Maple Syrup Digest

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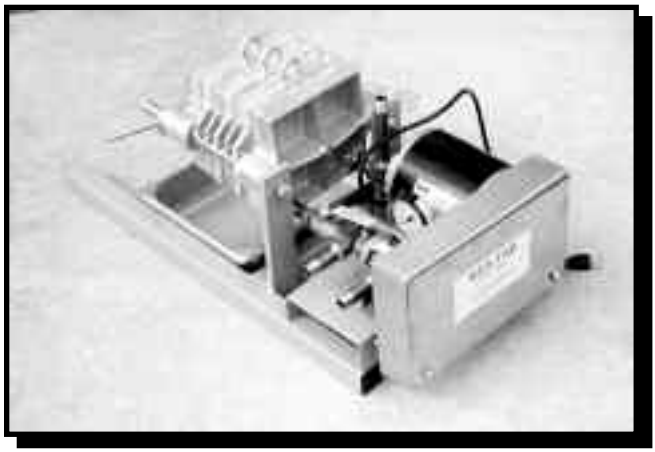

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COVER: Ice Storm damage at South Face Farm, Ashfield, MA

GREETINGS FROM YOUR PRESIDENT

As the 2009 sugaring season approaches we find the maple industry being affected by several issues, all of which are beyond our control. In the "old days" we would worry about how the upcoming seasons' weather may affect syrup quality and production but today it's more complicated with our concerns ranging from the current state of our economy, to syrup availability, threats to our trees and the ever increasing cost to produce a gallon of syrup. These variables are commonly shared by everyone involved with the industry regardless of whether we are a large or small producer, syrup packer or the folks that make the equipment and supplies that we use.

A year ago we were looking at record high fuel prices that seriously increased production costs resulting in soaring prices of bulk and retail syrup. The initial shock seems to be behind us and fuel prices are dropping but who is kidding who . . . we all know the real problem has not gone away. Energy costs will not stay low and there continues to be a fundamental need to continue research and development in syrup production efficiencies if we are to continue to produce an affordable food product. The reprieve in fuel costs is temporary and sooner or later we will be back to the high energy costs of 2008, or maybe higher. Let's be proactive and keep the research wheels in motion so we can stay ahead of the energy curve.

Here in Massachusetts the outbreak of the Asian Longhorned Beetle in Worcester was a surprise to many but the reality is that the threat to our trees continues. It was only a matter of time before it flared up again. Let's hope the government continues to fund fighting this pest. In addition, Massachusetts had a devastating ice storm on December 11th in the colder higher elevations of the state. Our sugarbush in Franklin County is at elevation 1,500' and we were one of many sugaring operations in the area severely damaged by the storm. The ice damage was beyond belief and the cleanup of downed trees and limbs began immediately with the threat of oncoming snow fall that would just make the required tubing repairs more difficult. The Massachusetts Maple Producers Association responded quickly by emailing information to its members on guidelines for tapping ice-damaged trees, research website links on managing and working with ice damaged trees as well as providing information on possible disaster aid for producers who suffered extensive losses. It's a great benefit to producers that our local maple associations are there to assist us with support and information when we need it.

NOW FOR SOME GOOD NEWS

Hillside Plastics, Sugarhill Containers of Turners Falls, Massachusetts is the first to join the Maple Research Alliance Program which was recently introduced at the North American Maple Syrup Council annual meeting in October. The program is designed

to increase funding for maple research by working with syrup container manufacturers and major container distributors who will solicit and collect volunteer contributions on behalf of the NAMSC Research Fund of one penny for every plastic, tin or glass container purchased by anyone who packages pure maple syrup.

Sugarhill, as an Alliance Partner, will assist the North American Maple Syrup Council in their mission to provide continued research, communication and education to the maple industry. The Council sincerely thanks Sugarhill for their support and commitment to this initiative. The Maple Research Alliance Program can only succeed if syrup producers and packers voluntarily contribute their fair share when purchasing containers. If you buy your containers from a manufacturer or distributor who is not an Alliance Partner, encourage them to join the program. Otherwise you can send your contributions direct to the NAMSC Research Fund and your contributions are always appreciated.

Thanks for your support and have a safe and productive sugaring season!

Mike Girard

FROM THE EDITOR

I was one of the lucky ones. The ice storm did not do that much damage to our sugar bush. We had a quarter of an inch of ice on the trees and lost some limbs. A few birch trees broke off.

In southwestern New Hampshire it was a different story.

Ben Fisk of Temple, one of our youngest members, had 4500 taps last spring. The ice storm caused such tremendous damage to his trees, breaking limbs and uprooting large maples, that his tubing was knocked to the ground and buried under debris and snow. He said he would now be hard pressed to find 500 taps, and is searching for a new orchard.

Dave Kemp of Jaffrey spent two weeks assisting neighbors and helping to clear roads. He finally got to check one orchard after Christmas and found downed beech & pine, but the large maples looked fairly good. Much of the regeneration, small boles, were laid over or snapped off. Dave spent four hours clearing debris from 800 ft. of tap lines.

Bill Eva of Hancock had some downed beech and pine branches. Although he hasn't been through his entire sugarbush, he believes his maples were relatives unscathed. He has been busy helping crews clean up the roadsides.

Chris Pheil of Lyndeborough, on of The Maple Guys, reported that one of his orchards with 300 taps was severely damaged. The trees remaining lost over 50% of their crowns, so won't be tapped in hopes that they will recover. Another orchard with about the same number of taps, but at a lower elevation, was not early as bad. Chris will have a state forester look over the orchards with him.

Besides losing a couple of large maples, Hand Peterson of Londonderry figures 10%-15% of his trees will not be tappable.

Tom McCrumm (a picture of his sugar bush is on the cover), of the

Massachusetts Maple Producers in Ashfied, lost about 35% of production for this year and probably 15% of his taps permanently.

Tom also had this to say “In agriculture, if it isn’t one thing going wrong, it’s three things! It could have been worse. They are only trees, in time they will come back. We had no injuries, no loss of life, no loss of property, no houses washed away by a flood, no family missing and presumed dead, no houses, barns or sugarhouses burned to the ground, etc. My friends were very helpful, many offered to come over with chain saws and muscle and help me clean things up. That’s what friends and neighbors do in the country - and that’s why we live here.”

Well said, Tom. I spite of everything I wish for as good a maple sugaring season as possible for all.

