



MAPLE SYRUP DIGEST



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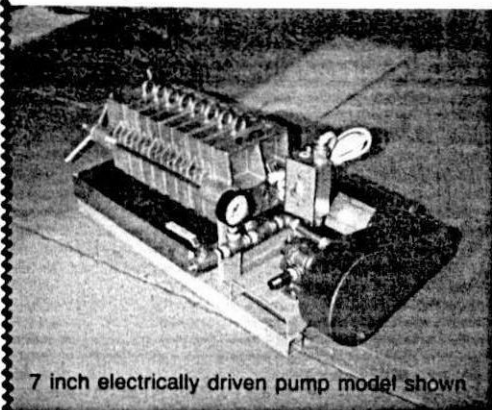
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In addition to the annual meetings of the North American Maple Syrup Council (NAMSC) and International Maple Syrup Institute (IMSI), we'll have educational sessions of interest to those in the maple industry. You can also browse commercial exhibits, collections of maple memorabilia and poster displays of maple research projects. Stay an extra day for the Michigan Maple Syrup Association (MMSA) Fall Tour which highlights several nearby sugar bushes, a forest thinning demonstration, plus a tour of Michigan State University, the nation's premier land-grant college.

The meetings will take place in Lansing at the Holiday Inn South / Convention Center featuring excellent conference facilities and guest accommodations. Several other hotels / motels and restaurants are within blocks of the convention center.

We've also planned for a little bit of fun! Thursday afternoon is devoted to sightseeing in our capitol city. Take a tour of downtown highlights or head to the country for a steam engine display. Later in the day, you'll need your best country duds for an old-fashioned country jamboree! Following a BBQ dinner, put on your dancin' shoes for a foot-stompin' good time or jump on a hay ride. We've even been promised a steam-engine "spark show" for the evening finale! We'll close our meetings with an elegant banquet featuring Michigan's delectable bounty and ballroom dancing.

If you have an interest in the maple syrup industry, whether as a producer (hobbyist or professional), packer, supplier or just an interested party, we invite you to come learn, share, greet friends and make new acquaintances. Mark your calendar today!

For more information, or to be added to our registration mailing list, contact:

Mary Fogle Douglass, Registration Co-Chair
2611 Okemos Road
Mason, MI 48854
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COVER: 1995 NAMSC tour stop at
Drummonds Sugarhouse, Ottawa, Ontario

GREETINGS FROM YOUR PRESIDENT



As most of you know, a resolution was passed at the last annual meeting of the NAMSC at Kingston, Ontario, Canada, by both the NAMSC and the IMSI to move maple syrup from "Forest Products" to "Agriculture". Word of the "Federal Register Notice of Proposed change for Maple Sap/Syrup" was announced as a small part of a 54 page summary of the new "North American Industry Classification system (NAICS)". The new system that is proposed to replace the Standard Industrial Classification (SIC) on January 1, 1997. The actual wording uses "maple sap" in the language. One statement that gives the best explanation is quoted as follows: "The production of maple syrup at the site where the sap is gathered is included in All Other Production while the production of maple syrup at a separate location is in the manufacturing sector of (NAICS)." All comments on the proposal were to be submitted by April 6, 1996.

It wasn't until the taps were going in and producers were thinking about sugaring that the Executive Officers and interested parties to the NAMSC got to work. After input from many sides and a few telephone calls the following letter was drafted and sent to the proper U.S. and Canadian officials.

March 27, 1996

Carole A. Ambler, Coordinator
Economic Classification Policy Committee
Bureau of the Census — U.S. Department of Commerce, Room 2633-3
Washington, DC 20233

Dear Ms. Ambler,

I would like to express my support, and that of the International maple syrup industry, for the North American Industry Classification System changes, which would classify maple syrup production as "crop production" in the agricultural category, as opposed to a classification under forestry products.

Recently I received a copy of the Federal Register outlining maple syrup production in "All Other Crop Production," under Agriculture. We accept this classification. However, the wording therein is not inclusive of all maple sap and syrup production as a crop. Therefore, we respectfully offer the following wording as best representing the production of maple syrup from sap as crop production, and secondary processing of maple syrup as manufacturing:

All Other Crop Production Classification:

Any gathering of maple sap, and the production of maple syrup

and other pure maple products, by an operation that originally produced the maple syrup directly from maple sap.

