coupled with poor growth and diminished production. There is good and ample reason to begin questioning local climatic impact on our sugaring season set to start in a very few short months. I do anticipate hearing about these issues from colleague researchers and producers across the industry when we meet at the end of October in Levis, Quebec for the annual Council meetings. Surely the climate driven impact on our forested ecosystems will be grist for discussion among those gathering to conduct the international business of our industry.

I started this message pretty much how most agriculturally oriented individuals commence their conversations – talking about challenges and the weather. But our challenges aren't

entirely related to the climate and weather.

Over the last few years we have done an awfully good job of out-producing our ability to adequately market our syrup. Technology, research, efficiency and addition of huge numbers of new taps seems to be heading our maple commodity products down the same economic avenue as corn, milk, soybeans, pork and the like. We need to earnestly spend more time and money looking for solutions to the question: who among us can continue to produce table grade syrup in the \$1.85-2.00 range, and for how long? This question is not at all unlike the ones asked of our much larger milk and corn commodity counterparts.

Recently there have been discussions by planning committees and ad hoc groups on pursuing new market ideas, exploring value added maple product innovation, and making attempts to garner funding to expand market niches. It was heartening to see that the USDA recently offered \$1,000,000 in US Farm Bill funding to researchers, directly aimed at the maple syrup sector. (*See pg. 37 for information about the grantees.*) This will be a nice start to address research, market expansion and outreach for our industry. For far too long Canadian producer groups have borne the lion's share of funding for the market research arena. Hopefully this USDA funding cycle will build upon and complement all the work that has been done previously.

It goes without question that these

President: continued on page 7



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efforts and initiatives are clearly strengthened by unified national and international maple organizations. Now, more than ever, is the time for all states, provinces, tribal nations, and producer groups to be heard, seen and counted. The Council and the Institute need to have every state and province, every producer group and, quite frankly, every producer and manufacturer, stand to be counted and to unify into the larger stewardship groups capable of shaking loose the funding and recognition our commodity requires and deserves. There is strength and credibility in numbers and there is tremendous power in showing that this industry has “its act together.” We have been slow at grasping the idea that modern maple sugaring is not the maple industry of our grandparents. Their pint per taphole, \$6 per gallon on a 600 tap operation is almost laughable today, but we continue to market, educate, and, for many, think similarly to those bygone days. We need to disseminate research data differently, transferring knowledge in modern ways, because our consuming public will demand that level of modernity or they will shop elsewhere.

Like I started a couple of paragraphs ago, these have been a couple of challenging years, not just for the industry but for me personally. This will be my last message as Council President. I have been honored to serve and to have had the opportunity to be a spokesperson for my sugaring colleagues internationally. There is much, much more to be done and a seemingly endless sequence of challenges lurking out there to be addressed. The capable hands of the incoming Council President will be substantially aided by every single province and state sending their strongest delegate and their unwavering membership support. On behalf of the North American Maple Syrup Council administration, officers and delegates I encourage you to attend the Council meetings in Levis, Quebec.

Kind regards,
Eric Randall, NAMSC President

Cover photo: It’s fair season! Paul and Serena Zononi of Williamsburg, MA took home the blue ribbon for this display at the Franklin County Fair.

Potential Plastic Residues in Maple Sap and Syrup Following Isopropyl Alcohol Sanitation of the Tubing System

Luc Lagacé, Carmen Charron and Mustapha Sadiki

Centre de recherche, de développement et de transfert technologique acéricole inc.

Microbes are naturally found in the maple sap tubing system. They come from the sugar-bush's ecosystem (trees, forest soil, air, etc.), and eventually colonize and multiply on inside surfaces of the tubing depending on growth conditions (time, temperature, nutrients, etc.). Many species of bacteria and fungi (Filteau et al., 2010, 2011, 2012; Lagacé et al., 2004) have been reported in this environment, and a biofilm may also form (Lagacé et al., 2006a) and affect sanitation treatments (Lagacé et al., 2006b). To help maintain good performances of the system and prevent microbial spoilage of maple sap (Morselli & Whalen, 1991; Lagacé et al., 2002), a sanitation treatment is commonly performed just after the season has ended to prevent any sap or syrup contamination with potential residues of sanitizers (Allard & Belzile, 2004; Chapeskie et al., 2006).

In recent years, isopropyl alcohol (IPA) sanitation was proposed after the sugar season to significantly reduce the microbial load and start the next sugar season with a sanitized system (Lagacé et al., 2011). Commercial IPA solutions at 70% (v/v) are accepted by the Canadian food inspection agency in Canada for both regular and organic maple productions, but are not allowed for use in the United States. In the suggested sanitation method in Canada, IPA is injected in the sap collection system made of food grade plastic materials and part of it remains in the system for a prolonged

period of time (nine months) during the off-season (St-Pierre et al., 2014). This procedure, although efficient to prevent microbial growth, has raised some questions as to whether it would contribute to the degradation of plastic material and to the leaching of chemical compounds into the maple sap and further concentrated into the syrup. This study was therefore conducted to evaluate the potential leaching of chemical compounds found in plastic polymers used in maple sap collection system tubing.

Experiment Design

First, samples of new plastic material such as spouts, connectors, and lateral and main lines of many models coming from the main maple equipment manufacturers of the maple industry were obtained and analyzed in our laboratory. They were ground into small particles and then soaked in IPA at 99% under constant boiling and condensation conditions for about 16 hours. After this extraction step, the solvent (IPA) containing potential residues of plastic was injected in a gas chromatography system equipped with a mass spectrometry detector (GC-MS) to separate and identify the molecules present. This enabled the identification of many chemical compounds (37) that were further retained as target molecules.

The second part of the work consisted of collecting samples of maple

sap and syrup from many sugarbushes that had performed IPA sanitation of their tubing system according to the recommended method, and from control sugarbushes that had not used IPA. These later sugarbushes had either not performed sanitation or used sodium hypochlorite (bleach solution at about 400 – 600 ppm) as previously recommended (Allard & Belzile, 2004). Sampling was done in 2014 in 14 sugarbushes using IPA and four control sugarbushes not using IPA and in 2015 in three sugarbushes using IPA and two control sugarbushes not using IPA. Duplicate samples (500 ml) of maple sap and corresponding syrup were collected in EPA certified glass amber bottles (Fisher Scientific) and frozen (-18°C) prior to analysis. Samples of sap and corresponding syrup were collected for the first and second sap runs (days) of the season and from an additional middle season run for every sugarbushes studied. In addition, a sample of pre-season sap run (flush) used to rinse the system was collected from every sugarbushes before the production start. A total of four samples of sap (including the pre-season rinse sample) and corresponding samples of syrup were therefore collected and analyzed for each sugarbush.

Following sampling, each sap and syrup sample was analyzed in our laboratory to see if they contained residues of target compounds previously identified or other non-suspected residues. Sap samples were analyzed using liquid-liquid extraction with dichloromethane (DCM), followed by GC-MS analysis. For syrup samples, a solid phase micro-extraction (SPME) method in an immersion mode was used for the determination of plastic residues in maple syrup. The SPME was conducted using a polydimethylsiloxane/divinyl-

benzene (PDMS/DVP) fiber according to the protocol of Liu (Liu, 2008). All extracts obtained from sap and syrup samples were then analyzed by GC-MS as it was previously done with samples of plastic materials. The identification of chromatographic peaks was completed using the NIST Mass Spectra Library-2007 as well as chemical standards for the confirmation and quantification of chemical compounds.

Results and Discussion

A fairly large and representative number of plastic materials (27 different units) used in the manufacturing of maple sap collection systems were analyzed in order to evaluate the interaction between these materials and IPA in terms of chemical composition and evaluate the potential risk of contamination. This work enabled the identification of many extractable compounds by GC-MS that served as target molecules in the analysis of the sap and syrup samples. Most of these compounds are regulated plastic additives used as antioxidants, lubricants, UV protectors, or plasticizers and were commonly reported in such type of material. This has provided us the evidence of the wide range of compounds that can be found in plastics used for collecting maple sap. While many plastic materials were analyzed in this experiment, not all materials have been investigated and other plastics used by maple producers could potentially contain other chemicals.