Roy

IMSI NEWS

In the December 2008 issue of the Maple Digest, it was reported that the International Maple Syrup Institute held their quarterly Board of Directors meeting as well as their Annual Business Meeting as part of the Annual NAMSC and IMSI Meeting event in Amherst, Massachusetts in late October 2008. Since then, work has continued on the various initiatives of IMSI, including the Maple Grades Review initiative and the evaluation of Air Injection System Technology.

AWARD RECIPIENTS FOR 2008

In the last issue of the Maple Digest, it was reported that IMSI currently administers two annual awards, the Lynn Memorial Leadership Award and the Golden Maple Leaf Award. The Lynn Reynolds Award and the Golden Maple Leaf Award were presented to the 2008 recipients this past October at the Annual Meeting of the North American Maple Syrup Council and the International Maple Syrup Institute in Amherst, Massachusetts. David Marvin from Morrisville, Vermont was the recipient of the Lynne Reynolds Memorial Leadership Award. The recipient of the Golden Maple Leaf Award was University of Vermont Proctor Maple Research and Cooperative Extension. The contest for these awards was competitive and everyone who submitted nominations in 2008 is thanked for their contribution. It is hoped that there will be even more interest in submitting nominations for the Awards in 2009.

MAPLE GRADES COMMITTEE

In the December 2008 issue of the Maple Digest, it was reported that

Left to right: *David Marvin, recipient of the Lynne Reynolds Memorial Leadership Award and Dr. Tim Perkins accepting the Golden Maple Leaf Award on behalf of the Vermont Proctor Maple Research Center and University of Vermont Maple Extension.*

IMSI received the final consumer research report from Cintech Agroalimentre, a Quebec-based research firm in October 2008. IMSI's Maple Grades Committee is reviewing findings from previously completed sensory evaluation research as well as this consumer research as they work to finalize recommendations regarding standardized grades and nomenclature for pure maple syrup.

Recommendations will be tabled for consideration of IMSI's Board of Director's in the winter or spring of 2009.

REVIEW OF AIR INJECTION TECHNOLOGY

In the last issue of the Maple Digest, it was reported that IMSI had established a Committee to review Air Injection Technology, including the findings from Research on this tech-

nology carried out in recent years in Canada and the United States. For the purposes of this study Air Injection is defined as the forced introduction of quantities of ambient, filtered air through a series of perforated pipes into the boiling liquid in the front and/or backpan of a maple syrup evaporator. The Committee Chair is Dr. Patrizia Ramacieri, General Manager, Centre Acer. It is expected that the Committee will be tabling their recommendation(s) regarding the use of Air Injection Technology at the February 2009 IMSI Board of Directors meeting in Quebec.

MAPLE CAN ALERT

In October of 2008, the Agency of Agriculture, Food and Markets in Vermont issued an Advisory Alert regarding certain chemicals confirmed to be present in trace amounts in certain tin cans distributed in 2008. The Agency advised that the trace amount of chemicals found did not constitute any risk to human health. IMSI received timely notification of the Maple Can Alert from Henry Marckres, Chief, Consumer Assurance with the Agency in Vermont. Official information received from the Agency, including the facts associated with the Alert, was shared with IMSI members to help raise awareness regarding the Alert. IMSI will maintain close contact with appropriate representatives from Vermont's Agency of Agriculture, Food and Markets to stay abreast of the latest information regarding the alert. IMSI will also strive to keep members of the Institute informed until this issue is resolved. For further information regarding the Maple Can Alert and follow-up advisories, contact Henry Marckres at 802-828-2436 or Dr. Kristen Haas at 802-828-2426. Any inquires from the press regarding the Maple Can Alert should be referred to Ms. Kelly Loftus at 802-828-3829.

IMSI WEBSITE

Subscribers to the Maple Digest should note that IMSI maintains a website which can be accessed at www.internationalmaplesyrupinstitute.com Readers of the Digest are encouraged to check out the website and make suggestions to Dave Chapeskie regarding what might be done to further enhance the site.

MEMBERSHIP IN IMSI

A membership renewal notification will be sent out early in January 2009 to existing IMSI members. Subscribers to the Digest who are not currently members of IMSI are asked to consider taking out a membership in 2009. This will help support the current initiatives of the organization and help build an even more effective IMSI for the future.

IMSI NEXT BOARD OF DIRECTORS MEETING

IMSI's next Board of Directors meeting will be held in Quebec on Monday, February 2, 2009 in St. Hyacinthe, Quebec

Date: January 1, 2009

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NEW YORK MAPLE ASSOCIATION'S 2009 ACTION PLAN INCLUDES INCREASING JOBS

By Glenda Gephart, NYSMPA

Strengthening New York's maple industry through continued and expanded promotion and by increasing jobs in maple production are top priorities in 2009 for the New York State Maple Producers Association.

"We need to keep New York maple in front of consumers," NYSMPA President David Campbell of Salem, NY, said. New York was second nationwide in maple syrup production in 2008. Production was estimated by the USDA National Agricultural Statistics Service at 322,000 gallons, up 44 percent from the year before.

Campbell said the Association's ongoing promotions program will feature cooperation with Cornell University's Maple Program. The Association will continue to support Cornell's research and technical assistance to maple producers by helping to seek state funding for Cornell Cooperative Extension, the Uihlein Maple Research Center and the Arnot Research Forest, according to the Association's 2009 plan for action.

Job retention and expansion is a vitally important issue for any industry right now, and New York's maple industry agrees. In 2009, the Association aims to create new upstate jobs by establishing a system for recruiting, training and mentoring new maple producers. Existing producers will be assisted with their production expansion. Tree leasing for tapping is another key component to expanding the industry, Campbell said. The Association has already begun addressing this need by working with the Cornell Maple Program in writing and designing a new publication for sugarmakers to distribute to neighboring forest owners and by discussing the concept of leasing trees on state forest land with legislators.

The Association's goal for 2009 is to work with the state Department of Environmental Conservation to develop standards and guidelines to allow maple producers to tap maple trees on forested lands owned by the state. In the 2009 sugaring season, the Association is looking for permits to be issued and monitored in at least two pilot regions where there are tappable trees adjacent to existing producer operations.

