# Maple Syrup Digest

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# *MAPLE SYRUP DIGEST*

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# GREETINGS FROM YOUR PRESIDENT

I hope everyone had a joyous and relaxing Holiday Season because a new maple season is fast appoaching us. In the past you never heard much talk about the up-coming season until late February or early March but now I hear folks talking about sugaring all year round. Maybe that's because of all the expansion going on and the high demand we're now seeing for maple syrup all around the world. The way we produce maple syrup has definitely changed for many of us over say the past ten years and it sounds like there may be even more amazing changes coming in the next few years. Many of these changes if implemented correctly will pay for themselves over a short amount of time but you first have to decide what change(s) to make, how to do it correctly, then implement these changes and this all cost money so you want to do it correct the first time. Therefore the need for good independent research on these new products or concepts is needed now more than ever but to do this research it also costs money. I've always believed that you're going to pay for this information one way or another so that's why it's so important for all of us involved in this maple industry on both sides of the border to support the NAMSC Research Program and donate 1 penny for every container you purchase. As more of us come-on board and join this program the more we share the cost to have this research done and the more research we can get done in a shorter amount of time. I think you'd have to agree that the more you know about something the quicker and easier it is to make a decision but most importantly it should also save you money in the long run because you did it correct the first time.

When purchasing your containers this spring please ask your dealer if they are a member of the NAMSC Alliance Program, if not please ask them to think about joining. If you're a large packer of maple syrup and buy your containers directly from the manufacturer you can still join us and voluntarily send in your 1 penny per container, when we all join together and support research, we'll all win! At the present time I would like to thank Hillside Plastics and D&G, USA for choosing to be a partner in this new program but we would also like to invite other equipment dealers and container manufacturers as well as state and provincial maple organizations, packers and individual sugarmakers to also join our Alliance Program. For more information on this program and the benefits you receive for being a partner please visit our web site at www.northamericanmaple.org or contact Research Committee Chair Mike Girard at mgirard@simscroft.com or call 860-408-4667.

Rick Marsh

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# IMSI NEWS

*By: Dave Chapeskie, R.P.F., Executive Director, IMSI*

The year 2009 will be remembered as a very good one for the maple syrup industry. A bountiful maple crop in 2009 was needed to satisfy pent up market demand after several years of relatively low yields. Attention has now turned to preparing for the 2010 maple production season. While the supply of syrup was generally adequate to meet market demand in 2009, the supply and demand scenario for 2010 depends in large measure on crop yields and quality achieved during the 2010 production season. A good crop in 2010 will help ensure that demand for syrup in regional and international markets is supplied.

In recent issues of Maple Digest, it was reported that IMSI was stepping up vigilance regarding potential adulteration of maple syrup in the international marketplace. In the fall of 2009, a number of syrup samples suspected of adulteration were submitted under the IMSI sponsored program for laboratory analysis. The results from this analysis are expected in February 2010. IMSI members and others are strongly encouraged to keep a watchful eye in the marketplace for any syrup samples suspected of adulteration.

Research to develop operational techniques to determine whether or not syrup is adulterated is currently being conducted by Centre Acer in Quebec. This research may lead to the development of tools and methodology which can be utilized by producers and packers of syrup to determine if syrup is adulterated with a range of sugars. IMSI in cooperation with Proctor Maple Research Centre has completed some initial investigation regarding the current potential of laboratories in the United States and Canada to analyze syrup samples for adulteration.

Since IMSI's Annual meeting in Bar Harbor, Maine the Chair of IMSI's Standardized Maple Grades and Nomenclature Committee has updated the proposal for standardized maple grades and prepared a draft plan for implementation of standardized grades and nomenclature. The updated proposal and draft implementation plan were distributed to IMSI members in late December 2009. The implementation plan recommends transition to new maple grades and nomenclature over a three year period. In 2009, important items in the implementation plan include planning for the transition to standardized international grades, further raising maple stakeholder awareness regarding details of the standardized grades and nomenclature proposal, preparing submissions supporting the changes for regulatory bodies in Canada and the United States.

IMSI is currently working on revising their use of Logo Policy and Guidelines as well as in developing a Code of Ethics and Standards of Practice for IMSI's Membership. Members of IMSI's Strategic Planning Committee will be engaged in reviewing these materials once a draft has been prepared.

A number of provincial and state associations have published information on the nutritional and health ben-

efits of pure maple syrup either on their websites or in hard copy booklet format. A few examples of Associations which have published materials are provided below:

**Federation of Quebec Maple Syrup Producers (website and booklets)**
http://www.siropderable.ca/Afficher.aspx?section=7&langue=en

**New Brunswick Maple Syrup Association Inc. (website)**
http://maple.infor.ca/nutritional_facts

**New York State Maple Producers Association (booklet)**
http://www.nysmaple.com/

**Massachusetts Maple Producers Association (website)**
http://www.massmaple.org/

Maple producers and packers are encouraged to access the materials currently published by these and other members of the International Maple Syrup Institute to help them with their promotional and marketing efforts of pure maple products.

Finally, it is important to mention that the next Annual meeting of the North American Maple Syrup Council and the International Maple Syrup Institute will be held at the Arden Park Hotel in Stratford, Ontario from Wednesday October 20th to Saturday October 23rd, 2010. You may contact Dave Chapeskie at agrofor@ripnet.com for a copy of the overall draft program outline for this event as well as an early draft of the technical and marketing speaker program outline. Dave can also provide you with information needed if you wish to place an ad in the Program Booklet for the 2010 Conference event.

# 2010 SAP PRICES

A lot of people have requested that we publish sap prices. What I have found is that sap prices vary greatly depending upon the retail price of syrup.

The retail price of syrup in the Northeast is higher than in the Midwest, hence the price paid for sap is higher in the Northeast. Listed below are sap prices being paid by SOME producers.

Remember these prices are for sap delivered to the sugarhouse.

These prices are intended to be used only as a guide for buying sap and no way intends that they dictate the price for the entire industry.

| sugar | $/gal. | sugar | $/gal. |
|---|---|---|---|
| 1.00 | .050 | 3.40 | .665 |
| 1.10 | .080 | 3.50 | .685 |
| 1.20 | .110 | 3.60 | .705 |
| 1.30 | .140 | 3.70 | .725 |
| 1.40 | .170 | 3.80 | .745 |
| 1.50 | .200 | 3.90 | .765 |
| 1.60 | .225 | 4.00 | .785 |
| 1.70 | .250 | 4.10 | .805 |
| 1.80 | .275 | 4.20 | .825 |
| 1.90 | .300 | 4.30 | .845 |
| 2.00 | .325 | 4.40 | .865 |
| 2.10 | .350 | 4.50 | .885 |
| 2.20 | .375 | 4.60 | .905 |
| 2.30 | .400 | 4.70 | .925 |
| 2.40 | .425 | 4.80 | .945 |
| 2.50 | .450 | 4.90 | .965 |
| 2.60 | .475 | 5.00 | .985 |
| 2.70 | .500 | 5.10 | 1.005 |
| 2.80 | .525 | 5.20 | 1.025 |
| 2.90 | .550 | 5.30 | 1.045 |
| 3.00 | .575 | 5.40 | 1.065 |
| 3.10 | .600 | 5.50 | 1.085 |
| 3.20 | .625 | | |
| 3.30 | .645 | | |