When sap and syrup samples were analyzed, no target chemicals previously found in plastic materials were detected in any samples collected in the many different sugarbushes sampled in 2014 and 2015. As an exception, only

IPA: continued on page 10

IPA: continued from page 9

one compound, Octabenzone (CAS No. 1843-05-6), was identified in some samples of preseason sap used to rinse the system. In view of these results, it was decided to focus the analysis of sap and syrup samples on Octabenzone (CAS No. 1843-05-6) and on phthalates (plasticizers) since these later compounds were previously found in other studies on foods in contact with plastic materials (Fasano et al., 2012; Fierens et al., 2012; Tsumara et al., 2002). Therefore, samples collected from sugarbushes were analyzed by GC-MS along with standards of Octabenzone and phthalates.

An example of a chromatogram obtained from these analyses is found in Figure 1 where standard chemicals (Octabenzone and Phthalates) are separated according to their specific retention time (Fig. 1A). Figure 1B is an example of a chromatogram obtained for the preseason sap (flush) showing the presence of Octabenzone while Figure 1C shows an example of maple sap for which no plastic chemicals were found. Detailed results for all samples of maple sap, syrup and preseason sap (flush) are found in Table 1. According to these results, no plastic residues analyzed were found in sap and syrup samples

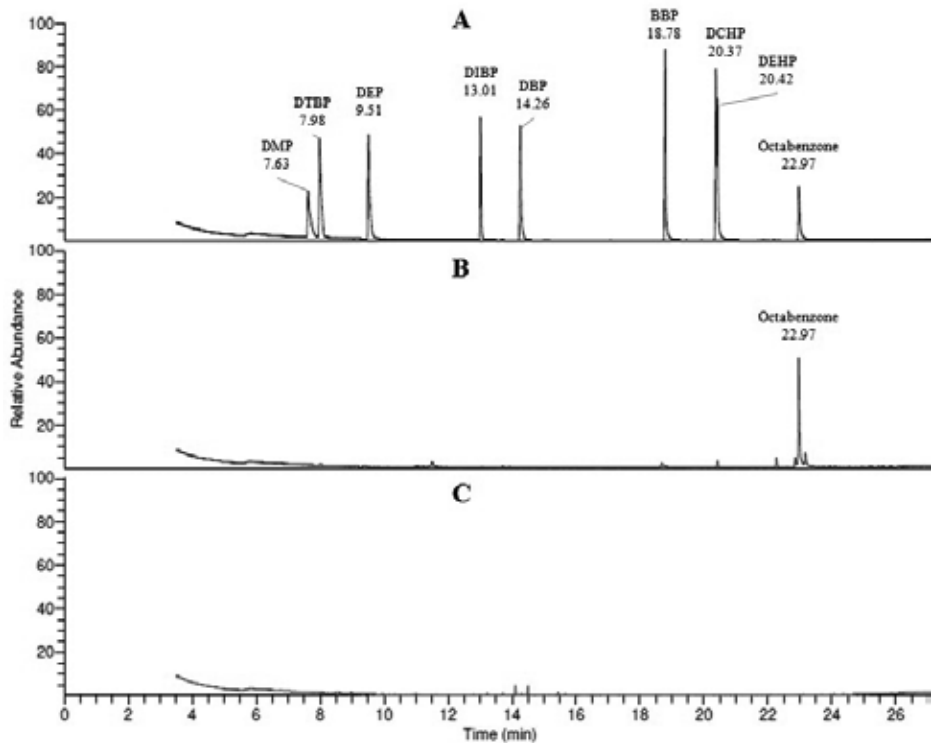


Figure 1. Total ion chromatogram of (A) standards at 10 mg/L (DMP: Dimethyl phthalate, DTBP : 2,4-Di-Tert-butylphenol, DEP : Diethyl phthalate, DIBP : Diisobutyl phthalate, DBP : Di-n-butyl phthalate, BBP : Butyl benzyl phthalate, DCHP : Dicyclohexyl phthalate, and DEHP : Di(2-ethylhexyl) phthalate), (B) a sample of first sap run used as a flush and showing residues of Octabenzone and (C) a sample of maple sap showing no residues.

for both types of sugarbushes using IPA as a sanitizer or not. A few samples of preseason sap used exclusively to rinse the tubing system before production starts showed concentrations of Octabenzone and one sample had residues (1.83 mg/L) of Di(2-ethylhexyl) phthalate (CAS No. 117-81-7). This later plasticizer was not previously found in commercial plastic materials analyzed. However, it was already found in food products in another study at concentrations up to 4.25 µg/g (Tsumara et al., 2002). Residues of Octabenzone (CAS No. 1843-05-06) were previously found in food (Muncke, J. 2011; Sagratini et al., 2008) and were also found in samples of preseason sap (flush) for nine sugarbushes over 17 where IPA was used and in two samples of the same type coming from two sugarbushes out of six not using IPA. Concentrations found in these samples range from 0.01 mg/L to 87.15 mg/L. Other target chemicals were not detected in any samples collected from the sugarbushes. It is also worth noting that many sugarbushes (five) showing chemical residue concentrations in the preseason sap had new material.

Conclusion

According to the results obtained, rinsing of the sap collection tubing with the first sap run before the production season starts as it is recommended would be necessary for sugarbushes

using IPA as well as those not using IPA, to minimize the risk of finding chemical residue in commercial maple products, and especially for sugarbushes using new material that has not been previously rinsed. This would also help eliminate organic residues (microbial metabolites) that remained in the system during the off-season. Therefore, the use of IPA as a sanitizer would not necessarily be associated with chemical residue in maple sap and syrup, since no residues were found in any of these samples coming from both types of sugarbushes (using or not using IPA).

Acknowledgements

This project was financially supported by the North American Maple Syrup Council Research Fund, the Industrial Research Assistance Program (IRAP) of the National research council of Canada, and by Centre ACER. We thank Mr. Jacques Boucher for his help in samples collection, and maple producers who participated in the project.

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Mean concentration of chemical residue* (Range) and number sugarbushes			
Sugarbushes using IPA		Sugarbushes not using IPA	
Octabenzone (ppm)	DEHP (ppm)	Octabenzone (ppm)	DEHP (ppm)
15.19 (0.01 – 87.15)	1.83	3.58 (0.35 – 6.80)	0
9 sugarbushes out of 17	1 sugarbush out of 17	2 sugarbushes out of 6	0 sugarbush out of 6

*No chemical residue found in all sap and syrup samples

Table 1. Results on sugarbushes showing measurable concentrations of chemical residues in their preseason sap sample (flush) used to rinse the system

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Maple Research and Extension..... Going, going, gone?

Dr. Timothy Perkins, Director, University of Vermont Proctor Maple Research Center

Many of you may vaguely know about or remember having heard about the North American Maple Syrup Council (NAMSC) “Penny per Container” (PPC) program for funding of maple research. This program started quite some time ago, and has funded a great number of maple research projects over the past 25+ years.

If you’ve discovered the advantages of using vacuum, or have learned about the effects of improved sanitation on taphole yield, then you have benefited from this program. If you feel that research on pear thrips, acid rain, the ice storm of 1998, climate change, and other forest stresses on maple tree health are imperative, then the PPC program is important to you. Maybe you have a better understanding of sap flow, or how equipment such as air injection

or reverse osmosis effects your syrup flavor, or perhaps you know how big you need to size your mainlines, or the importance of packing syrup correctly. Research on all of these topics, and a great many more, has been funded by the NAMSC Research Fund, supported by the Penny per Container program. Altogether, research and outreach funded by the PCP has helped thousands of maple producers large and small improve their operations and increase their income derived from maple. In that way, the program should be considered a great success.

While this is not a new subject, and others have written about how the program works and some of the issues involved, what you might not know is how the program has fared. Before we do that, let’s take a quick look at how

maple production has changed since the program started.