Mike Bennett of Glens Falls, NY, a member of the Association committee working on this issue, said education is crucial to making headway with this effort. Lawmakers and the public need to be convinced that tapping state-owned trees under lease will benefit the state through increased revenues and will pump up the economy through increased maple sales. Even DEC officials must be shown that tapping does not harm the trees and that collection tubing will not hinder wildlife or recreational uses of state land.

"This is an untapped resource. There's a lot of potential, and it could really be a resource for New York State," said Bennett, who operates upwards of 1,000 taps each season, all but two of which are on trees leased from private property owners.

He is concerned about a less than

enthusiastic response from the DEC so far. But, Bennett and Campbell are hoping the legislature will direct the DEC to develop standards and move ahead with the pilot projects.

Bennett said maple producers in Vermont are also interested in leasing their state-owned trees for tapping. He predicted that Vermont producers will have an easier time convincing state officials and the public of the value of leasing.

Another issue the Association hopes to have resolved in 2009 is the ongoing dispute about tax exemption for pure maple sugar. In February 1967 the state Tax Department determined that maple sugar is a pure food and not a candy, and unless it is marketed as such, should be exempt from sales tax. But a July 1998 Tax Department publication showed maple sugar candy as taxable and maple sugar as tax exempt. Greg Zimpfer of Attica, NY, president of the Western New York Association, said that since maple sugar is a pure product, that which is known as maple candy is the same and should be tax-exempt.

"The whole world calls it maple candy. But it's molded maple sugar. Molded into a shape. We don't call it candy, and we don't advertise it as candy," Zimpfer said. An official ruling is needed, but Zimpfer and others are concerned that if the state determines that maple sugar is candy, some producers will no longer sell it.

"It just becomes a real headache then," Zimpfer said of the need to charge sales tax and the required accompanying paperwork. If that happens, the availability of a popular maple product will decrease, he said.

Other issues that Campbell said need to be kept in front of state legislators and agency officials include:

- The detection and eradication of invasive species that could impact the state's maple trees, especially Asian Longhorn Beetle. This must be a priority for the USDA and New York State Department of Ag & Markets. In 2008, ALB was found in western Massachusetts; and the beetle has also been found in New York City and Chicago.

- The adoption of changes in maple grading. The Association has given Ag & Markets recommendations for changes that would reduce consumer confusion related to grade designations unique to New York. The changes also would bring New York's grading regulations closer to those of nearby states. The Association believes that the changes would improve sales of pure maple syrup in the state.

- The Association would like to see the New York State Energy Research and Development Authority accept the efficiencies and offer matching funds for producers to upgrade their equipment for this technology.

In 2008, NYSMPA promotions efforts included new educational programs. VVS FFA students developed an awareness program and mobile maple exhibit that they shared with school children in New York City. A retired teacher and maple producer designed lesson plans that she took into New York City classrooms. The Association and the state apple growers worked together on a successful fall promotion; and maple recipes were the stars on television cooking shows across the state leading up to Thanksgiving and led the list of hits and downloads on the Association website www.nysmaple.com

METABOLISM OFF-FLAVOR IN MAPLE SYRUP

Part I: Identification of the compound responsible for metabolism off-flavor

Abby K. van den Berg[1], Timothy D. Perkins[1], Mary An Godshall[2], Steven W. Lloyd[3] and Mark L. Isselhardt[1]

INTRODUCTION

The characteristic flavor of pure maple syrup is derived from a complex mix of aroma and flavor compounds, including phenolic compounds, carbonyl compounds, alcohols and acids, and pyrazines (Alli et al. 1992). Off-flavors which are not part of this characteristic flavor profile can also occasionally develop in maple syrup. When off-flavors occur they can usually be attributed to some single or combination of factors, including some that are intrinsic to maple sap and some that arise from external sources such as contamination during production or storage (Perkins et al. 2006). 'Metabolism' is a term often used to describe a variety of maple syrup off-flavors. More specifically, however, the term metabolism (also called 'woody') refers to a distinct off-flavor described as 'earthy to bitter' which can develop at any time during the season, and at times can occur simultaneously over a large regional scale (Perkins et al. 2006). In some years it can affect up to 25% of the total annual maple syrup crop (Perkins and van den Berg in press). The presence of metabolism off-flavor significantly reduces the economic value of maple syrup, often causing syrup to be downgraded to commercial grade (Perkins and van den Berg in press).

Research on metabolism off-flavor in maple syrup at the University of Vermont Proctor Maple Research and Extension Center (PMREC) had two main objectives. The first was to identify the primary compound(s) responsible for metabolism off-flavor in maple syrup. Once the responsible compound or compounds were identified, measures to reduce or remove the off-flavor from finished maple syrup could be investigated. Thus, the second main objective was to determine whether a technique could be found that maple producers and packers might employ to effectively remediate the flavor, and thereby increase the economic value, of metabolized maple syrup.

This paper addresses the first objective, to identify the compound or com-

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pounds responsible for metabolism off-flavor in maple syrup. A subsequent paper will focus on efforts to reduce or remove metabolism off-flavor.

MATERIALS AND METHODS

Experts in maple syrup flavor evaluation selected four maple syrup samples. Two of the syrup samples were determined to possess 'pronounced' and 'severe' metabolism off-flavor, respectively, without the presence of other off-flavors. The other two syrup samples were determined to have representative flavor characteristic of pure maple syrup without the presence of off-flavors, and served as controls.

The syrup samples were analyzed with gas chromatography/mass spectroscopy (GC/MS) to determine the identity and quantity of flavor/aroma compounds present in each. The flavor profiles of the metabolized syrup samples were compared to those of the control samples to determine if any clear differences existed. We hypothesized that compounds which were present in both the metabolized syrups, but absent in the control syrups, were likely to be responsible for producing metabolism off-flavor.

RESULTS AND DISCUSSION

Figure 1 shows an example chromatogram generated by GC/MS for a maple syrup sample with metabolism off-flavor. Generally, GC/MS chromatograms show the profiles of flavor/aroma compounds present in each sample. Each peak on the chromatogram represents the presence of an individual compound. The area of each peak corresponds to the relative quantity of that compound present in the sample; larger peaks indicate compounds present in larger quantities. Chromatograms generated by GC/MS are compared to known chemical libraries to determine the identity of the compound indicated by each peak.