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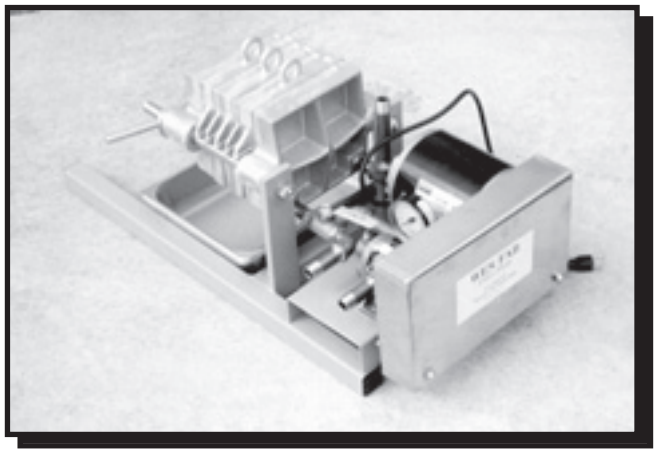

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# Antimicrobial Silver in Maple Sap Collection

*By: Timothy D. Perkins*
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**INTRODUCTION**

The ability of some metals to inhibit the growth of or to kill certain microorganism is well established. In particular, the use of silver as a method to control microorganisms to maintain water quality has been known for centuries (Landau 2006). Silver coins were added to pots or barrels of water to preserve freshness during extended land and sea voyages when potable water sources were uncertain. Ions of silver (and other oligodynamic metals) work by interfering with the metabolism and reproduction of microbes, resulting in their death. Contact between the microbe and silver-containing material is required to affect surface exchange of ions. Silver does not readily dissolve in water, so there is little or no residual action of silver in solution.

The role of microorganisms in the premature cessation of maple sap flow (taphole drying) has been well recognized for some time (Naghski and Willits 1955). Bacteria, fungi, yeasts, molds and algae can colonize tapholes and sap collection systems, thereby reducing sap flow via a combination of vessel plugging by microbial biomass (Ching and Mericle 1960), or through the normal response of trees to close off the wound (taphole) to prevent microbial spread throughout the tree tissues (Shigo 1965, Walters and Shigo 1978). In both cases, the result is the same: sap flow is reduced and eventually stops.

During the late-1950s and early-1960s, research was conducted to investigate ways to reduce or eliminate microbial contamination and attendant taphole drying in maple sap collection systems (Sheneman et al. 1958, Costilow et al. 1962). A number of different compounds were tried at that time, including paraformaldehyde (PFA), oligodynamic silver, antibiotics, sorbic acid, mercuric iodine, and sodium hypochlorite (Sheneman et al. 1958). Of all the substances tried, ". . . only paraformaldehyde appeared promising for commercial use." (Shenaman et al. 1958). Subsequently, PFA in tablet form was introduced as a taphole disinfectant, and registered by the E.P.A. as an approved pesticide for maple use.

Using PFA in tapholes resulted in increased sap flow, especially in the latter part of the sap collection season, and could result in increases in sap yield up to 96% (Costilow et al. 1962). After a period of use in the maple industry, it was found that PFA interfered with the wound healing response of trees, resulting in greatly increased staining columns and decay, and higher levels of morbidity and mortality in trees in which PFA was used (Shigo and Laing 1970, Walters and Shigo 1978). Consequently, the use of PFA was banned in both the U.S. and Canada, and, as a result, the E.P.A. registration of PFA as an approved pesticide for maple use eventually lapsed.

A review of the role of microorganisms on premature drying of tapholes was

conducted during the Second Conference on Maple Products held at the U.S.D.A. Pennsylvania Laboratory (1953). At that time, a question was raised about the possible use of silver to control bacteria in maple spouts. The answer given was, "The bactericidal property of metals was first investigated some forty years ago and has been of considerable academic interest. However, the effect is of a slight magnitude and of little practical value." (Naghski 1953). Regardless of this conclusion, antimicrobial silver (along with other substances) was investigated by Shenaman et al. (1958). Cotton balls soaked in a solution of "O-Silver" were placed into tapholes and these tapholes were compared with untreated tapholes and tapholes into which other antimicrobial substances were added. O-Silver did not produce a substantial reduction in microbial contamination.

More recently, interest in antimicrobial silver has experienced a resurgence as bacterial antibiotic resistance has increased in medical applications and the desire to find "natural" alternatives to chemicals has increased. Current applications of antimicrobial silver utilize nano-scale technology (microscopic particles) to increase the ion exchange surface area. Minute particles of an inert, inorganic, crystalline (usually ceramic) carrier material is embedded with silver ions and incorporated into the material in which antimicrobial properties are desired. The positively-charged silver ions are attracted to negatively-charged surfaces, like bacterial membranes. In maple, most plastic spouts (typically food grade nylon) are made by an injection molding process, while

tubing is made by an extrusion process. For tubing incorporating nano-silver, there are frequently two layers: an outer layer without nano-silver, and an inner coextruded layer with nano-silver. The nano-silver mixture is simply mixed into the plastic prior to molding or extrusion. U.S. E.P.A. regulations allow a maximum of 2% silver by weight, and, in certain applications, the use of antimicrobial silver is U.S. E.P.A. and FDA approved. Because of the need for contact between the microbe and silver, only the very outmost layer of silver-containing material is effective in transferring silver ions to microbes. Silver embedded beneath the surface of the plastic or on the outer surface that does not come into contact with sap during normal collection procedures does not contribute to the antimicrobial effectiveness of the material.

Because of this new approach to using nano-silver, the fact that PFA has been banned, and the desire to control microorganisms in maple sap collection systems, the University of Vermont Proctor Maple Research Center investigated the use of spouts and tubing containing antimicrobial nano-silver for suitability for increasing maple sap yield.

## 2008 EXPERIMENTS

***Sap Yield Methods.*** During the spring of 2008, we tested fittings and droplines containing antimicrobial silver. Both 5/16" antimicrobial fittings and 5/16" (ID) FlexeleneTM FXAG silver antimicrobial tubing (Figure 1) were purchased from Eldon James, Corp. (Loveland, Colorado). The 5/16" fitting was a standard straight-through tubing coupler fitting that we used as a spout. We did not observe any abnormal leakage around the fitting when used in this way. Henceforth, silver spouts will be referred to as AG spouts and silver-containing dropline will be referred to as AG dropline.

The 2008 treatments were: a) a new Leader spout and 1-year old, used 30P dropline that served as a control, b) a new AG spout (fitting) with 1-yr old, used 30P dropline, and c) a new AG spout with new AG dropline and d) a new Check-valve spout with 1-yr old, used 30P dropline (this treatment was discussed in a prior publication and will not be addressed further in this paper). All used dropline was cleaned prior to use. Each tree received four tapholes, one for each treatment, with a total of 10 trees used.

Droplines were connected vertically to vacuum chambers. All droplines were 36" in length. Chambers were connected to a mainline which was under approximately 22" Hg vacuum supplied through a 5/16" lateral line at the top of the chamber. Trees were all tapped on the same day using the same 5/16" drill bit and tapholes were placed such that the orientation of tapholes for the treatments were rotated from tree to tree. The sap volume in each chamber was measured following each sap flow period, after which the chambers were drained. Sap yield for each period was totaled for the 2008 season.

***Microbial Estimates.*** At two dates near the end of the 2008 sap flow season, sap samples were collected from each chamber for microbial contamination testing using a Charm Sciences, Inc. (Lawrence, Massachusetts)

**Figure 1. 5/16" straight-through silver antimicrobial tubing coupler used as a spout and FlexeleneTM FXAG (silver antimicrobial) tubing used as a dropline. Fittings and tubing were sourced from Eldon James, Corp. (Loveland, Colorado).**

FireFly® ATP Luminometer and Watergiene® swabs. This system provides a rapid estimate of the microbial population of liquid samples. In the lab, Watergiene swabs were immersed into the samples for 30 seconds, then immediately inserted into the luminometer and a reading taken.

***Silver Concentration in Sap.*** Sap collected in the study described above was also analyzed for silver concentration by ICPAES at the UVM Plant Testing Laboratory.