Clearly, maple production between 1990 and 2016 in the U.S. has grown tremendously (Figure 1). U.S. maple producers are making about 4-5 times the

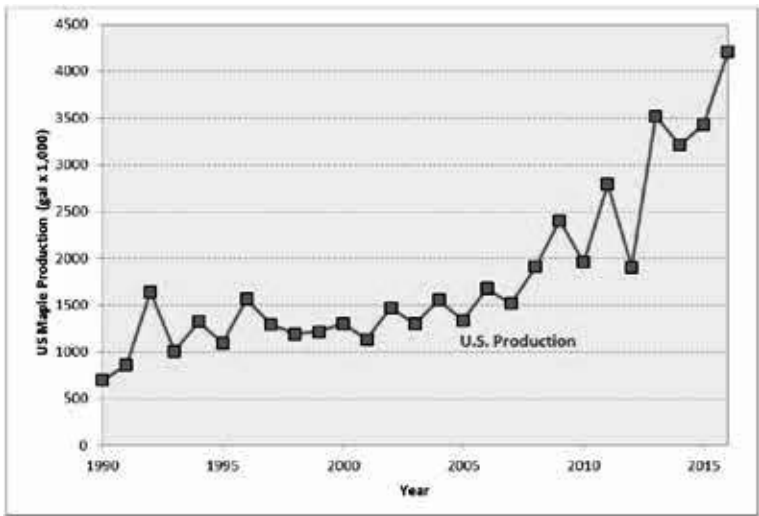


Figure 1: Data Source: USDA NASS

amount of syrup they made before the turn of the century. Although much of that growth comes from expansion, a good share of it also comes from increased yields per tap. Those improved yields and the associat-

ed increased net profits per tap, derived from research and education about best management practices for maple, fueled the explosion in growth of the U.S. maple industry. We currently produce 2-3 times the syrup from each tap these best management practices *derived from maple research and education*.

With so much more syrup being made and sold, how are we doing for contributions garnered from the PCP program to the North American Maple Syrup Research Fund?

The story isn't as rosy-looking here (Figure 2). Donations to the NAMSC Research Fund have largely been flat since the program began (with maybe a slight uptick in the last couple of years), even though we're making 4-5 times the amount of syrup. Let's look a bit deeper.

Since maple producers are making so much more syrup, but donations to the research fund have been flat for 25+ years, the actual donation amount per gallon of syrup has fallen (Figure 3). Early in the program the donations

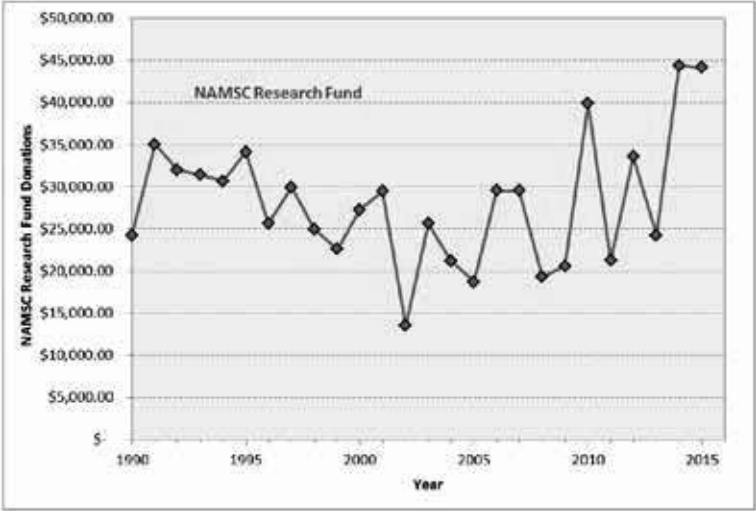


Figure 2: Data Source: NAMSC

were in the range of 2-4¢ per gallon. Over the past several years, donations averaged just over 1¢ per gallon of syrup produced in the U.S. The situation isn't looking so good, but let's look a bit closer still.

The value (based upon retail price) of maple syrup hasn't stayed the same over that 25+ year time-frame either (Figure 4). Syrup price (and overall cost-of-living) has nearly doubled since 1990. If we factor in the value of syrup, we see that donations for maple research are only about ¼ of what they were when the PPC program started, and now average about 0.03¢ per dollar of maple syrup value. Let me state that again so there is no confusion: for every \$1 of maple syrup value produced in the U.S., the maple industry donates and spends **3 HUNDRETHS** of one cent on maple research through the NAMSC Research Fund. For comparison purposes, this amount is about 50 TIMES LESS per unit syrup value basis than producers in the Quebec Federation of

Research: continued on page 17

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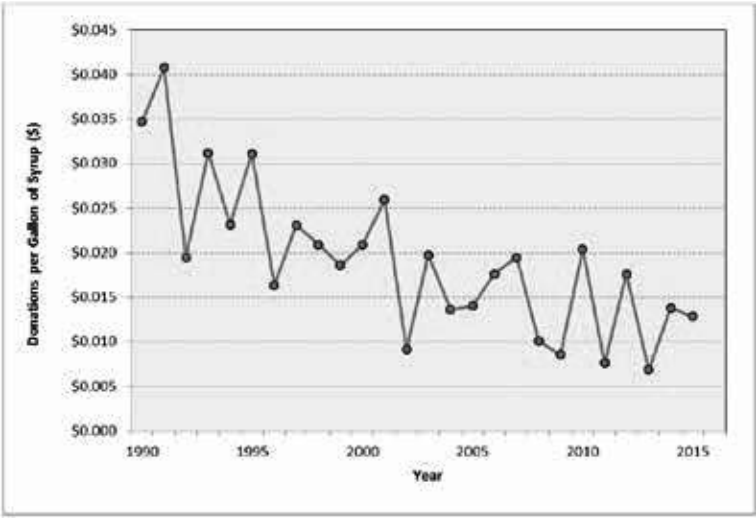


Figure 3: Data Source: USDA NASS, NAMSC

Research: continued from page 15

Maple Producers are charged for re- search and promotion.

If U.S. donations had kept pace with production gains and inflation, annual contributions to the North American Maple Research Fund whould be at a level of around \$150,000.

Clearly the U.S. maple industry either: 1) does not “value” maple research; or 2) has not realized the extent of the problem and reacted to it.

I personally do not think that #1 is the case. We at the University

of Vermont Proctor Maple Research Center and UVM Maple Extension, as well as our colleagues in other states, have been responding to more requests for information each year. We regularly travel to meetings across the maple producing re-

gion to present information on maple. We find that maple producers are eager to learn efficient techniques and to apply best management practices to in- crease their yields, total production, and income streams from maple syrup.

Research: continued on page 18

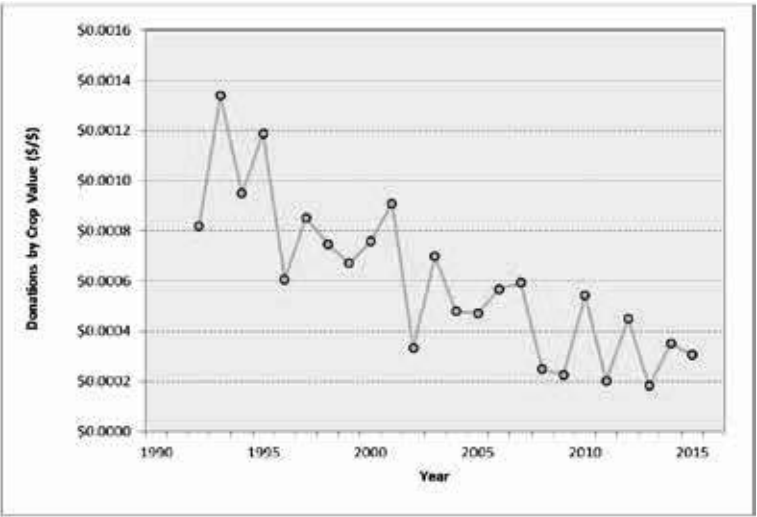


Figure 4: Data Source: USDA NASS, NAMSC

Research: continued from page 17

There is a strong and growing demand for maple marketing research and education.

This issue is not new and did not develop suddenly. Chabot, Perkins and Ramacieri wrote about some of these issues in the *Maple Syrup Digest* in 2008. Researchers have begun to raise the issue even more stridently for the past few years.

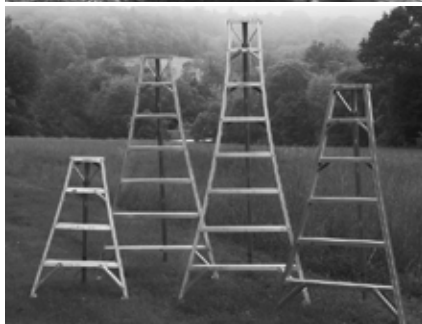
So the real question is, how do we correct this? There are several possibilities, and some have been suggested over the past decade by myself and by other researchers. We could continue voluntary donations, although given recent history, I have little faith this would go far in resolving the problem. We could investigate a "market order" for maple, and some associations are doing that now. We could make the

Penny per Container program mandatory, and apply it to ALL types of maple containers (tin, glass, plastic). Dr. Michael Farrell, past Director of the Cornell Uihlein Maple Research Station suggested Penny per Container and Penny per Spout contributions.