An examination of the chromatograms generated for the four maple syrup samples in this study (not shown) revealed the presence of one major peak in both of the metabolized samples that was absent in the flavor profiles of the con-

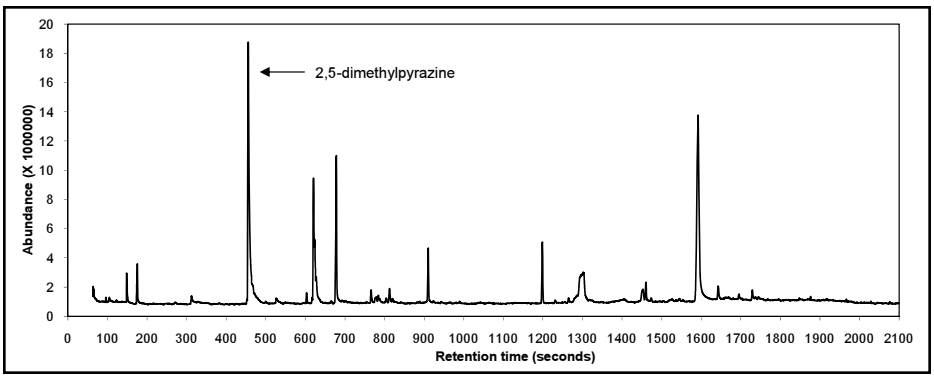

Figure 1. An example chromatogram generated by gas chromatography/mass spectroscopy of a maple syrup sample with metabolism off-flavor. The arrow indicates the location of the peak corresponding to the compound 2,5-dimethylpyrazine.

trol syrup samples. The identity of this compound was determined to be 2,5-dimethylpyrazine by comparison with a known library. To further investigate the potential relationship between this compound and the presence or absence of metabolism off-flavor, the precise amount of 2,5-dimethylpyrazine present in each of the four syrup samples was quantitatively determined.

Table 1 shows the quantity of 2,5-dimethylpyrazine determined to be present in each of the four syrup samples tested. The syrup sample evaluated as having 'severe' metabolism off-flavor contained 462 parts per billion (ppb) 2,5-dimethylpyrazine, while the sample evaluated as having 'pronounced' metabolism off-flavor contained 166 ppb. The compound was not present in either of the two control syrup samples without the off-flavor (Table 1). The apparent correlation between the quantity of 2,5-dimethylpyrazine present and the degree of metabolism off-flavor, as well as the presence of this compound in metabolized syrup and its absence in control syrup strongly suggest that 2,5-dimethylpyrazine is the primary compound responsible for metabolism off-flavor in maple syrup.

2,5-dimethylpyrazine is a naturally-occurring volatile flavor compound found in a variety of heat-processed foods, including roasted beef, cocoa, bacon, and coffee (Maga 1992), as well as maple syrup (Alli et al. 1992, Akochi-K. et al. 1997). However, the quantity of 2,5-dimethylpyrazine typically present in maple syrup ranges between 10 and 17 parts per billion (Akochi-K. et al. 1994, Akochi-K. et al. 1997), approximately 10 to 40 times less than the amount found in the metabolized syrup samples analyzed in this study.

2,5-dimethylpyrazine and other pyrazines are formed during the Maillard reaction (Maga 1992), a complex set of reactions responsible for the development of a diverse array of flavor and color compounds in many heat-processed foods (Belitz et al. 2004, Davidek and Davidek 2003), including maple syrup (Perkins and van den Berg in press). Pyrazines are responsible for a variety of both desirable and undesirable flavors and aromas in foods (Maga 1992). 2,5-dimethylpyrazine in particular has a characteristic aroma described as strong nutty, musty, meaty roast or green (Maga 1992), though the precise nature of the aroma can depend greatly on the concentration of the compound present. 2,5-dimethylpyrazine has an extremely low odor threshold, approximately 38 ppb, and thus at the concentrations present in the metabolized syrup samples analyzed in this study it would be expected to produce an extremely pungent aroma and flavor.

Table 1. Quantity of 2,5-dimethylpyrazine (in parts per billion) determined by gas chromatography/mass spectroscopy present in four pure maple syrup samples with (Metabolized) and without (Control) metabolism off-flavor.

	2,5-dimethylpyrazine (ppb)	Off-flavor
Control-1	0	No off-flavor
Control-2	0	No off-flavor
Metabolized-1	462	Severe metabolism
Metabolized-2	166	Pronounced metabolism

We hypothesize that in metabolized syrup, the specific pathways of the Maillard reaction leading to 2,5-dimethylpyrazine formation predominate during sap processing to syrup, yielding large concentrations of this compound which overwhelm the presence of other flavor constituents. This process could be influenced by the presence or abundance of specific precursors in sap, conditions during sap processing to maple syrup, such as the temperature, pH and length of processing time, or a combination of any of these factors.

In conclusion, the results of this study strongly suggest the compound 2,5-dimethylpyrazine is responsible for what is referred to as 'metabolism' off-flavor in maple syrup. With the responsible compound identified, subsequent research focused on developing techniques to remediate the flavor of metabolized syrup by targeting 2,5-dimethylpyrazine for removal from maple syrup.

ACKNOWLEDGEMENTS

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REFERENCES

Akochi-K., E., Alli, I., Kermasha, S. and Yaylayan, V. 1994. Quantitation of alkylpyrazines in maple syrup, maple flavors and non-maple syrups. Food Research International 27: 451-457.

Akochi-K., E., Alli, I. and Kermasha, S. 1997. Characterization of the pyrazines formed during the processing of maple syrup. Journal of Agricultural and Food Chemistry 45: 3368-3373.

Alli, I., Akochi-K., E. and Kermasha, S. 1992. Flavor compounds in maple syrup. Food Science and Human Nutrition (Ed. G. Charalambous). Elsevier Science Publishers, Amsterdam, The Netherlands. pp 131-140.

Belitz, H.-D., Grosch, W. and Schieberle, P. 2004. Carbohydrates. Food Chemistry, 3rd ed. Springer-Verlag, Berlin, Germany. pp 245-341.

Davidek, T. and Davidek, J. 2003. Chemistry of the Maillard reaction in foods. Chemical and Functional Properties of Food Saccharides (Ed. P. Tomasik). CRC Press, Boca Raton, FL, USA. pp 291-315.

Maga. J.A. 1992. Pyrazine update. Food Reviews International 8(4): 479-558.

Perkins, T.D., Morselli, M., van den Berg, A.K. and Wilmot, T.R. 2006. Maple chemistry and quality. North American Maple Syrup Producers Manual, 2nd ed. (Eds. Heiligmann, R.B., Koelling, M.R. and Perkins, T.D.). The Ohio State University, Ohio, USA. pp 294-300.