***Tree Wounding.*** An AG spout and a control (food-grade nylon) spout were placed into opposite sides of three small (2.5-3.0" diameter) understory trees as a preliminary study of possible incompatibility of silver with tree healing processes. Taps were removed in late-spring after the sap flow season had ended. Trees were cut during the summer of 2009 to examine the size of the internal wound.

## 2008 RESULTS

***Sap Yield.*** Over the course of the 2008 sap-flow season, the control spout produced 14.3 gal sap/tap, while the AG spout with a used 30P dropline produced 16.6 gal sap/tap, for a total increase of 15.8% more sap than a standard spout at the same vacuum level. The AG spout with new AG dropline pro-

duced 18.2 gal sap/tap, for a 26.6% increase in sap yield. The majority of the increase in sap yield was found in the last week of the season.

Microbial Contamination. ATP luminescence showed that microbial contamination was moderate to high in all sap samples collected near the end of the season, but was significantly lower in sap collected from chambers with AG spouts both with or without antimicrobial droplines when compared to control spouts on both collection dates. In both cases, microbial loads in sap from AG spouts or AG spouts with AG dropline were about 55% that of control spouts.

***Silver Concentration in Sap.*** All sap samples fell below quantification limits of 0.02 mg/l and there was no evidence suggesting higher silver levels in sap from antimicrobial silver containing spouts or droplines. Due to the concentration effect, further testing is necessary to determine whether this is also true of syrup.

***Tree Wounding.*** The internal staining in trees using AG spouts appeared to be approximately the same size as that of a normal spout (Figure 2). In both cases, the size of the wound was quite small, probably due to the slow growth of these suppressed understory trees. Further work with a larger sample size of faster growing dominant or co-dominant maple trees is necessary to validate these results.

**2009 EXPERIMENTS**

Two field studies involving AG droplines were conducted over the course of the 2009 sap flow season. The basic design of both studies was described in

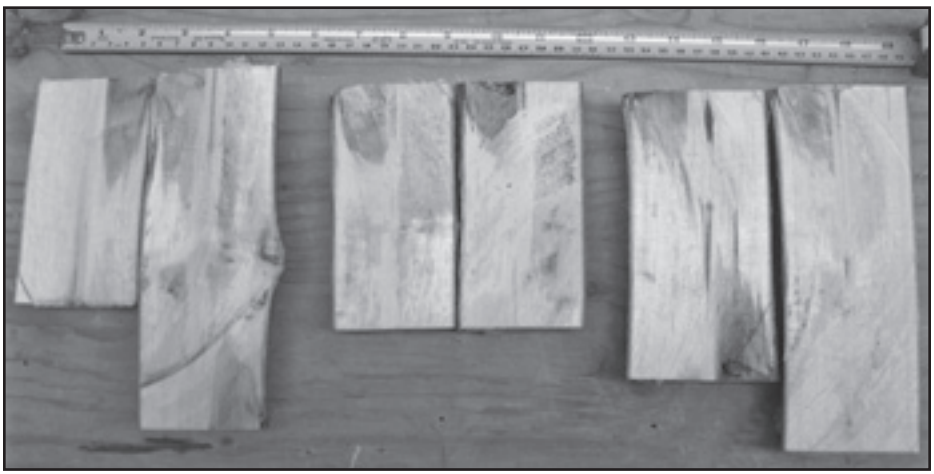

**Figure 2. Internal staining in young maple stems tapped with regular (food-grade nylon) spouts and antimicrobial silver spouts. For each pair of stem segments, the regular spout is on the left and the antimicrobial silver spout is on the right. Note the very small stain pattern, probably the result of the slow growth and suppressed stature of these saplings.**

a previous paper (Perkins 2009), and will only be briefly described except where further detail is required.

***Study 1 Methods.*** Vacuum chambers were set up on 24 trees at the UVM Proctor Maple Research Center. All trees were connected to a common vacuum system operating at an average of 22.5" Hg throughout the 2009 season. Eight trees had 30P droplines that had been used for one year and then cleaned along with new Leader stub spouts and regular spout adapters. Another eight trees also had used 30P dropline and stub spouts, but had new Leader stubs and Check-valve adapters. A third set of eight trees had AG droplines that had been used for one year and then cleaned, along with new Leader stubs and normal spout adapters. Sap volume was measured after each flow period and the chambers emptied. Sap yield for each period was totaled for the 2009 season. Trees averaged 10.4" in diameter at breast heigh (dbh).

***Study 1. Results.*** Sap yield from control trees (new spouts with used droplines) averaged 33.3 gal/tap (Figure 3). Sap yield from treatment trees (new spouts with used AG droplines) averaged 32.6 gal/tap. Patterns of sap

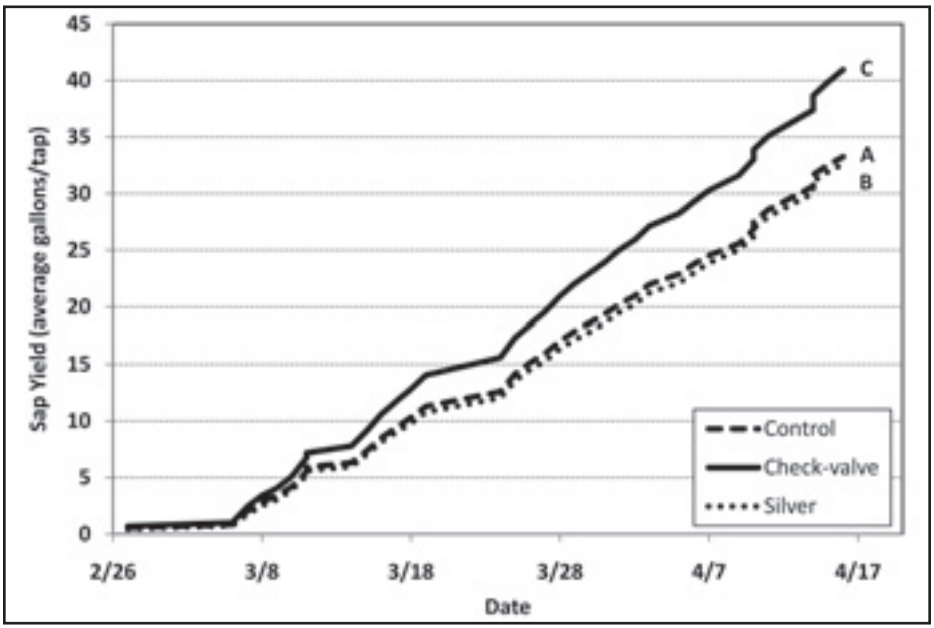


**Figure 3. Seasonal progression of average sap yield (gal/tap) from trees on vacuum chambers during the 2009 season with:**

**A. 2-part spout stub/adapter with 1-yr old used 30P dropline (Control),**

**B. 2-part spout stub/adapter with 1-yr old used antimicrobial silver dropline, and**

**C. Leader Check-valve adapters with 1-yr old 30P dropline.**

**All dropline tubing was used for one season and then rinsed clean prior to use in this experiment. All chambers were connected to a common vacuum pump.**

flow over the season were nearly identical. For comparison purposes, sap yield from new Check-valve spouts with used droplines was 41.0 gal/tap. The difference between the Check-valve spout treatment and the Control or AG dropline treatments grew steadily throughout the course of the season.

***Study 2 Methods.*** Sections of the production woods at UVM Proctor Maple Research Center that had been completely re-tubed in 2004 were utilized. Sap yield from each section was measured each year from 2005-2008, and were roughly comparable each season (Perkins, Stowe and Isselhardt unpublished), with average yield above 0.5 gal syrup/tap each year. For the 2009 season, one section had all droplines and spouts replaced. Drops in that area were new semi-rigid tubing and new spouts were 5/16" health spouts. A second section had all droplines replaced with new antimicrobial silver FlexeleneTM FXAG tubing (Eldon James Corp.). Spouts were new Leader stubs with new Check-Valve adapters (Perkins 2009).