Regardless of our pleas, there remains to be any serious discussion or consideration of these changes by the maple industry.

Although challenging, the NAMSC provides a good venue for this discussion to occur. To that end I request that this topic be added to the agenda of the 2017 NAMSC annual meeting with the goal of having some concrete action plan to take by adjournment. Why is this so important now? All you need to do is look around. Despite strong interest and huge growth of the maple industry in the past ten years, there are

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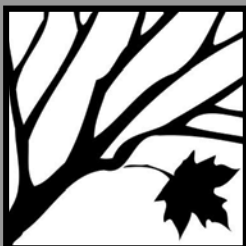
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far fewer full-time maple researchers and Extension professionals than any time in the past half century. The U.S. Forest Service and Canadian Forest Service have almost completely stopped doing any work in the field of maple syrup production. Researchers and educational institutions will support the maple industry, but only if there are sufficient financial resources for us to do the work.

As maple industry funding has diminished over time, so have maple research and Extension positions. It is a fact that academic institutions support successful industries that provide resources to do research. If scientists are not able to find funding, they move on to other more fruitful areas of work. This is not due to a lack of interest, it is merely self-preservation. Academics in research institutions must find funding to build a research program and

achieve tenure. Institutions must see research funding flowing in, and publications and education flowing out. While state and federal grant funding can help, those sources are not stable in the long-term, and decline without substantial and continuous industry support.

If the maple industry allows this decline in funding to worsen much longer, the research and Extension support that does exist may simply cease altogether.



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Ask Proctor



Should I Use 3/16" or 5/16" tubing?

One of the first questions maple producers face when deciding to tube (or retube) a sugarbush is whether to use 3/16" or 5/16" tubing. Unfortunately, this decision is often very site-specific, and it can be difficult to thoroughly determine the proper approach without a good site walk-through, and sometimes good measurements must be taken. Besides the lower upfront cost of 3/16" tubing and easier working characteristics, there are some general rules that can be helpful in narrowing down the pros and cons of each approach.

First, if using 3/16" tubing, the site should have good slope in order to achieve some drop in elevation from the taphole to where the sap exits the 3/16" tubing – either into a mainline or into a tank. This change in height is what generates the downward pull (from gravity) of sap in the 3/16" tubing to create the vacuum. This difference in elevation should be on the order of at least 3%, but steeper is better. With a slope less than this, friction of sap with the tubing walls becomes a bigger factor, resulting in poor sap movement and build-up of pressure in the system, which is the opposite of what is desired. For this reason, 3/16" tubing should almost never be installed in flat or low-slope applications without supplemental pumped vacuum.

When used on the proper slope, one foot of drop in tubing, when filled with moving sap, will produce about 0.75-0.80" Hg of vacuum (note that 1 ft water = 0.88" Hg, however tubing is typically filled with a mixture of sap AND gases produced by the tree, and there are frictional forces between sap and tubing, thus the vacuum level is often somewhat lower than the straight mathematical height conversion might indicate). Actual vacuum level achieved will depend upon the height of the taphole in relation to where the sap exits the 3/16" tubing system and number, size, and position of leaks in the system.

A second consideration in determining whether to use 3/16" or 5/16" tubing is whether supplemental pumped vacuum will be used, and what level of vacuum your pump can achieve. Producers with some drop, but not enough to reach maximum levels, or with trees lower down on the slope, may wish to use pumps in order to get higher vacuum levels throughout their system. When used together in a so-called hybrid system, pumped vacuum and 3/16" gravity are additive, meaning that, for example, if you pull 15" Hg in your mainline with a small pump, and get another 10" Hg from using 3/16" tubing, your total vacuum would be 25" Hg (15" + 10" = 25" Hg). Note that the maximum vacuum is based upon your elevation and barometric pressure conditions and cannot be exceeded. When

Ask: continued on page 22

Ask: continued from page 21

using a high-vacuum pump, there is relatively little to be gained using 3/16" tubing (other than the cost savings and easier handling characteristics) because the difference in vacuum is fairly small.

3/16" gravity vacuum and 5/16" systems without pumped vacuum have similar recommendations as to the number of taps on a lateral line. Both can support long (or short) tubing runs around 10-25 taps on a lateral line. In contrast, 5/16" pumped vacuum systems should be short and stick to "strive for five, no more than ten" taps per lateral line for best performance.

Although short distances across flat areas are permitted, and sap can be "pushed" uphill to some degree in both 3/16" or 5/16" systems, this will affect the vacuum level in areas around the flat or uphill area, and should be avoided if possible. A downhill slope

after the flat area will produce the best results. Pumped vacuum systems will ameliorate the negative effects to some degree, and are generally required in most instances where sap ladders are needed.

The achievable vacuum level on either 3/16" or 5/16" tubing is strongly affected by leaks in the system. Tubing systems using 3/16" lines are particularly sensitive to leaks. Thus, it is critical that any type of vacuum system be monitored carefully so that leaks are detected and corrected quickly to achieve maximum vacuum and maximum sap yields. Pumped and hybrid systems hold some advantages in that leaks are more easily detected through the observation of small rapidly moving bubbles. Leaks are more subtle and can be considerably more difficult to find in pure gravity vacuum systems until one is more familiar with the

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signs of a leak.

Sanitation is another important factor in tubing systems. In the decision whether to use 3/16" or 5/16" tubing, one important distinction is that recent research seems to indicate that 3/16" tubing requires flushing to maintain high long-term yields. Although other strategies such as annual spout replacement, use of CV adapters/spouts, and periodic replacement of drops can greatly reduce the drop off in yield due to sanitation-induced taphole drying in 5/16" tubing systems, 3/16" systems seem to be more strongly affected by such losses, possibly due to the higher amount of backflow that can occur in 3/16" tubing. At this point, the best recommendation is that 3/16" systems should be flushed each year, at least with clean water, but preferably with an approved sanitizer first followed by subsequent rinsing (or letting the first flush of sap in the following season to run on the ground). If it is impossible to flush the tubing system, then producers should probably use 5/16" tubing. More research on this subject will be conducted over the next few years to assess whether other sanitation methods can be helpful. At this point, changing spouts annually to maintain high yields, as is currently done by many producers, does not appear to be as effective in 3/16" tubing systems as it is in 5/16" systems.

Finally, producers have asked whether using 3/16" tubing drops into buckets would be helpful. In general, any benefit would be marginal. When using a dropline, the spout would probably be placed a bit higher on the tree than a bucket normally would be hung in order to gain height to generate vacuum. Any vacuum gained by a 3/16" dropline in this way would there-

fore be offset by the decreased pressure head in the tree due to the height of placement of the taphole. The bottom line is: you can't cheat physics.

*Timothy Perkins, Ph.D., Director
University of Vermont Proctor Maple
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Henry Marckres: Retiring After Decades of ‘Lovely Days’ in Maple

Henry Marckres traces his fondness for maple syrup back to when he was three years old. His father was a buyer for bulk syrup and he would travel with his dad when he went out at night to grade syrup from farmers he was buying from, and Henry would always get a taste. Now he’s retiring from his role as Consumer Protection Chief and Maple Specialist at the Vermont Agency of Agriculture, Food and Markets, after 34 years and tens of thousands more tastes of maple syrup.

In his early 20s Henry was a sugarmaker himself, with an 1,800 tap operation in Albany, VT. He began working with the state as a field inspector in 1984, and while those in the maple industry have known Henry primarily as a maple expert, his position as Chief of Consumer Protection for the State of Vermont has meant he has been in charge of all weights and measures for the state, from gas pumps to grocery store scanners. His portfolio has also included a wide range of agricultural products, like apples, strawberries, and potatoes, and he is a USDA-certified shell egg grader, having completed the four-week course and learning by candling more than 5,000 eggs a day.