Perkins, T.D. and van den Berg, A.K. (in press) Maple syrup - production, composition, chemistry, and sensory characteristics. Advances in Food and Nutrition Research (Ed. S.L. Taylor). Academic Press, San Diego, CA, USA.

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-profit, volunteer based committee of the North American Maple Syrup Council, Inc.

HISTORY OF THE NAMSC RESEARCH FUND

The NAMSC-Research Fund is a non-profit, volunteer based committee of the North American Maple Syrup Council. The fund was established in 1987 by the Councils State and Provincial Delegates in an effort to promote and support maple research.

The Research Fund is promoted and managed exclusively by the Council which annually solicits, reviews, and selects maple research proposals on topics of overall importance and concern to the maple industry. The grants for maple research projects are distributed to qualified universities and research institutions in the United States and Canada and progress reports are presented at the annual meetings of the North American Maple Syrup Council and the International Maple Syrup Institute. Research results are also published regularly in the Maple Syrup Digest and other maple industry publications providing benefit to the entire maple industry.

The source of funding has been voluntary contributions of "one penny for every container filled" from maple syrup producers and packers. The majority of the contributions to the fund have been collected by two plastic container manufacturers, Sugarhill Containers of Turners Falls, Massachusetts and The Bacon Jug Company (Gamber Container, Inc.) of Littleton, New Hampshire. In addition, there have been numerous state and provincial associations as well as individual producers, cooperatives and equipment distributors contributing directly to the fund on a regular basis, some since the inception of the fund.

The intent has been and continues to be to gain industry wide participation and grow the voluntary fund raising effort to a level that would provide adequate financial resources to fund maple research on an annual basis. The "penny per container" unit of measure has been deemed to be a reasonable amount of money and relatively affordable to any maple syrup producer or syrup packer. As an example, a producer packing 10,000 containers annually would contribute $100.00 to the research fund. Seemingly this is a small price to pay for the value of research and the future of the industry. But with the maple industry spread over sixteen States and Provinces the program has been cumbersome to promote and manage through the volunteer committee and a few dedicated container manufacturers assisting in collecting voluntary contributions.

Consequently, the voluntary program has worked but with marginal success for twenty years averaging receipts of $20,000 to $30,000 annually. With the large number of maple research proposals submitted each year funding has been limited and researchers receive "seed money" as an industry endorsement for their projects and seek alternative funding and grants from other sources.

The NAMSC Research Fund has depended solely on this voluntary "penny per container" program to fund maple research. To those that have contributed and / or assisted in

the collection of the funds over the past twenty years, we extend our sincere thanks for your effort and your continued support.

THE NEED FOR MAPLE RESEARCH

Since its inception, the Research Fund has generated and provided funding annually to initiate timely maple research for all producers, large and small, in the United States and Canada.

The need for maple research continues to increase in areas such as tree health, insect infestation, energy, fuel efficiency, syrup production methods, product quality, packaging, marketing, syrup adulteration, seasonal climate change and a host of other concerns that are vital to the future of the maple industry.

Regardless of the amount of syrup individually produced or packaged there are common issues that affect everyone involved in the maple industry from the producer, to syrup packers, equipment manufacturers and suppliers, to the cooperatives, and the marketing and sales of pure maple products on the retail store shelves.

Maple research provides the necessary knowledge to help the maple industry anticipate and the meet the challenges of the future.

EXPANSION OF THE NAMSC RESEARCH FUND

The Delegates of the North American Maple Syrup Council unanimously adopted a resolution at the

2007 annual meeting in Akron, Ohio allowing the Research Fund to restructure its "voluntary penny per container" funding initiative. With consideration of the options presently available it was decided to develop a formal program to expand the network of container manufacturers and major container distributors that assist in soliciting and collecting voluntary contributions for research on behalf of the NAMSC Research Fund.

This new program is called the Maple Research Alliance and is designed to increase and maintain consistent funding sources through an industry-wide network of container vendors who assist in the collection of voluntary contributions to fund maple research and education. Participating companies who make the commitment to support and promote the research and educational initiatives of the Council are known as Alliance Partners.

Alliance Partner's request voluntary contributions of their customers at time of invoicing of one penny for every container purchased for packing pure maple syrup at the time of invoicing. Customers would include containers sales to all U.S. and Canadian maple syrup producers, producer associations, cooperatives, maple syrup packers, container distributors and dealers that are not also active Alliance Partners. Containers are defined as plastic, tin or glass containers of any size up to and including (1) gallon that can be used for packaging maple syrup.

The NAMSC is a 501(c) (6) nonprofit and its structure is appropriate to receive contributions and pass-through from manufacturers and major distributors to the Research Fund.

With more funding available the committee plans support of more focused research and the funding of larger research projects that are of key importance to the industry as well as continuing to provide funding the necessary smaller other research projects.

It is essential that adequate funds be generated for research to meet the increasing demands placed on our industry. Comprehensive maple research must be expanded or we will not be able to address the issues that we face today or will face us in the future. The NAMSC Research Committee is committed to achieving these objectives and has full support of the Council as well as our participating research institutions and universities.

ACHIEVING THE RIGHT SYRUP DENSITY

By John Henderson,
Risk Management Specialist
Ontario Ministry of Agriculture,
Food and Rural Affairs (OMAFRA)

Achieving a consistent and acceptable density level for maple syrup continues to be a challenge for many producers.

In Ontario, Regulation 386 establishes the minimum legal density for maple syrup as 66 degrees Brix, anything less than this is illegal and is considered to be low density. There is not a legislated maximum in most jurisdictions, however a density level from 66.5 degrees to 67.5 degrees is considered ideal. Maple producers have also indicated that some of their customers want a higher density product. The Maple Products Regulations under the Canadian Agricultural Products Act specifies the same density standard as Reg 386 on a national basis.

In Vermont and Maine, the minimum legal density is 66.9 degrees Brix and a legal maximum of 68.9 degrees Brix has been established. Other maple producing regions in the United States have a legal minimum of 66 degrees Brix and no established maximum, similar to Canada.

The Ontario Ministry of Agriculture, Food and Rural Affairs' (OMAFRA) collects approximately 450 samples of syrup each year for lab analysis and label review. Results continue to indicate that many producers pack syrup outside the legal and or recommended density levels.