All sections were connected to individual releasers through individual mainlines. Releasers were calibrated and equipped with counters to record the number of dumps. Total volume was calculated each day and totaled for the 2009 season. The entire system was serviced by an Airblo Flood vacuum pump pulling a seasonal average of 22" Hg at the pump. The pump was turned on when the air temperature approached 32°F, and turned off automatically if the releaser did not dump within a four hour time span.

***Study 2 Results.*** These overall results were discussed in a previous publication (Perkins 2009), but the results of the AG drop combined with the Leader Check-valve adapters are discussed in further detail here. The tubing section with new AG droplines and Leader Check-valve adapters produced 58.0 – 91.2% more sap than the other sections (Figure 4). The bulk of the increase was observed in the latter part of the season. The section of woods which had new drops and spouts showed an slight increase (10-20%) in yield, also during the late season, consistent with results of research on replacing drops and spouts under vacuum (Perkins 2009, Perkins, Wilmot and Stowe unpublished).

New AG dropline appeared to have little effect on the yield of sap. Sap yield in Study 1 (using one year-old 30P droplines with new Check-valve adapters) from 10.4" dbh trees averaged 41.0 gal/tap, whereas sap yield in Study 2 (new AG dropline with new Check-valve adapters) from trees averaging over 20" dbh produced 44.6 gal/tap. The small difference in production between the two studies is far more likely to be a result of the size of the tree than the use of antimicrobial tubing. Even in the highly unlikely case that all the difference in sap yield between the two studies was due to AG tubing, the total effect amounts to less than an 8% increase in yield.

***Study 3. Methods.*** To examine the efficacy of the antimicrobial silver containing materials on bacterial kill, several 2 cm long pieces of tubing were cut from new, 1-yr old used, and 2-yr old used antimicrobial FXAG FlexeleneTM tubing, as well as new and 1-yr old used 30P tubing. Tubing pieces were

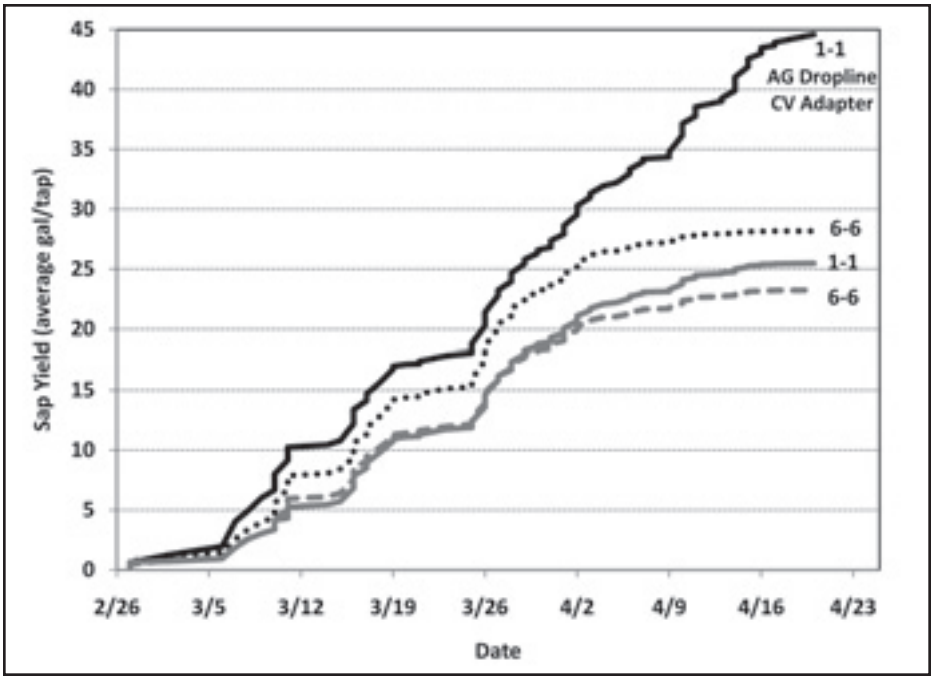


**Figure 4. Seasonal progression of sap yield (gal/tap) from similar tubing systems at UVM PMRC during the 2009 sap flow season. All sections were retubed in 2004 and were connected to a common vacuum pump. Numbers refer to age of spouts and dropline (1 = new spout or tubing in 2009). Topmost line used silver antimicrobial dropline and Check-valve spout adapters.**

placed into small vials with 25 ml of late-season (contaminated) sap and allowed to sit for for a period of time after which microbial contamination was assessed using the Charm luminometer and WaterGenie® swabs as described above. Three trials were conducted: a 1 hr period, a second separate 1 hr period, and a 4 hr time period. Vials of sap without tubing served as controls.

***Study 3 Results.*** New antimicrobial silver tubing clearly reduced microbes (Table 1), however the efficacy of microbial reduction was greatly diminished with use. After 1-2 seasons, microbial reduction in used tubing was less than one quarter that of new silver tubing and was similar to that of used 30P tubing. Interestingly, new 30P tubing produced about a 20% reduction in microbial count.

## DISCUSSION

In the 2008 study, new AG spouts in combination with a one-year-old used (but cleaned) droplines produced a 15.8% improvement in sap yield. Given that a new spout or spout adapter alone can yield an improvement in sap yield of 10-15% (Perkins 2009, Perkins, Wilmot and Stowe unpublished), the added

**TABLE 1.** *Efficacy of various types and ages of dropline material on microbial reduction. Values are percent reduction in microbial population as a result of exposure to different tubing materials and were estimated with a Charm Luminometer and WaterGenie® swabs in a controlled laboratory setting for 1 or 4 hours.*

| | Reduction in Microbial Count (%) | | | |
|---|---|---|---|---|
| **Treatment** | **1 hr.** | **1 hr.** | **4 hr.** | **Average** |
| Control (sap only) | 0.0 | 0.0 | 0.0 | 0.0 |
| New 30P Tubing | 16.0 | 29.9 | 10.6 | 18.8 |
| 1 Yr. Used 30P Tubing | 4.5 | 8.9 | 6.4 | 6.6 |
| New Antimicrobial Silver Tubing | 40.7 | 59.1 | 37.3 | 45.7 |
| 1 Yr. Old Antimicrobial Silver Tubing | 17.1 | 26.4 | -12.4 | 10.4 |
| 2 Yr. Old Antimicrobial Silver Tubing | 15.3 | 4.3 | 2.3 | 7.3 |

effect of the antimicrobial silver in spouts appears to be marginal at best. Similarly, a new AG dropline and new AG spout used in combination yielded a 26.6% increase in sap compared to a new conventional spout and one-year-old dropline, yet use of a new dropline and new spout (both non-antimicrobial) will produce a 15-20% increase in sap yield compared to materials that are four-years-old (Perkins, Wilmot and Stowe unpublished), again demonstrating that the antimicrobial silver effect, even in new silver containing spouts and dropline, is very small.

The lack of increase in sap yield over the control system in the 2009 study on vacuum chambers clearly showed that after one season of use the AG dropline was no longer effective in significantly controlling microorganisms that impact sap yield in the sap collection system. This is further verified by the lack of reduction in microbial populations in the controlled lab studies.