But maple has always been his fa-

vorite part of the job, he says, and he has become an integral part of the industry, from his teaching to his contest judging to his regulatory oversight.

Educating before regulating

As a regulator, Henry is well known in the maple community for his “dogged protection of pure maple,” says David Marvin of Butternut Mountain Farm, but not in a way that made producers worry about working with him. “I never had any experience with

him that was unfair or unwarranted. His working style is very collaborative – he’s not out to get you, he’s out to make you a better sugarmaker.”

“He approaches his work as a regulator as ‘how can I help you fix that?’ not ‘I’m going

to slap your fingers” agrees Westfield sugarmaker Jacques Couture.

When the maple industry was focused on addressing the challenge of lead in syrup in the 1990s, Henry played a key role, recalls Leader Evaporator President Gary Gaudette. “He came up with a lot of the suggestions that we ended up implementing, and helped people get rid of equipment that was causing problems. He wasn’t focused on enforcement as much as he was trying to support the industry.”

And even those who Henry has had



Henry grading entries at the 2016 NAMSC contest in Pennsylvania. (Mark Isselhardt)

to take corrective action with have become familiar with his signature greeting: "It's a lovely day!" he proclaims. "It always cheers me up when I hear him say that," says Gaudette.

Learning from experience

Henry is well-known for the stories he tells at workshops and conferences of his misadventures with off-flavored syrup. There was the syrup that tasted like burnt rubber, a characteristic that he traced back to the sugarmaker using tires for fuel in his evaporator. Another syrup's odd-flavor turned out to be caused by the liquid manure tank that had been used to transport sap. There was the syrup entered into a contest in a jar that was stained an odd shade of brown, which the producer admitted was from the canned meat the container had been used for previously. A sugarmaker who added battery acid to his back pan to 'lighten' the syrup managed to produce a syrup with a ph of zero that needed to be handled with full protective gear. And after shaking out a jug of syrup that simply "wouldn't pour out of the bottle" Henry discovered a saturated mass of fiberglass insulation, along with droppings left behind by the mice who had dragged the material into the jug to make their nest before it was filled with syrup. Another memorable day for Henry was spent grading bulk syrup coming into Maine from Canada when he tasted 932 samples, drinking close to a half gallon of syrup that day.

While one might not think of syrup

grading as a hazardous career, Henry's history of hospitalizations suggests otherwise. Mistakenly tasting a bottle of glycerin that was in a syrup jug was the first time he required medical attention. Then there was the time he ended up in the hospital after tasting the product of a sugarmaker who, it turned out, had used muriatic acid – paint stripper – to clean his reverse osmosis membranes. "People used to do some awfully strange things to syrup," he says.

Those experiences, and many more less life-threatening ones, are a significant part of Henry's immeasurable contribution to the maple industry, since each one led to bad syrup being kept away from consumers, and to sugarmakers learning important lessons about how to properly make quality products. He also played a key role in halting a number of instances where adulterated and mislabeled syrup was found on store shelves, including helping to prosecute two cases where individuals went to prison.



Henry tasting an entry at the 2016 Vermont Maplerama. (Mark Isselhardt)

Henry's role as a judge for maple contests in nearly every state and province has also been a significant contribution to the industry, particularly because of his commitment to following up with producers when he notices off-flavors or other telltale signs of problems with their operations. "Judging used to be more challenging," he says "because people would really confront you if they didn't win. It's not as bad now, and it's a great

Henry continued on page 29



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Henry: continued from page 25

way for people to learn about how to make the best syrup they can."

Fortunately, and thanks in no small part to his own work, incidences of off-flavored or improperly produced syrup have declined significantly in recent years. The most common off flavors he finds now are caused by organic de-foamers – they don't work as quickly as non-organic, he explains, and so users often add more than they should – and by sugarmakers not knowing how to detect metabolic and buddy flavors.

"I consider him the standard palate for syrup flavor, whether it's good or off-flavored syrup, and in that capacity I rely on him quite heavily for research on syrup flavor," says Dr. Abby van den Berg, a researcher at the Proctor Maple Research Center. "There is simply no one that has a more comprehensive knowledge of and experience with syrup flavor."

Another part of Henry's contribution to the reduction of off-flavors was his work as one of the founders of the International Maple Syrup Institute Maple Grading School, and his ongoing participation in the program as a teacher. Hundreds of sugarmakers, packers, educators, regulators, and inspectors have taken the course since it began in 2004, learning how to detect and pre-

vent off-flavors. The course has been offered in nine states and three provinces, with producers ranging from a Brooklyn, New York resident who tapped one tree, to sugarmakers with tens of thousands of taps. Henry says that the school has been "one of the most enjoyable parts of my career," and that he will continue in his role as educator, offering the program in more states and provinces in the coming years. "The grading school should really be mandatory – education is key, particularly

with new sugarmakers," he says. "Most of them are very eager to learn."

Perspective

"It's amazing to me to see the growth in the maple industry that has happened in the last 10 years," says Henry. "In the past when we had good production years the market didn't catch up, but now it seems like everybody is working together and the markets are doing well."

Another positive trend he has seen in the industry, he says, is "more concern and caring about the fact that maple is a food product. That's a good thing, because consumers look at maple as a healthy, special product, and having producers value quality and safety helps to increase the market and increase customer satisfaction."



Henry had some medical issues after tasting one unidentifiable off-flavored batch of syrup. The horns were later surgically removed.

Henry continued on page 31

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Henry: continued from page 29

As for challenges facing the industry, Henry cites the need for additional attention to marketing efforts, so that demand keeps pace with increased production. He also says that the cost

of new equipment and of land is an ongoing challenge for sugarmakers. "There will always be challenges," he says, "but the industry seems very well prepared to deal with them."

Thoughts on Henry Marckres

Henry "Lovely Day" Marckres is a great man who I, and many others, hold in the highest regard for his knowledge, his eagerness to help all, and his ability to deliver the information that is understandable to all audience levels. Henry has been such an advocate for the maple industry and has carried the industry through many transitions and changes. His calmness and ability to deliver the knowledge in an understandable manner are gifts that we all should strive to emulate. Henry has been a friend to all the maple industry, not just in Vermont. His dedication and hard work will be missed and felt across the entire maple industry. Henry and I formed a friendship 17 years ago and it's a friendship that I cherish all these years later. He is as great of a friend as his great work in all things maple.

- Dr. Gary Graham, Ohio State University

Henry has been a hero to the maple industry for over thirty years. He has willingly placed himself in between enforcement actions, bureaucracy, consumers, and producers in order to create the best solution for everyone. He has helped support both consumers and producers. When great ideas go bad suddenly, as in the case of high lead levels from solder or toxic plastic tubing, Henry has been there to connect with scientists, legislators, the media,

equipment companies and others who have the interests of the industry and the consumer at heart. He has defended the image of pure maple syrup and works tirelessly to educate producers about how off-flavors develop and how that can be prevented with correct production practices. It is not easy to be the go-to-guy but Henry has never complained or dodged from the responsibility of protecting the industry and the consumers who support the industry.

- Dr. Kathryn Hopkins, University of Maine

Throughout the time I've known him, Henry has proved to be an extremely effective and capable leader in the maple industry. He blends humor with important lessons, which makes the bite of regulation a little less unpleasant. He always tries to educate and work with producers first, rather than impose rules and dictate. However, when needed, he steps in assuredly to correct things that need fixing. A few other important life lessons I've learned from hanging around with Henry:

1. He has a keen sense of when a meal is about to be served.
2. Never miss an opportunity to take a nap during a long car ride.
3. Every day is a "lovely day."

- Dr. Tim Perkins, University of Vermont

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State moves to protect Maine's largest sugar maple plantation

The Maine Department of Agriculture, Conservation and Forestry is seeking to acquire a \$1.2 million conservation easement, through its Land for Maine's Future program, to protect the Big Six sugar maple plantation in Somerset County.

Maine Public reported the agency is the lead applicant for the 23,600-acre swath of timberland, which accounts for about a quarter of the state's maple syrup output. Much of the maple production at Big Six is done by Canadian syrup producers.

The Trust for Public Land is a co-applicant for the easement.

Land for Maine's Future Director

Sarah Demers said it's not unusual for the state to partner with other organizations to apply for LMF funds.