Syrup with a density lower than 66 degrees Brix has legal, quality, economic and potential food safety issues. Low density syrup may ferment or mould and result in unmarketable product, lost customers and recalls.

Syrup with a density above the suggested or legal maximums may have quality issues, including flavour and crystallization resulting in economic loss to the producer.

For example if your syrup is 70 degrees Brix instead of 67.5 degrees Brix and you are selling by the litre, your 1 litre container of heavy syrup is equal to 1.05 litre of syrup at 67.5 degrees Brix. The value of the .05 litres of syrup or extra sugar you are providing is $0.90 if you are selling for $18 per litre. Assuming all your syrup is heavy (over recommended or legal density levels depending on jurisdiction) and you have 1000 taps with an average yield of 1 litre per tap, the lost value could be $900.00. In reality your syrup would not all have high density levels; however significant fluctuations in density could indicate that you need to review measuring methods. Similar values can be determined for other densities using information from the section on Adjusting Syrup Density, pages 168 to 170 in the North American Maple Syrup Producers Manual.

Density problems can be rectified. You begin with an analysis of your current finishing and density measuring method, determine what is not working and look at alternatives. It may mean changing your current finishing and density measuring methods, checking the calibration and accuracy of the equipment you use,

replacing if necessary, and taking a bit more time to double-check the density before packaging the syrup. If you are having problems with density, take some time, get some advice if needed and find a method that works for you.

Many resources are available to assist you with any density issues. See how your neighbour checks theirs, ask your equipment supplier, consult industry people and review available literature.

The following is a list of some of the resources available to help you determine how to achieve the optimum density range for your maple syrup and other maple related interests:

In Ontario: Fact Sheet - Maple Syrup: Measuring Density, Order No. 08-003, Agdex 310/70; (replaces 05-019) can be obtained from your closest OMAFRA Office or may be found on line at: http://www.omafra.gov.on.ca/english/crops/facts/08-003.htm

Food Safety Practices for the Production of Maple Syrup Manual may be found online at: http://www.omafra.gov.on.ca/english/food/inspection/maple/maple_prod_food_safety.htm. (Or call 1-866-466-2372 ext. 64395 to order a copy)

The North American Maple Syrup Producers Manual, Second Edition is available through your local maple syrup association or equipment supplier. The Manual can also be ordered from Ohio State University at:

Ohio State University,
Communications and Technology,
Media Distribution,
216 Kottman Hall, 2021 Coffey Rd.,
Columbus, OH 43210-1044
Phone: (614) 292-1607
Fax: (614) 292-1248.
Cost: Softbound $17.50 and Hardbound $25, plus shipping.

Producers can attend one of the very successful maple grading schools offered by IMSI. For information on the grading school times and locations or current industry personnel, contact Dave Chapeskie at the IMSI office at:

International Maple Syrup Institute,
Dave Chapeskie,
Executive Secretary,
5072 Rock St.
RR#4, Spencerville, Ontario
K0E 1X0,
Tel: 613-658-2329
Fax: 613-658-2250
Email: agrofor@ripnet.com
Web: http://www.internationalmaplesyrupinstitute.com/content/en/contact_us.aspx

Contact your local State or Provincial Maple Producers Association or Government Regulatory Office.

THE 2009 NORTH AMERICAN MAPLE SYRUP COUNCIL AND INTERNATIONAL MAPLE SYRUP INSTITUTE ANNUAL MEETINGS

A Golden Anniversary

The Maine Maple Producers Association is delighted to invite you to this year's NAMSC and IMSI meetings, to be held in beautiful Bar Harbor, Maine, an ideal get-a-way destination. The meetings begin Thursday night October 22nd and continue through a banquet on Sunday, October 25th with a separate northern Maine tour beginning on Monday October 26th, 2009. The annual meetings will be held at the Atlantic Oakes by the Sea Resort and Conference Center which was formerly a private estate and now offers spacious meeting rooms and 150 ocean view rooms with balconies and patios.

There will be demonstrations, producer workshops and technical sessions, equipment displays and tours to interest everyone involved in maple, from the backyard producer to the largest producers, packers and wholesalers. These meetings will be a great opportunity to celebrate, learn, meet, eat seafood, have fun, and see the latest products developed for the maple industry. Technical presentations and reports from recent maple research will be a benefit to everyone.

For more information, please contact either:

Robert Smith
Smith's Maple Products
24 Bennett Ave., Skowhegan ME 04976
207-474-3380
Email: bob@beeline-online.net
or
Eric Ellis
Maine Maple Products
449 Lakewood Rd.
Madison, ME 04950
Phone: 207-474-3887
Email: mainemaple@beeline-online.net

Or go to the Maine Maple Producers website at http://www-mainemapleproducers.com/

CROP REPORTS FOR 2008 CONTINUED

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.

NOVA SCOTIA

The production in 2008 will be reported as 93,500 liters produced from 326,650 taps. The number of liters produced was the fewest since 1996 and the yield/tap was the lowest since 1987. The gross farm receipts from the maple crop n 2008 were $913,200. It dipped below one million for the first time since 2001 and was the lowest since 1996. Some producers reported that they had the poorest year ever.

The MPANS Annual General Meeting was held on January 26, 2008 at Tatamagouche Center. Guest speakers were Dave Copus, Nova Scotia Business Inc. who addressed the group about how that organization might be able to help Maple Producers and Patricia Amico spoke about uneven-aged Management Outreach Projects.

At the AGM, a presentation was made to the family of Max and Patty Spicer who were inducted into the Nova Scotia Maple Industry Hall of Fame. Max and Patty are fondly remembered. They did a lot of work for MPANS and were good ambassadors for the Maple Industry.

A special thank you to the Committee for putting on this years convention.

OHIO

The Ohio 2008 maple season was one for the record books. Some producers started tapping in January. Most producers waited until the end of February or the first week of March. March was when the sap started running really good and for most of the state it didn't stop until April.

Ohio production for 2008 per the USDA-NASS report was 118,000 gallons. That's 43,000 gallons more than was produced in 2007. Ohio's yield per tap was.299 gallons per tap. Most producers with good vacuum systems produced .5 gallons per tap. The highest yield per tap was on James Miller's sugarbush with 7.37 pounds of syrup per tap. He runs a 2050 tap operation.