Thus it appears that the antimicrobial effect of AG droplines, and presumably also that of AG spouts made in the same way, is greatly diminished or exhausted after one season of use. This does not appear to be related to cleaning, as all used droplines were rinsed clean prior to use, but is more likely due to the depletion of the silver from exchange sites on the surface of the spout or tubing material. Although antimicrobial silver is reported to be effective in water systems for a long period of time, the substantially higher microbial loads in maple sap most likely overwhelm or exhaust the beneficial effect within a single production season when used in sap collection systems. This is not unprecedented: ozone works well as a sanitizer in water treatment systems, but is ineffective in killing microorganisms in maple sap (Labbe 2001).

Due to the low-moderate increases in sap yield and diminished-absent antimicrobial capacity after just a single season of use, and the very high cost of the antimicrobial spouts and dropline (approximately $2 per ft), it appears that antimicrobial silver usage in maple sap collection systems is likely to be economically prohibitive for the amount of sap gained.

In addition, it should be noted that antimicrobial silver is not on the list of

approved substances for organic maple production. Organic maple producers should be cautioned against utilizing antimicrobial silver in their operations, otherwise they will lose their certification and any premium that is associated with it. Finally, continued research is necessary to firmly establish that silver is not being released and accumulated in syrup, and that silver-containing materials do not impede the healing process in trees.

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# 2010 NAMSC-IMSI ANNUAL MEETING TO BE HELD IN ONTARIO

The Annual Meetings of the North American Maple Syrup Council (NAMSC), the International Maple Syrup Institute (IMSI) and the Ontario Maple Syrup Producers Association (OMSPA) will be held from October 20th to 23th, 2010 at the Arden Park Hotel in Stratford, Ontario. The theme of Conference is Sugaring 2010: Progress and Potential. OMSPA is hosting the international meeting and a Planning Committee comprised of OMSPA members, government representatives and other volunteers has been laying the groundwork for the meeting for many months. OMSPA last hosted the NAMSC-IMSI Annual meeting forum in 1995 when the meetings were held at the Ambassador Hotel in Kingston, Ontario. Many NAMSC and IMSI delegates as well as OMSPA members will remember this meeting which drew an attendance of well over 300 participants from the maple producing regions of the United States and Canada. NAMSC and IMSI are very active in supporting varied aspects of the maple syrup industry at the North American and International levels including communications, input to government policy, research,development of standards and quality assurance.

There will be an opportunity for those in attendance to experience a very unique and beautiful region of Ontario, learn about research, the latest developments in production technology and successful marketing strategies. The meeting venue will also provide an excellent opportunity to renew acquaintances, network with others in the maple industry and make new friends.

The combined Annual meetings of NAMSC, IMSI and OMSPA will include a number of very important features including:

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- Maple Research and Practice Presentations
- Maple Quality Assurance and Marketing
- Maple Workshops and Demonstrations
- Companion Tours (Stratford and St. Jacob's areas)
- Sugar Bush Tour (incl. other interesting features)
- Maple Products and Maple Photo Contests
- Entertainment and Delicious Food

Please contact Dave Chapeskie if you wish to place an ad in the conference booklet.

For further information contact:

**Bill Robinson**
**2010 Conference Coordinator,**
**Telephone: 519-529-7857**
**E-mail:**
**robinmap@hurontel.on.ca**

**Dave Chapeskie**
**2010 Secretary and Chair - Technical and Marketing Program,**
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Joe Polak, Treasurer, W1887 Robinson Drive, Merrill, WI 54452

Phone 715-536-7251 FAX 715-536-1295 Email: maplehollowsyrup@verizon.net

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

# CROP REPORTS FOR 2009

**Editor's note:** Each year at the annual meeting each state and province provide crop reports for that year. We will publish their findings each year in the Digest, dedicating as few or many pages as space dictates.

**WISCONSIN**

Wisconsin produced a record crop of maple syrup in 2009. We increased in 2008 and jumped another 33% in 2009. According to NASS we made 200,000 gallons of syrup this year.

Our Maple queen, Ashley Weissmann has been very active this year. She has attended numerous opens houses, County fairs and presented at schools. A new slogan contest was initiated by the promotion committee. The winning entry is Wisconsin Maple Syrup - Nature's Pure Gold.

The Wisconsin State Fair continues to be the major fund raiser for our organization. The Stockwell family, along with many volunteers man the booth for 11 days. The producer of the year award was awarded to long time WMSPA director Darvin Peiper and his wife Pat. Thanks for the many years of service.

The biggest challenge Wisconsin maple producers are facing this year is the enforcement of licensing requirements. All producers that sell syrup for resale, both packaged and bulk, must have a license in the future.

**VERMONT**

Wow, what a year! Since last year's annual meeting we have dealt with a major shortage of maple syrup where we saw bulk prices being paid for syrup as high as $4.00 or more a pound, then like someone was watching over us we had one of our best production years ever. I say the maple industry here in Vermont is alive and doing well as I'm sure many other states and provinces are also seeing. When dealing with a struggling local, national and global economy, a bright and profitable maple industry looks very inviting to many. When one starts counting all the new operations coming on-line over the last couple of years this is quite apparent and several of these operations are presently at or plan to be tapping over 20,000-60,000 taps within a year or two. Not to be over-shadowed by these new operations many of the existing operations that have been producing syrup for generations have also started increasing their yearly production in order to generate more profit and help supply a growing demand for our product. According to the NASS report this past spring we nearly hit the 1,000,000 gallon mark, that's the first time we've produced that much maple

syrup since back in the 1940's. Much of this new production growth is coming from the addition of more taps but a fair amount of it is coming from changes being made to existing operations such as better tubing systems, better vacuum pumps and keeping a closer track of what is happening in the woods. It's hard to know exactly how many taps have been added lately but when you talk with equipment dealers and industry leaders many of us believe last year there was an increase of around 300,000 new taps here in Vermont which puts the total number of taps now somewhere around 3,000,000 and growing. Each year more and more producers are seeing the benefits of having their trees on a good "high-tech" tubing system. These "high-tech" systems normally consist of a 2-line vacuum system, vacuum pumps producing 20 plus inches of vacuum and in many cases the producer's not satisfied until they have 25 inches or more throughout the entire sugar bush. It's becoming quite common for these types of systems to average over a half gallon of maple syrup per tap year after year. I believe the more of these systems we see the higher we'll see our state's per tap average climb, this year we saw it rise to approximately one third of a gallon per tap.

After years of discussions with the Governor, various state officials and the Department of Forest, Parks & Recreation we were finally able to get more land designated for maple syrup production. Back in the 1960's, six operations were allowed to start tapping state owned land but no more had been opened since then. So for the past eight years I had been working on ways to get additional land opened, I was finally able this past legislative session to have a bill drafted in both the House and Senate making it a law that state owned land should be used for the production of maple syrup. Even though this law was

passed and a Memorandum of Understanding "MOU" was signed between the Dept. of F, P & R and the Vermont Maple Sugar Makers Association seven parcels of state owned land was offered to producers this past summer. Of these seven parcels three were leased to sugarmakers this past summer and plans are underway for them to be in production this coming spring. Hopefully more will become available in the future because when you look at the economics of this type of project it's a win-win for both the state and producer.

Starting in January 2012 maple syrup produced here in Vermont can only be stored in drums and containers made from a food grade material. Industry leaders asked the Agency of Agriculture to make this change to our "Maple Law." Studies have shown lead levels in maple syrup rise when it's stored for any length of time in galvanized drums containing lead. As a way to help producers change over to new approved drums the VMSMA once again sold stainless steel drums to producers at bargain prices. It's believed that nearly half or more of Vermont's annual maple crop is now being stored in containers made from food grade materials.

A new 16 foot mobile sugarhouse was designed and purchased by our Vermont Maple Foundation with donations they received from state and county maple organizations, individual donors and private businesses. This new trailer will replace our original mobile sugarhouse which has promoted our industry for the past twenty plus years at events from Vermont to Florida. It had become the center of attention at the Annual Boston Ski Show and went to New York City several times to serve sugar-on-snow during an event in Central Park.