"The state does not privately fundraise and typically does not have dedicated funds available to cover the costs associated with an appraisal, survey, environmental site assessment, etc., which can total hundreds of thousands of dollars," Demers wrote.

In May, the Bangor Daily News reported that Big Six owner Paul Fortin had plans to cut down the sugarbush for timber if it didn't receive a conservation easement. Fortin bought Big Six in late 2012, purchasing it from Land-Vest, a Boston company with land holdings across the U.S., including old timberland in Maine.



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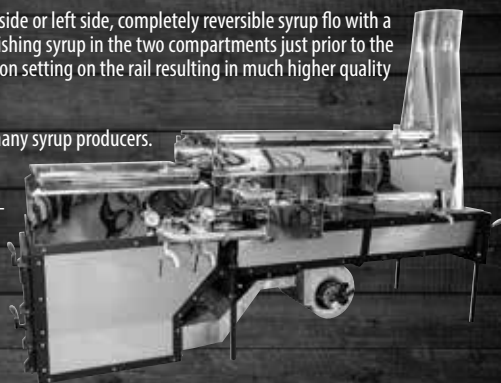
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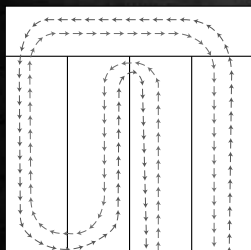
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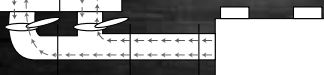
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Trade deal sees Canadian maple syrup prices cut by 8% in Britain

The price of Canadian maple syrup could soon fall by 8% in Britain thanks to a new trade deal between the EU and Canada.

The Comprehensive Economic and Trade Agreement (CETA) means that the EU is poised to axe the 8% duty on Canadian imports to the UK. The provisional application of the deal came into force on September 21 and could mean a considerable saving on the price of Canadian premium maple syrup.

The European Parliament approved CETA in February, removing tariffs on industrial products traded between the EU and Canada, and liberalizing the trade in agriculture of food products such as 100% pure Canadian maple

syrup.

In 2016, the Federation of Quebec Maple Syrup Producers (FPAQ) reported a 6% increase in exports to the UK with 90% of Canadian maple syrup sourced from the province of Quebec.

FPAQ President Serge Beaulieu said: "The UK is a booming market for maple products from Quebec, with chefs and consumers falling in love with the taste, purity and versatility of maple syrup.

"The fact the CETA deal will see the duty cut by up to 8% is great news for businesses who import maple products."



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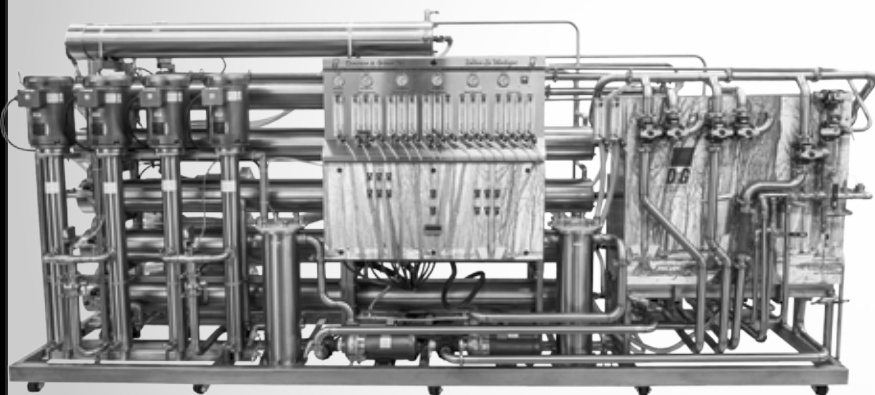
The advertisement features a large, black, cylindrical tubing spout with a flared end, set against a dark background. Below it, a smaller, similar spout is shown. The text is in a mix of bold, serif, and italicized fonts, creating a sense of urgency and innovation.



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Acer Access and Development Program Grantees Announced

On September 29 the USDA announced three grantees in its first round of funding for the Acer Access and Development Program. These are brief summaries of the grantees' projects. Full descriptions are available at <https://www.ams.usda.gov/services/grants/acer>.

Iowa State University of Science and Technology

Moving Production of Maple Syrup as a Sustainable Specialty Crop in the Upper Midwest Forward through a Suite of Educational Platforms Geared Towards New and Established Maple Producers

Iowa State University of Science and Technology will assist and educate established engaged and unengaged producers, new or expanding hobby producers, and non-producing land-owners that wish to make their woodlots available for maple production. Project staff will specifically support the maple producing association members and non-members of six Midwest states (Minnesota, Wisconsin, Michigan, Iowa, Indiana, and Illinois) as well as in the Inter-Tribal Maple Syrup Producers Cooperative with direct, face-to-face learning opportunities, workshops, and field based events all while offering educational outreach to the entire maple production region through written, online, and video platforms.

University of Vermont and State Agricultural College

Outreach to Improve Yields and Profits for Maple Producers

Project staff will develop a maple industry web portal to serve as an information hub for disseminating education to maple producers on best management practices (BMPs) to increase yields per tap, total production, and provide positive net economic returns. Educational videos will also be produced about maple production best management practices to increase yields per tap, total production, and net economic returns. Project staff will conduct research in critical areas to identify new maple tapping practices to increase and maintain yields and production given changing seasonal conditions and specific weather challenges. This research and information about best practices will be presented at maple conferences, meetings, and open-houses throughout the maple-producing region of the United States.

West Virginia Department of Agriculture

Expanding the Maple Industry in West Virginia and the Central Appalachian Region through Research and Education

Project staff will investigate the feasibility and establish a "Southern Syrup Research Institute" at West Virginia University. Additionally, staff will work with producers to develop an identifiable marketing strategy for maple syrup and maple products produced in the central Appalachians. Efforts will be made to expand the production of maple syrup and maple products in WV and the central Appalachians through the development of online extension and training programs.



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International Maple Syrup Institute News

Dave Chapeskie R.P.F. Executive Director, IMSI

The IMSI Board of Directors held its quarterly meeting at the Sheraton Hotel in Ottawa on August 18. Following are some highlights from the meeting.

Supply, Demand and Pricing of Maple Syrup

Production of maple syrup in 2017 was similar or higher than the 2016 level in many jurisdictions. In Quebec, the 2017 production exceeded 2016 output by 4 million pounds.

Prices of retail maple syrup have remained stable but competition is strong, especially among packers/processors. Recent company mergers suggest that there is a move to offset tight profit margins with increased economies of scale. For example, over the past year Great Northern Maple and Highland Sugarbush were purchased by L.B. Maple Treat. More recently, L.B. Maple Treat was purchased by Lantic Sugar to add a natural sugar line to that company's sugar products spectrum. Some expect this trend towards mergers to continue into the foreseeable future.

There is growing concern regarding whether or not increases in demand will be able to keep up with production increases over the next few years. This points to the importance of continuing to develop new markets for maple syrup both in North America and overseas, and is supportive of the IMSI's efforts to help bolster promotion and marketing efforts. For example, with the fast-paced lifestyle of young people, there is ample opportunity to work towards full integration of real maple into fast food offerings as well as

restaurant menus.

Some of the main factors which could affect the North American maple industry going forward are the level of growth in markets, supply versus demand, the Canada-US exchange rate, and trade agreements. Efforts directed at helping maintain a reasonable balance between supply and demand will be especially important over the next few years.

Development of an International Slogan and Messaging Themes for Maple Syrup

The IMSI continued work on the development of an international slogan and the identification of messaging themes to be used in the promotion and marketing of maple syrup. The slogan is intended for use as an overall brand in website, literature, and social media approaches.

The IMSI Slogan and Messaging Themes Task Team identified five potential overarching slogans for the North American maple syrup industry and solicited input on these slogan options in a round of consultations in 2017. The IMSI also requested input on suggested maple messaging themes, which the IMSI and individual IMSI members should place emphasis on in their promotion and marketing efforts in the future. The results from these consultations are available from the IMSI's Executive Director upon request. At the meeting in August, on the recommendation of the IMSI Task team, the IMSI Board of Directors selected a final overarching international slogan for

IMSI continued on page 41

Think



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the maple syrup industry, which can be adapted for different real maple products. The slogan is “Real Maple Syrup – A Natural and Nutritious Choice.”