Syrup quality remained very good until the end of the season. We are seeing more and more RO's being used every year and with fuel costs continuing to climb I'm sure we will be seeing more RO's.

Ohio was honored to have Bill Brown of Knox County inducted into the Maple Hall of Fame. Bill is the fourth hall of fame member to be inducted from Ohio. Congratulations to Bill and the rest of the Brown Family.

NEWS FROM NEW HAMPSHIRE

By Barbara Lassonde

Regional Educational Sessions for Maple Producers in New Hampshire are as follows:

February 3 - Intervale Farm Pancake House, Route 114 & Flanders Rd., Henniker, NH, 7 p.m.

February 5 - Stuart & John's Sugarhouse, Jct. Rts 63 & 12, Westmoreland, NH, 7 p.m.

February 10 - Mt. Cube Farm Sugarhouse, Route 32A, Orford, NH, 7 p.m.

February 12 - Fish & Game Research Bldg., Route 3, Lancaster, NH, 7 p.m.

March 28 & 29 - New Hampshire Maple Weekend. Statewide. Over 50 sugarhouses open to the public and offering tours, samples, special activities, pancake breakfasts and more. For a complete list of participating sugarhouses, check the NH Maple Producers Association website at: nhmapleproducers.com or call 603-225-3757.

Sharing That Maple Flavor

Whether you're giving a gift of pure maple syrup or cooking with it, sharing the wonderful flavor of maple is an old New England tradition that continues today. A gift of real maple syrup will delight any recipient, and savoring its unique flavor on pancakes or a steamy bowl of oatmeal is the highlight of any breakfast.

But maple syrup is not just a breakfast food. If you'd like to try cooking with maple syrup, you're in for a treat. To gain the most maple flavor in cooking, Grade A Dark Amber or Grade B syrup are recommended. These grades have the strongest maple flavor.

The following recipes were taken from the New Hampshire Maple Producers Association cookbook, "New Hampshire Maple Recipes". Cookbooks may be purchased by using the order form on the NHMPA website: www.nhmapleproducers.com, or by sending your order and $14 to: NHMPA, c/o Betty Messer, 2827 Route 25A, Orford, NH 03777.

MAPLE MEMORY COOKIES

¾ cup shortening, ½ cup pure maple syrup, 2 tsp baking powder, ½ cup brown sugar, ½ cup nuts, ½ tsp baking soda, 1 egg, 2 ¼ cups flour, ½ tsp salt.

Cream brown sugar and shortening together. Add egg, maple syrup and mix well. Add dry ingredients and mix well, stirring in nuts. Drop by teaspoonsful on an ungreased cookie sheet and bake at 400° for 8-10 minutes.

ICE STORM UNVEILS DISCOVERY OF ANOTHER TREE WITH SIGNS OF ALB

Submitted by: Tom McCrumm

WEST BOYLSTON, MA — Apparently, it's the gift that keeps on giving.

The recent ice storm that took down thousands of trees and limbs, and had some in the region camping inside their homes or staying in shelters, has led to the discovery of another tree that showed signs of infestation of the Asian longhorned beetle, the U.S. Department of Agriculture said yesterday.

Suzanne M. Bond, spokeswoman for the USDA, said an infested red maple tree was found Monday on Bunker Hill Parkway. The tree had both egg sites and exit holes, typical signs of the wood-boring insects, she said.

The discovery pushes out slightly the Asian longhorned beetle regulated area, which includes all of Worcester and parts of Shrewsbury, Boylston, West Boylston, and Holden.

The edge of the regulated area now goes all the way to the Wachusett Reservoir, and edges slightly northward in Holden. The regulated area has increased in size by one square mile, from 63 to 64.

Ms. Bond said the tree was found as crews helping with debris removal noticed it on Bunker Hill Parkway. The tree had been damaged in the ice storm. She said it is the second infested tree to be found in the town since September.

No hardwood or brush with a diameter of half and inch or more – green, living, dead, fallen or cut – inside the regulated area is allowed to be moved outside the zone.

She said no additional signs of infestation were discovered in Holden, but the location of the new find on Bunker Hill Parkway pushed the (buffer) zone farther into Holden.

Live beetles, firewood, lumber or any infested host tree, branch, twig, stump or other woody material cannot be moved out of the area.

First discovered over the summer, the invasive beetles have an appetite for several varieties of trees.

Ice storm: Look at these video clips, they will tell you the sad story of the ice storm.

http://www.abc40tv.com/global/story.asp?s=9609661

http://www.cbs3springfield.com/news/local/37020064.html

Most every producer was hit in Mass, a few with minimal damage, but most with moderate to severe damage. Hundreds of thousands of taps will be lost, Mass. production will be half of last years I think. Long term we are looking at huge cleanup and repair expenses, lost sap, lost production, lost trees, lost income, etc.

Tom -

A NATURAL EVENT

By Russ Davenport

It seems that Mother Nature has done a great pruning job. The ice storm of Dec. 10-11-08 will go into the history books as one of a kind. Depending on elevation and location the tree damage was the worst I have ever experienced. The elevation of our sugar bush goes from one-thousand to sixteen hundred feet above sea level. Some of the taller mature trees appear to have had the top four or five feet of branches sheared off just like a haircut. The ice built on until the branch could not support it, then, crash, the wood just broke square usually taking off branches and twigs with it to the ground. The sound of this breaking is like no other on earth. A shattering followed by the rattle of falling ice. As the ice continued to form on all branches larger, and larger branches were giving way. Now is when you see the splitting of tight crotches. Some will split clear to the ground, some, just the weaker side will collapse. In all my management programs this tight crotch has been avoided.

The tree damage will be the longest lasting affect on the total tree health. The question is asked - should the trees be tapped this spring? I'm sure you will get many different suggestions. Let's go back to the time of the breakage. The weather will stay below freezing so the ice hangs on and the mess gets greater. When a warm spell comes with above freezing temperatures the sap will start to run. It will be like rain throughout the bush. The shade tree near your home will paint your car with sweet sticky sap.

All this tree damage will heal over in the next few years, but what to do this spring? I feel you must get what you can. The sap is going to run off the broken branches anyway, so get what you can. We will hear all kinds of management theories. A year or two from now there will be some comprehensive tabulated results both for tapping and not tapping.