**QUEBEC**

We all know that in the maple industry, the situation is changing very rapidly. After dealing with a significant surplus position and the related consequences, we are now in a position of having no more reserves despite the significant harvest in 2009. The last production season met the industry's needs both in terms of quantity and quality. As regards volume, we recorded slightly over 109 million pounds for 41.3 million tapholes. On August 15 more than 87 million pounds were classified. The process went smoothly despite the large volume delivered. Quality is very good, with a low level of flavor defects. As regards price, empty processor warehouses and uncertainty about the harvest in March led to fairly high initial offers in the vicinity of CA$4.25. The price subsequently adjusted to the agreed upon level, for an average of approximately CA$2.70. Producers will generally be paid a premium despite the production volume.

Last year's stockouts left their mark, with a number of markets shrinking or flat out disappearing. New substitute products appeared on the shelves. These products that copy the presentation of 100% maple products sometimes mislead consumers and harm the industry's image. Take a sharp rise in prices, limited supply, and a virtually global recession, and we have a recipe for damaging an industry as solid as ours. We must work very hard to reconquer lost consumers and industrial markets. More than ever, we must join forces to ensure renewed growth, without which we will face the danger of more unsold surpluses at a volume higher than desirable for strategic inventory. This concept alone is a challenge, as producers are the ones who support it and high product costs make this support painful enough to discourage some.

Still, morale is high. The harvest was good and prices are firm. Let us work again to conquer the markets. Our association is strong, and new members have joined. We participate in all forums deal-

ing with maple products, and we also still know how to have fun at the festivals that showcase them. In closing, we would like to congratulate the Maine Maple Producers Association on organizing this conference, and we assure them of our unwavering support. Happy 50th anniversary!

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Nous savons tous que dans cet univers de l'érable, la situation évolue très rapidement. Après avoir conjugué avec des surplus importants et les conséquences que cela implique, nous voilà où il n'y a plus de réserve malgré l'importante récolte de 2009. En effet la dernière saison de production a permis de combler les besoins de l'industrie autant en quantité qu'en qualité. En termes de volume, nous recensons un volume d'un peu plus de 109 millions de livres pour 41.3 millions d'entailles. En date du 15 août il y avait plus de 87 millions de livres de classés. L'opération s'est bien déroulée malgré le volume important livré. La qualité est très bonne avec un niveau faible de mauvaises saveurs. En termes de prix, les entrepôts vides des transformateurs et l'incertitude de la récolte en mars ont fait débuter les offres assez hautes, soit aux environs de 4.25$ CDN. Par la suite, le prix s'est ajusté à celui prévu à la convention pour une moyenne d'environ 2.70$ CDN. En général une prime sera payée aux producteurs malgré le volume de production.

Les ruptures de stocks de l'an dernier ont laissé des traces. En effet plusieurs marchés ont diminués ou carrément disparus. De nouveaux produits succédanés sont apparus sur les tablettes. Conjuguons une hausses drastiques des prix, une offre limités du produits, mélangeons le tout dans une bonne récession pratiquement mondiale, nous avons là la recette pour nuire à une industrie même aussi solide que celle de l'érable. Nous devrons travailler de façon très efficace pour reconquérir les consommateurs et les marchés industriels perdus. Nous devrons plus que jamais unir nos efforts pour assurer à nouveau la croissance, sinon un danger nous guette, c'est à nouveau des surplus invendus dont le volume sera plus grand que celui souhaité pour un stock stratégique. Cette seule notion est déjà un défi en soi, car ce sont les producteurs qui le supportent et le coût élevé du produit rend ce support suffisamment pénible pour en décourager plusieurs.

Malgré tout, le moral est bon. La récolte fut au rendez-vous et les prix sont fermes. Travaillons à nouveau à la conquête des marchés. Notre association est forte et de nouveaux membres y adhèrent. Nous sommes présents à tous les forums où il est question de l'érable et savons toujours aussi nous amuser dans les festivals qui en font l'éloge. En terminant, nous désirons féliciter l'Association des producteurs de sirop d'érable du Maine pour l'organisation de ce congrès et l'assurons de notre support indéfectible. Bon cinquantième.

**PENNSYLVANIA**

According to the National Agriculture Statistics Service, Pennsylvania Maple Syrup production is estimated at 92,000 gallons, down 8% from last years production of 100,000 gallons. When talking to most producers one would think it should have been down more

Burton Kimball reported from Northwest Pa their season started in mid February and ended in late March. They had many starts and stops during the 42 day season. They had three four day runs with no freeze. Other runs were short. Time spent in the sugarhouse boiling was short. Sugar in the sap started with a high of 2.6% and averaged 2%. The last week it fell below 1%.

Hardly anyone made light syrup. Some medium was made early then dark and darker was made, Most producers had a

hard time getting more than 15-20 gallon through the filter press at one time. When the season ended most producers came up short on production, grade and quantity.

Prices paid in the Northwest were as follows: $3.15 Light, $3.00 Medium, $2.80 Dark, $2.70 grade B, $2.50 Commercial, $2.00 Unclassified (sour, buddy, thin, ropey) best prices ever.

Ron Brenneman reported from Somerset county production was enough to get by with but when asked if it was an average year he said I wouldn't go that far. He said very little light syrup was made but a whole lot of dark and B. He said it was too warm and no snow cover.

Thom Helmacy reported from Northeast Pa. Production was about 2/3 of last years' crop and mostly dark syrup.

Don Russell reported from Endless Mountains. Our area had a fairly average year for production with the color grade being significantly darker than normal. Some producers were down in production and others had real good production. At Russell Maple Farms they made 1250 gallons of syrup on 5400 taps, no vacuum, just a few gallons of light and a fair amount of medium but mostly dark.

Potter Tioga Association - Larry Hamilton in Potter county reported equaling last years production but he also added 1000 taps. He said he made very small amount of light but a whole lot of medium. Another producer in Potter county made a little more than last year but when they started getting bad sap from their lines they set out more buckets. These two above mentioned producers are at an elevation of 2000 feet or above. Patterson Farms in Tioga County is the largest producer in Pennsylvania. He reported having a real good year. Production was up this year to 17,491 gallons as opposed to last years' production of 14,000. His production grade was half medium, half dark with no light.

Here at home we had a lot of southerly fronts resulting in warm days and no freeze at night. We quit on March 26th. It was a warm day with, again, no freezing weather in sight. We did manage to make some light, a good bit of medium and a little dark and at the end commercial when we cleaned out the evaporator. We ended our season with about 2/3 of last years' production.

Producers in Potter county were hit very hard with the Eastern Forest Tent Caterpillar this year with complete defoliation in many areas. They are very concerned about next year as well as I am at our place. The damage ended just 18 miles west of us in Galeton, Pa.

**ONTARIO**

In January, eleven Maple Information Days were hosted by OMSPA around the province. The maple season started in the southwestern area the 2nd week of February with most producers starting by the first week of March. The season lasted until mid April for the northern producers. Most producers in Ontario had the biggest crop every made. The bulk

price of maple syrup was the highest price ever paid. This is one of the few times in maple history that a record crop size and record high prices were in the same season.