IMSI Launches Social Media Campaign

In May of 2016, the IMSI Board of Directors voted to engage social media to help advance objectives. Brad Gillilan from Leader Evaporator is leading the IMSI’s Social Media Task Team that has IMSI membership representation from both Canada and the United States. The IMSI’s social media plans are consistent with the Institute’s approved Marketing Implementation Plan which is a very important reference. A planning document has been prepared to guide the IMSI’s engagement in social media. A detailed implementation plan outlining a set of guidelines for launching messages strategically was also developed and the IMSI media campaign was launched in September of 2017. Messaging themes will be altered monthly or bi-monthly throughout the year. The intent is that consistent messaging will be made available to IMSI members and others who have a social media presence and following.

September marks the start of the IMSI’s new Social Media Promotion and Marketing Initiative titled “Tapping Into the Passion for Maple.” A PowerPoint Presentation highlighting efforts of the IMSI Social Media Task Team is now available and is posted on the IMSI’s website www.internationalmaplesyrupinstitute.com We encourage you to access and share the PowerPoint with maple syrup producers, maple

packers and others.

The IMSI has initiated a Facebook page (facebook.com/internationalmaplesyrupinstitute) and has agreed to key themes for three-month periods which will be refreshed on an ongoing basis. For example, for the next three to four months, the messaging themes will be “The Colours of Maple” and “Sharing Maple with Family and Friends.” This is intended to take advantage of the upcoming fall colour season and then the Thanksgiving and Christmas periods. Weekly posts on specific topics related to those themes will be posted. Maple associations, maple packers and others are encouraged to utilize the material and themes as shared by the IMSI, but they are not required to do so if they choose other approaches.

Brad Gillilan will be the IMSI’s keynote speaker describing the social media initiative at the Annual meetings of the IMSI and the North American Maple Syrup Council in Levis, Quebec on Monday, October 23.

IMSI Standardized Maple Grades and Nomenclature

The state of Wisconsin approved regulatory amendments aligned with the IMSI’s proposal for standardized grades and nomenclature in 2017. Ontario is moving through a transition year towards full implementation on January 1, 2018. The Federal governments in both Canada and the United States as well as all states and provinces with maple grading regulations have now adopted the new grade standard. While the new international grading and classification standard has now



been formally adopted in regulation, maple producers and packers/processors are strongly urged to reference the federal and state/provincial regulations regarding the very specific labelling requirements. For example, New York State is currently requiring that the word “color” be included as part of the label description within that state.

In general, adoption and implementation of the new grade standard for maple syrup has been smooth and feedback to the IMSI has been very positive. A few concerns have been expressed regarding very specific provisions in individual regulations.

Working to Harmonize Nutritional Information on Maple Syrup Product Labels

In 2016, concern was expressed that current nutritional labelling of maple syrup is quite variable and that it would be very advantageous to develop harmonized labeling specifications that are ready for the roll out of new FDA labelling requirements. Harmonization would set one standard for industry application in the United States, removing inconsistencies and some confusion, which is associated with existing labels. The IMSI has been facilitating follow-up with maple quality assurance specialists employed by maple packers and maple researchers from both Canada and the United States, with the aim of coming up with standardized nutritional label specifications for maple syrup and maple sugar. Draft generic nutritional facts panel label provisions have now been developed by the maple industries’ quality assurance specialists with input from maple researchers at UVM, Proctor, and Centre Acer. Some details are still being worked on, such

as attempts to align the serving size for maple syrup. Consultations with the federal governments in both the United States and Canada are also continuing.

National Labeling Regulations

US: FDA

The IMSI has been working with the FDA regarding the “Added Sugar” line requirement on the new FDA Nutritional Facts Panel (NFP). Since the FDA was unreceptive to providing an exemption for maple syrup to the added sugar requirement, a task team led by Emma Marvin of Butternut Mountain Farm developed options designed to explain to consumers what added sugar means (i.e. added to diet, rather than added to product) in case we cannot achieve an exemption to the requirement from FDA. More recently the IMSI formally requested a 5-year delay for the FDA NFP compliance dates. Subsequently FDA announced that there would be an extension and that details would be announced in the Federal Register at a later date. In August of 2017 the IMSI developed a formal position statement on the FDA’s Added Sugar requirement, which is available from the IMSI’s executive director upon request. At the same time, the IMSI formally advised FDA of the industry position and urged them to announce the length of the NFP extension as soon as possible so that producers, processors/packers, and buyers of maple syrup understand and can plan for the FDA’s NFP labelling compliance requirements.

Canada: Health Canada

Health Canada is proposing to put warning labels on the Front of Package (FOP) for all products that have above the daily value (DV) of sugar that humans should consume for a healthy diet. It is unlikely that the Canadian

federal government will move away from asserting that sugar is in maple syrup. What is most troublesome is the method proposed. Health Canada (HC) was proposing, in earlier consultations, to put a warning stop sign on the FOP exclaiming the dangers of eating the product, similar to warning labels on cigarette packages and bleach. The IMSI, the Maple Industry Council, and the Canadian Industry Advisory Group (CDN Round Table), have been active in attempts to convince the Canadian government to modify this proposed approach to labelling.

North American Maple Contest Guidelines

The IMSI has worked cooperatively with maple educators in Canada and the United States as well as the North American Maple Syrup Council to prepare contest guidelines for use by judges at contests in both Canada and

the United States. In particular, there was a need to ensure that the contest rules were aligned with the new international classification and grading system for maple syrup. The new maple contest and judging guidelines are increasingly being applied in the different states and provinces. A copy of the new North American Maple Judging Guidelines can be accessed on the IMSI's website www.internationalmaplesyrupinstitute.com. For further information contact the IMSI's executive director at agrofor@ripnet.com.

Wisconsin Winter Maple Institute

Yves Bois, the general manager of Centre ACER and president of ACER Division Inspection Inc., will be the keynote speaker of the Wisconsin Winter Maple Institute in Wausau January 12-13, 2018. <http://www.wismaple.org/>

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Maple syrup producers take note! There are a few suppliers promoting and selling seedlings of high-sugar parent trees. Only vegetative propagation (cuttings or micro-cuttings; tissue culture) will reliably produce the sweet sap trait in the offspring.

For more info, please contact Connor Hardiman, at St. Lawrence Nurseries, LLC. Connor@stlawrencenurseries.com (315) 261-1925

Maple at the New York State Fair

Melina Mandell (*right*) of Wohlschlegel's Maple Farm in Naples, New York, offers up the state fair sundae at the New York State Fair – maple softserve ice cream topped with bourbon barrel-aged maple syrup, maple sugar crystals, and a maple leaf-shaped maple sugar candy. Other new products in the New York State Maple Producers Association's booth this year included maple cream soda, maple ginger ale, maple scones, and maple swizzle sticks. Sales were up 9% over 2016.



Massachusetts Maple at the Big E



The Massachusetts Maple Producers Association operated its booth again in the Massachusetts State Building at the Big E in West Springfield, MA. The two-week fair welcomes visitors from all over the northeast.

The booth offered maple syrup, candy, and cream, as it has for decades. Staffed by sugarmakers who volunteer their time, the booth gives the As-

sociation an excellent opportunity to educate the public about how maple syrup is made, how it can be used, and how purchasing it from local producers helps support farms and the local economy. This year's popular offerings also included maple cotton candy, maple lemonade slushies, and maple cream cones. The booth also gave out samples of maple mustard and maple salad dressing, to teach fairgoers how versatile maple syrup is. Cream and candy are made on-site in view of customers.

Associations from Vermont, New Hampshire, and Maine also have booths at the Big E in their respective state buildings.

Maple at the Indiana State Fair

Each year the Indiana Maple Syrup Association (IMSA) is a vendor at the Indiana State Fair. This provides the opportunity to educate fair attendees on how maple syrup is produced. Syrup is available for tasting and purchase. Maple cream and maple sugar are also sold. The revenue from syrup sales keeps membership dues low and pays for IMSA's activities and administrative costs for the year.

The fair runs for the first two weeks of August, and thousands attend. The crowd is not limited to just residents of the Hoosier state. Visitors come from surrounding states and foreign countries as well. This year the IMSA volunteers who manned the Sugar Shack had the opportunity to educate visitors from China, Japan, Brazil, Germany, France, England, Ireland, Ukraine, Mexico and Canada on the production and health benefits of pure maple syrup.