Not known at this point is the extent of damage to tubing and main line installations. After the ice is gone a better analysis of damage will be more accurate. But my wildest dreams will not believe the time consuming work involved in cleaning-up and replacing sap collection systems. Older tubing when covered with ice will snap like spaghetti. Fittings that are a little brittle will break. Mainlines may be buried under ice and branches on the ground. We will hear some real horror stories as well as those lucky ones with little damage. This can be a real financial crisis for some. Anyone with a carry-over of a few barrels of syrup will be the lucky ones. I am not aware of this situation happening in our immediate past. We will eventually learn the extent of this destruction and its long term affect on our local industry. Stay tuned. I am sure there will be another chapter.

COMING EVENTS

19th ANNUAL HEBRON MAPLE FESTIVAL
March 14 & 15, 2009
10:00 a.m. - 4:00 p.m.
Hebron, Connecticut, Route 66 & 84
for more information contact:
www.hebronmaplefest.com or e-mail: rlwenzel@snet.net

23rd MAPLE SYRUP FESTIVAL
March 14 & 15, 2009
Warkworth, Ontario, Canada
For more information contact:
Alice Potter Tel: (705) 924-2057 Fax: (705) 924-1673

FIFTH ANNUAL POTTER/TIOGA
PENNSYLVANIA MAPLE WEEKEND
March 28-29, 2009
10:00 a.m. - 4:00 p.m.
For more information contact:
Peggy Clark Tel: 570-724-4764 E-mail: clarkwp@ptd.net

NAMSC/IMSI ANNUAL MEETING 2008
October 22-26, 2009
Atlantic Oakes Resort - Bar Harbor, Maine
Contact: Robert Smith, E-mail: bob@beeline-online.net
or
Eric Ellis, E-mail mainemaple@beeline-online.net

2009 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		

CLASSIFIED

FOR SALE: Equipment & Supplies from Bakers Maple. Lamb tubing, Bacon jugs, Marcland controls, Carrageenan for maple jelly, 1 1/2 lbs. for $19.95. Used Beckett CF 2300 Oil Burner. Bainbridge, NY *(607) 967-7229.*

FOR SALE: Complete King Evaporator 5'x15'. 1998 Leader model. Good condition. Firebox, evap pan, & finishing pan. Chimney, bricks, 2 blowers, & extras. Dissembled and ready for easy pick up. $4,500. Call North Country School Farm Office 518-523-9329 x 121 or email jluoma@northcountryschool.org

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FOR SALE OR BARTER: 3' X 10' New GH Grimm arch never used, needs assembling, need room in our sugar house, please buy it. Sap buckets $6.00, spout & cover extra. 500 gal. SS Tank, 250 gal. 5 galvanized tanks, $50.00 ea. 2 gas commercial stoves - 1 10 burner, 1 6 burner. (413) 623-6021.

IN MEMORIUM

LAWRENCE M. ROLOSON

Lawrence M. Roloson, 87, of Columbia Crossroads, PA, passed away on Tuesday, November 11, 2008 at the Robert Packer Hospital in Sayre, PA. He was the loving husband of the late Genevieve M. (Everts) Roloson who passed away on September 24, County Memorial Park.

Lawrence was born on December 21, 1920 in Troy, PA, the son of the late Glenn and Ora (Hager) Roloson. He was a graduate of Troy High School and was a dedicated farmer. He served as Columbia Township Supervisor for 50 plus years. His memberships included the Sylvania Presbyterian Church, Board Member of the Troy Farm Museum and Alpron Park, Endless Mountain Maple Producers Association and Eastern Milk Producers. In his spare time Lawrence enjoyed gas and steam engines and found great pleasure in attending the Pageant of Steam in Canandaigua, NY. He was well known for the maple syrup that he and his family produced.

Lawrence is survived by his sons and daughters-in-law; Ralph E. and Connie Roloson, Martin W. and Louise Roloson, Dale L. and Kathy Roloson, Alan L. and Roxanne Roloson, all of Troy, PA, 12 grandchildren, 22 great-grandchildren, one great-great-grandson, many nieces, nephews, cousins and friends.

The family has asked that to honor Lawrence's memory, memorial contributions may be made to the Sylvania Lions Club, P.O. Box 5 Sylvania, PA 16945 or to the Endless Mountains Maple Producers Association, c/o Andy Dewing, HC 34 Box 31, Warren Center, PA 18851.

MILTON H. WILLIAMS

Milton H. Williams, 86, of 32 Old Main Street, Deerfield, former Deerfield Fire Chief, died Monday night at home after a period of failing health.

He was born in Sunderland, August 5, 1922, the son of Kenneth S. Williams Sr. and Charlotte (Wells) Williams.

He was educated in the Sunderland School and graduated from Deerfield Academy in Class of 1941.

Milton graduated from New York State Ranger School in Class of 1943.

After graduation he started farming at the Wells Farm in Deerfield, now known as the Williams Farm where he continued to work until his death.

He was Fire Chief in Deerfield for 39 years, retiring in 1987. Tree Warden in Deerfield, retired in May 2008 after 54 years of service. He was an active member of Western Mass Forest Wardens Association for decades, President of Mass Maple Producers 1973-1983.

He was Franklin County Fair Parade Grand Marshal in 2004. A member of US Department of Agriculture Stabilization and Conservation Service during the

Administration of George Bush Sr. A member of Deerfield Land Trust. Farming operation including generations of Maple Sugaring on Mt. Toby in Sunderland, Mass., now located on Route. 5&10 Deerfield. Large scale sweet corn operation, raising beef cattle and produce farming. He was a pillar in the community of Deerfield for over half century.

Milt was married to Elizabeth Underwood since 1968. Besides his wife Betty, he leaves a son, Milton (Chuck) Williams Jr. and his wife, Gina, of Deerfield; two step-sons, Carl Allen and his wife, Alison, of Shelburne, and Todd Allen of Shelburne. Two daughters, Leslie MacFarlane of No. Falmouth and Sally Ferreira and her husband Larry of Falmouth. One stepdaughter, Tracy Allen of Deerfield. One brother, Richard Williams of Pawtucket, R.I. Seven grandchildren, seven great-grandchildren, five step-grandchildren, nieces and nephews. He also leaves his beloved cat Trevor.

His hobbies included fishing, hunting, and traveling, especially to Florida in January.

In lieu of flowers, donations may be made to Deerfield Fire Dept., 82 Old Main Street, Deerfield, Mass. 01342 or Deerfield Rescue Vehicle, State Road, South Deerfield, Mass. 01373.

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