The annual meeting and summer tour was held in Perth, Ontario hosted by the Lanark and District Local of OMSPA. Workshop speakers were: Henry Marckres and John Henderson had a Maple Grading school, Rosemary Bennett from Kemptville College demonstrated Cooking with Maple, Sugar Maples and Climate Change was presented by Barb Boysen who works for the OMNR in Central Ontario, Mark Richardson talked on What's Bugging Our Woodlots, Mark is the general manager of the Eastern Model Forest; Shirley Fulton Deugo spoke on Value Added Maple; Is it for your Business? Frank Chaikowsky spoke on Value Added Maple For Hobby Producers; Jamie Fortune of Fortune Farms talked on the Fundamentals of Building A Maple Business; Paul Bailey, OMAFRA, presented the Growing Forward/Food Safety and Traceability Initiative; Abby Vandenburg from Proctor spoke on the Effects of RO on Chemistry of Maple and Flavour; Dr. Mandouh Abou-Zaid, talked on the identification of Anti Oxidants

Polyphenols in maple syrup.

Tour stops were David and Tressa Oliver, wood fired evaporator and 2,000 tubing taps with half on vacuum.

Ron and Diana Coutts have a farm store as well as selling their own syrup from 5800 taps, they sell their own naturally grown beef, vegetables and preserves and home baking as well as produce and meats from local farms

McEwen Acres have 3500 taps with a RO and oil fired evaporator.

Fortune Farms Maple Orchard was planted in 1990/1991 with trees on a 21 foot spacing in a six acre hay field. A few of the trees are ready to tap.

Jameswood Maple 1,000 tap with 2/3 of the tubing on vacuum and a wood fired evaporator owned by Dwight and Colleen James.

Dorian Heights Maple have an oil fired evaporator, 2X5 finisher and 2,000 tubing taps owned by Ian and Doris Gemmill. They have won many awards for maple at the Perth Festival and the Royal Winter Fair.

The Ennis Family Sugar Camp on Bennet Lake has 4000 taps, woodfired evaporator with a RO machine.

Golden Maples Farms, Doug and Wenda Wheeler operate 20,000 taps on vacuum with an oil fired evaporator and 2 RO machines.

**OHIO**

This season surprised most of us to say the least. With deep freezing temperatures in January and large amounts of snow, we thought we were in for a great syrup season. In Ohio this year, production varied according to geography, with a better crop in the colder northern part of the state and a lesser one in the south. Producers in the state experienced a relatively short, below-normal yielding season as warm temperatures halted the flow of sap. Central and southern Ohio made 1/3 to ¾ of a crop this year. Northern Ohio made ¾ to an average crop. The light crop was extremely low this year. Mostly Grade A Medium Amber & Grade A Dark Amber was produced. (Luckily, local retail trends have been towards the Medium to Dark Amber syrups) There was some Grade B made, again, much less than average. Though the majority of the syrup produced was on the darker side, it had fantastic flavor.

Those who tapped early reported better outcomes than those who tapped later. This was definitely a year to have tubing and vacuum. Bucket producers mainly reported having poorer yields on their runs. This spring was warm and one of the driest on record. We were able to walk lines in tennis shoes. The woods were not wet & there was no snow. This brought low sap sugar content and an abrupt end to the season. Ohio usually has a pretty good snow cover in the woods throughout the season.

With bulk syrup prices remaining high, a large amount of syrup was sold in drums to bulk buyers in other states. These producers said they could get more for their syrup that way than selling from their farms.

Higher bulk prices have brought positive changes for Ohio. The amount of taps for the 2009 season increased an estimated 25% to 30%. Sugarbushes are increasing their taps for the 2010 season as well in hopes of a great syrup season and that the bulk prices will remain high. Producers have been improving the equipment in their sugarhouses as well.

**NOVA SCOTIA**

The 2009 maple season in Nova Scotia was very poor in terms of production. Sixty four commercial producers made only 84,300 liters of pure maple syrup from 324,000 taps. The average maple operation in the province collected the sap from over 5,000 taps. Cumberland

County was home to 35 operations and over 274,000 taps.

Most producers reported a very disappointing yield. The average yield per tap in 2009 was just over 0.26 liters, the poorest since 1987. The total production for the province was the lowest since 1991, but there were 77,100 fewer taps in 1991 than in 2009. The weather, however, did not cooperate with us. Many producers in Nova Scotia reported that it stayed too cold day and night early in the season and stayed too warm day and night later.

The first boiling reported in 2009 was February 28th. The last reported boiling was April 26th. The price received by producers in 2009 was relatively good. Gross farm receipts from the maple crop totaled $1,013,600.

In 2009, approximately 90.5% of the syrup produced was or will be sold as syrup. That means that 9.5% of the syrup produced was made into other maple products such as maple cream, maple butter, and maple sugar. Producers indicated that 23% of total Nova Scotia production of maple products was sold at their camps and home. Twenty four percent (24%) of production was sold to retailers and 53% was sold to packers and shippers both inside and outside Nova Scotia.

I attempted to use the production reported in 2009 to show whether or not a sap collection system using artificial-vacuum yielded high amounts of sap/syrup than a system that does not use artificial vacuum. There was very little difference between the yields reported from operations using vacuum compared to operations that did not use vacuum.

On behalf of MPANS, I would like to thank those producers who took the time to fill out the questionnaire that I sent to them. I asked if their woods and collection systems sustained damage from the ice storm and how much damage. Fifty four percent of producters indicated that their trees/tubing systems suffered damage. Several producers indicated that other snow and wind storms throughout the fall and winter also caused considerable damage. The accumulation of damage meant that the time/labour required to get ready for the season was dramatically increased compared to a normal year. Producers worry about the long lasting affects of the storms on their crop trees.

Producers also were generous with their suggestions for topics that they would like to see information provided on in future meetings and in the newsletter. These suggestions will be taken very seriously when we plan for the MPANS annual meeting and the fall tour and when future newsletters are being developed.

A very important part of the extension that MPANS and AgraPoint jointly undertakes each year is the maple newsletter, published 3 times per year (January, June and September).

This Maple Industry Situation Report was developed for the maple industry of Nova Scotia with the assistance of AgraPoint International Inc.

**NEW HAMPSHIRE**

The 2009 maple season was a case of

haves and have not. Production varied from north to south. Some of the remarks were. too cold during the day, sugar content of the sap was 1 to 2 % lower than normal, no cold nights, wind kept the trees cold during the day, short season. Very little light amber was made, mostly medium amber and dark amber. Sugar makers on tubing and vacuum did the best, some did above average. State wide we had about average production.

The ice storm in Dec. 08 caused serious damage to some sugar orchards. A few sugar makers lost most of their trees and all of their tubing. Some did not tap in 2009. The ice storm was the worst at the higher elevations. It was sad to drive thro the area and see the damage. Trees were not only broken in half but some tipped over due to wet ground. The broken ones will survive, the tipped ones are gone. This storm was not as bad as the ice storm of ten years ago. Some sugar makers were able find other orchards so they did produce syrup in '09. Sales have remained brisk even with gallons selling in the $ 50.00 to $ 60.00 range

The Association is moving along with Maple Museum. We have entered into an agreement with the Forest Society at the Rocks Estate in Bethlehem, NH. They have a working tree farm and have a number of buildings that we can display the historical artifacts from C. Stewarts collection. There will also be a working sugar house. The plan is to have a traveling exhibit that can be used at fairs and other shows.

The Asian Longhorned Beetle (ALB) continues to be a concern to us. The recent out break in Worcester, MA. is but a few miles from our border. There has been a number of work shops put on by state and federal forestry officials. It is interesting to note that of the hundreds of reported ALB sightings, they were all by the general public. All sightings were investigated and all were negative. The work shops were aimed at educating the general public as to the danger to our forests. There has been no ALB's found in any sugar bushes, we don't know what will happen if it gets into a sugar bush.

**NEW BRUNSWICK**

In general, 2009 was a banner year for New Brunswick compared to the previous 2 years. The northern part of the province had from a very good to excellent year; central N.B. was mixed depending on which side of the river valley you operated on; southern N.B. was average to low.