Preparation for the state fair begins several months in advance. In May, IMSA members gather to bottle the

syrup. This is an all-day affair, which provides the opportunity to visit with fellow producers and learn how the sugaring season turned out in different parts of the state. This year IMSA bottled 600 gallons of syrup in sizes ranging from half-pint to gallon jugs. The syrup is then divided up for transport and storage until August. Several members bring utility trailers for this task.

The day before the fair starts, volunteers meet at the fairgrounds in Indianapolis to clean the Sugar Shack, unload the syrup from the trailers, and stock the shelves. With many helping hands, this job gets done fairly quickly given the volume of syrup and cream to be prepared for sale.

The weather was generally cooperative this year, which resulted in larger crowds from prior years. Statistics from the state fair organizers indicate over 900,000 people attended this year, which is a 24% increase from 2016. As a result, IMSA had very good sales revenue.



The Hoosier Sugar Shack is a popular stop for fairgoers.

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News from Quebec: New Quotas and Open House at the Strategic Reserve

New Quotas for Young Entrepreneurs

As a result of the historic June 7, 2016 decision by Quebec's Régie des marchés agricoles et alimentaires concerning the issue of new quotas, 40,000 taps are now distributed every year to young entrepreneurs under 40 years old. The Quebec Maple Syrup Producer Federation's goal with those annual allotments is to help the younger generation to establish thriving new maple syrup exploitation. Last year 11 new maple syrup producers shared these specific quotas, distributed by random drawing.

"There is a strong demand for new quotas by new businesses, because our industry is stable and the demand has grown by 8% yearly in the last five years", says Serge Beaulieu, the Federation's President. "Young producers must take their place in the sector and we want to help them do so. That's why we distribute specific quotas for them every year."

In 2017, the Federation received 242 projects and 198 of those were eligible for the annual draw, for a total demand of 1.5 million taps. The official draw was held on August 3, and four new businesses received a total of 41,500 taps. Every drawn project is filled in full, so the Young Entrepreneur Quotas are always a little more than

40,000 taps.

The quotas granted this summer must be used by the 2019 season at the latest. Unused quotas will be recovered. As for the 5 million taps distributed in last year (Young Entrepreneurs, Start-ups and Expansion), the producers have until spring 2018 to install them. For the 2017 season, a third of those were installed.

Open House at World Strategic Maple Syrup Reserve in August

On August 25, the Quebec Maple Syrup Producer Association organised an open house event at the World Strategic Maple Syrup Reserve so producers would have the opportunity to visit this key installation in the province's marketing plan. The 550 attendees had a guided tour of the Reserve by one of our executive staff member, and were invited to discuss with the Federation's elected representative at the corn roast held just outside the Reserve. Producers and representatives alike were very pleased with this opportunity.



North American Maple Syrup Council Research Fund

The NAMSC Research Fund funds research that supports and advances the maple industry. In recent years we have given tens of thousands of dollars to projects that have developed innovative practices and technologies, helped deepen our understanding of the science of sugarmaking, and promoted the products we all make.

You can make a difference!

Concerned about the future of the Maple Industry? Make a contribution to support the maple research we fund. One easy way is to pledge to send \$.01 per container to the NAMSC Research Fund. Grant recipients are announced at NAMSC Convention each October.

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For more information contact:

Winton Pitcoff, Chairman: PO Box 6, Plainfield, MA 01070
413-634-5728, editor@maplesyrupdigest.org

Joe Polak, Treasurer: W1887 Robinson Drive, Merrill, WI 54452
715-536-7251, fax 715-536-1295, joe@maplehollowssyrup.com

The NAMSC Research Fund is a non-profit, volunteer committee of the North American Maple Syrup Council, Inc.

2017-2018 New York Calendar of Upcoming Schools and Workshops

2017

November 10-11: Lake Erie Maple Expo, Contact: <http://www.pamaple.org/LEME.html>

December 2: Southern Tier Maple Program, Contact: Brett Chedzoy, CCE Schuyler County, Agriculture and Natural Resources, office: 607-535-7161; cell: 607-742-3657; bjc226@cornell.edu

December 9: Onondaga County Maple School, Contact: Kristina Ferrare, Cornell Cooperative Extension of Onondaga County, The Atrium, 2 Clinton Square, Syracuse, NY 13202, 315-424-9485 ext 231, 315-424-7056 – fax, www.ExtendOnondaga.org

2018

January 5-6: New York State Maple Conference, Verona NY, Contact: Keith Schiebel; kschiebel@vvsschools.org or go to cornellmaple.com

January 13: Western NY Maple School, Contact: Deb Welch, Cornell Cooperative Extension of Wyoming County, 401 North Main Street, Warsaw NY 14569; 585-786-2251; djw275@cornell.edu

January 19: Lewis County Maple Production for the Beginner, Contact: Michele Ledoux, Cornell Cooperative Extension Lewis County, 5274 Outer Stowe Street, P.O. Box 72, Lowville, New York 13367; 315-376-5270; mel14@cornell.edu

January 20: Lewis County Maple School, Contact: Michele Ledoux, Cornell Cooperative Extension Lewis County, 5274 Outer Stowe Street, P.O. Box 72, Lowville, New York 13367; 315-

376-5270; mel14@cornell.edu

January 26: Maple School at the Miner Institute, Contact: Michael Farrell, Ph.D., The Henry II and Mildred A. Uihlein Director of The Uihlein Forest, 157 Bear Cub Lane, Lake Placid, NY 12946, mlf36@cornell.edu Office (518) 523 9337 Cell: (518) 637 7000

January 27: Maple Expo- St. Lawrence County, Contact: Cornell Cooperative Extension, 1894 State Highway 68, Canton, NY 13617-1477; 315-379-9192

Lake Erie Maple Expo Turns Six

Come join your fellow maple producers at the 2017 LEME, November 10 and 11, 2017 at Northwestern High School in Albion, PA. On Friday the LEME will present a series of four-hour workshops where producers have the opportunity to focus on one specific topic. One will be a “Woods Walk and Talk” with Glenn Goodrich, about the basics of sugarbush layout and design. Cornell University Extension Forester Dr. Peter Smallidge will also present a workshop on sugarbush management.

This year’s boiling workshop will be presented by Kevin Lawyer from the Leader Evaporator Co. NY Maple Specialist Stephen Childs to discuss “ROs For the Small Producer.” Les Ober from OSU Extension along with Ohio maple producer and maple products judge James Miller will offer “Maple Grading and Quality Assurance: How Can It

LEME: continued on page 50

LEME: continued from page 49

Help You?" Other workshops include a beginners workshop with Laura Dengler and Mark Lewis, a museum talk with Janet Woods, and a confections workshop with Jake Moser. The registration for the workshops is separate from the Expo registration. The cost to attend a four-hour workshop is \$30.00, which includes lunch.

After the workshops, the program shifts back to Northwestern High School where the tradeshow will open at 5:00 p.m. The program will include maple equipment and more maple equipment, along with a panel discussion at 6:30 p.m. Panelists discussing "Where is The Maple Industry Headed?" will include Glen Goodrich of Goodrich Maple, Carl Lapierre from

Lapierre Maple Equipment, and Joe Orefice, newly named Director of Cornell's Uihlein Forest Research Center.

Friday morning the workshops will start at 10:00 a.m. at different venues across the area. Friday evening the doors to tradeshow open at 5:00 p.m. and the show will run until 8:00 p.m. The evening program will begin at 6:30 p.m. in the Auditorium. On Saturday the trade show will open at 8:00 a.m. followed by concurrent seminars where producers will be able to choose from over 40 different topics. The cost of both Friday evening and all day Saturday programs is \$40. Lunch is included. For complete registration information go online to the Northwestern Pennsylvania Maple Producer Association website: www.pamaple.org



Matthew 6:9-13



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list NAMSC as the beneficiary of your bank accounts, retirement plan or life insurance. Contact your attorney for information on how to revise your will, or your financial institution, plan administrator, or life insurance agent for the procedures required to revise your beneficiary designations.

The information needed for your legal documents is: North American Maple Syrup Council, PO Box 581, Simsbury, CT 06070.



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