A good year in N.B. will give around 4 m. pounds of syrup but 2009 produced 5 million pounds of quality syrup of which 80% of this production comes from the north. Overall, a very good year. The association continued its marketing efforts in France and the US. We launched a new high end French cookbook during the summer with the cooperation of the “conseil general de al Vienne” in France. The launch was held in N.B. this past August. This was the fruit of 2 years of continued efforts from a dedicated team.

Our annual meeting was held in Woodstock this past January and we continued with our education program. We had a one week course in French and English on “sugar bush operations and management.” We continued our sugar bush silviculture program. Before next December, we will be holding a financial session on the financial management of a sugar bush operation, we will be holding a 2 day extensive GPS course and we are presently working on a 4 day tour of organic producers, equipment dealers and certifier in Quebec.

We continue supplying our new recipe brochure to different organizations as convention bag stuffers and we introduced a new technical brochure entitled “maple syrup . . . in everyone’s taste.”

2010 starts a new chapter for the asso-

ciation and while continuing our marketing efforts, more emphasis will be given to the education to members file.

**MINNESOTA**

Like last year the state had snow cover all winter. This is a key factor in our region as it keeps the frost from going deep into the soil. March was cool ( as was the whole spring and summer). With those conditions there was a short 2 to 3 day run about the 3rd week of March in the central region and southward and then those areas shut down. It can be said that it was a April run in the state. We had a 10" heavy wet spring snowstorm on the 30th of March and then the run started around April 2nd and it just picked up from there. The sap quality was excellent with a 2 week period of cool northwest winds.

I know it may sound like a "broken record", but Minnesota was again blessed with excellent sugar numbers. In the 3% range again. A high of 3.8%, with 3% on the low end. There was one report just west of Mlps. Of only 2.5%. One producer reported his last run has jumped up to 3.5% from a 3% low! What has made the last 2 years enjoyable is that the producers on buckets have been able to have good production years also. A good crop of excellent maple flavored syrup was made throughout the state.

The MMSPA's annual meeting was held at the Harriet Alexander Nature Center in Roseville, Minnesota in May. We had 2 wonderful presentations. One by Dr. Bob Koch, Minnesota Dept. of Ag, on insects that have been destructive to hardwoods. The other by Dr. Lee Frelich of the Univ. Of Minnesota. Dr. Frelich has done extensive research on the

maple tree and mapping of the maple regions in the upper midwest. Both were very informative presentations.

The MMSPA has around 100 current members and is again hosting a "information" booth at the "Great Minnesota Get Together", our Minnesota State Fair which runs for 10 days at the end of August.

**MICHIGAN**

The 2009 maple season for Michigan varied around the state. In total Michigan was up in production by 10% according to the National Agriculture Statistics Service report.

A general comment from all corners of the state was that the sap sugar content was below average by around 1/2 percent the entire season. The Shepherd area reported an average to good yield. The Thumb region had a good season at around a quart per tap average. The Lapeer area had a good year reporting a low of two-thirds of a quart per tap to a high of three quarts per tap. The Mio/Fairview region reported a good year with yields of one-third gallon per tap. Rose City reported a good year with yields of one quart plus per tap. The Ludington area also had a good year. Word from the Upper Peninsula was that it was a very good year with mostly light amber syrup being produced. This was also the case in the northern half of the Lower Peninsula. The southwest corner of the state had a poor year. Yields were less than a quart per tap. The season started with dark syrup and lightened up to medium, no light syrup was made here. While the color was medium to dark amber, the flavor was excellent. In south central Michigan we had a very bad year with yields of only two-thirds of a quart or less per tap. Production varied greatly depending upon the location and elevation of the sugar bush. The most often heard complaint was that it did not get cold enough nights or warm enough during the day. On many days when you would have thought that the sap would run there was a cold north or east wind. The syrup started out dark and did lighten up to medium amber some days.

We had an outstanding January Annual Meeting. We had over 200 folks in attendance. We passed revisions to our By Laws and Constitution. Many of these revisions were to clarify some sections and to make them easier to read and understand. Other revisions were to satisfy state and federal requirements for “not for profit organizations.”

Last fall a package of four bills was introduced in the Michigan House. These bills deal with the classification of maple syrup production as “agricultural use” as related to the Natural Resources and Environmental Protection Act, General Property Tax Act for real and personal property and The Food Law of 2000. Our MMSA committee members have worked hard in support of these bills. In the spring they hosted a breakfast at the capital in Lansing. Three of the four bills have passed the house and senate and were signed by Governor Granholm. The fourth bill pertaining to property tax did not pass and is currently in the hands of the senate committee of Agriculture and Bioeconomy. We will continue to work toward passage of this bill.

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# COMING EVENTS

**20th ANNUAL HEBRON MAPLE FESTIVAL**
March 13 & 14, 2010
10:00 a.m. - 4:00 p.m.
Hebron, Connecticut, Route 66 & 84
For more information contact:
www.hebronmaplefest.com or e-mail: info@hebronmaplefest.com

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**24th MAPLE SYRUP FESTIVAL**
March 13 & 14, 2010
Warkworth, Ontario, Canada
For more information contact:
Alice Potter Tel: (705) 924-2057 Fax: (705) 924-1673

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**SIXTH ANNUAL POTTER/TIOGA**
**PENNSYLVANIA MAPLE WEEKEND**
March 27-28, 2010
10:00 a.m. - 4:00 p.m.
For more information contact:
Peggy Clark email:clarkwp@ptd.net Tel: (570) 724-4764

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**NAMSC/IMSI ANNUAL MEETING 2010**
October 20-23, 2010
Arden Park Hotel, Stratford, Ontario
For more information contact:
Dave Chapeskie, 613-658-2329, email: agrofor@ripnet.com or
Bill Robinson, 519-529-7857, email: robinmap@hurontel.on.ca

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# MEMORIALS

The Somerset County Maple Producers Association and the Pennsylvania Maple Industry lost two special people during 2009.

## WILMA EMERICK

Wilma Emerick, 53, of Emerick Sugar Camp, Hyndman, died June 12, 2009. She was the wife of Ed Emerick, mom to Matthew Emerick and wife, Stephanie, and grandmom to Tyler Emerick. Pep and personality were hallmarks of her life and she worked tirelessly with her family to make Emerick's syrup an award winning product. She and Ed were always interested in learning new and better ways of working with Maple and generously shared their expertise. In traveling about, they made lasting friends throughout the Maple venues of Canada and the United States.

Wilma is surely missed here, in her Somerset County Maple home, as Maple events of Mountain Crafts Days, tapping ceremonies, and Maple Festivals pass without her physical presence but certainly not without her spirited Maple presence.

## GEORGE POPE

George Pope, 47, reigning Somerset county Maple King, died October 27, 2009. George and wife Tracy owned and operated G & T Acre near Salisbury. George was a director of the Somerset County Maple Producers Association and a liaison for the Somerset producers at the State Farm Show, shouldering the burden of the County exhibit and helping with sales and promotion at the State Show. He also took time to attend the State Maple meetings and offer his help.

While he worked for Keystone Lime Co., his life was the promotion of Maple and he worked hard to make the local exhibits and festivals productive. He and Tracy hosted the spring tapping events several times and strived to make them educational for the general public as well as the seasoned producers.

George stayed abreast of the new developments in Maple equipment and procedures and experimented and kept records to see how the new products and methods measured up. No Maple challenge was too great and he always aspired to do better and to teach others the same.

A native of Somerset County, he was born to a Maple family and community and loved the beauty of the outdoors. He respected all of creation and gave witness to his Creator at the end of his days.

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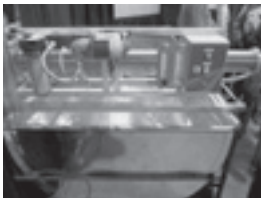

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