Manufacturing Sector:

The secondary production of maple products from maple syrup by operations that are unrelated to the original production maple syrup from maple sap.

We feel that it is critical that the maple syrup production operations and the sap gathering operations (even though they may be off site), be included in Agricultural rather than under Manufacturing in the new NAICS. Thank you for your consideration in these matters.

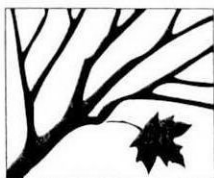
Very truly yours,

Robert S. Smith, President

We now have to wait again and see if your recommendations are used or not. At least it looks like we have been changed from Forestry to Agriculture anyway. I wish to thank all the people that were involved in this brainwashing event, because without you, it would not have been possible to accomplish.

Sincerely,

Robert S. Smith, President



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IMSI NEWS

It is May 1st, 1996. Normally, things would be cleaned and put away. The sun would be shining, and the green grass would be springing up. Mayflowers should be everywhere. But not this year in many maple producing areas. In northern maple areas there is two feet of snow, lakes are still frozen, and the frost has not even considered coming out. Some report that sap has been dribbling since mid February. I say "dribbling," because many report that they never had a "sap run," it just dripped a little each day in late afternoon. A very cold spring. Because of this, production has been very "spotty". Neighbors tell me that one had a great crop, the next down the road, a very poor one. Many are still hoping to make syrup in the far north regions.

So what does this all mean? Only finalized reports shall reveal exactly what happened. But, in a nutshell, and with a lot of guesses, here goes. The midwest probably will end up with about 75% of a crop. New England had an above average crop. Mid-western and central Canada had a good crop. Eastern Canada, not so good. Quebec, probably about a normal crop, with estimates of 55 million lbs. of production. Southern maple producing areas had a poor crop, central areas had a good crop, and the far north, not so good, but still producing at time of this report. The syrup flavor is good, but color is darker.

For so many years I went out on a limb to urge we spend money developing an acceptable test for adulteration. I believe we now have that test at our fingertips. I refer to the NMR "SNIFF" test by EUROFINS. The test is

available, can be used in prosecution of violators and is considered accurate by the courts. Now we can make that test even more respected and acceptable. EUROFINS has offered a joint project between their Company and the IMSI to provide AOAC approval to the legitimacy of the test. Without going into all of the details, this would lend further integrity to the test, and would be a great advance for prosecuting cases involving adulteration of pure maple syrup. This is somewhat the same as a "good house-keeping seal," if you will. The IMSI will consider these developments during the coming meeting during May, in Victoriaville, Quebec.

I wish to acknowledge the cooperation of several persons in addressing a last minute request for the new Classification system, changing maple from "Forestry" to "Agriculture." Let me just say that Aubrey Davis, Clarence Coons, Luc Lussier (IMSI President), Robert Smith (NAMSC President), and Bruce Martel and Commissioner Leon Graves (Vermont Department of Agriculture), acted in a rapid effective manner, for the benefit of the maple industry. My appreciation and congratulations go out to these folks for their positive and cooperative action. These changes were required because the initial published "classifications" did not say what the resolution said, as was passed by the IMSI and the NAMSC, in Kingston, Ontario, in October.

Well that's enough for now. Get out and sell that syrup. Make lots of money. Enjoy your summer vacations. Help your neighbor. Be happy. Love life. We will talk again soon.

Lynn Reynolds, Exec. Dir., IMSI

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AMERICAN MAPLE MUSEUM REPORT

PO Box 81
Croghan, New York 13327

By Haskell Yancey, Jr.

Once again May has arrived and brought with it the Museum Opening and Induction Ceremonies. Each year the event is anticipated with high expectations.

This year we have two excellent inductees into the Hall of Fame; Everett A. Willard from Vermont and John Kroll from Minnesota. Both of these Inductees have been not only active in the maple industry, but also other activities and interests.

As you can see from their biographies, they both have rich maple backgrounds.

EVERETT A. WILLARD

Mr. Willard was raised on a hillside farm in Derby, Vermont, where the family milked cows, produced eggs and poultry, raised certified seed potatoes and tapped Maple trees.

He held several town offices and was active in both Farm Bureau and Grange. In 1949 he married Dorthy Domina and raised four children on the dairy farm which they had purchased.

In 1962 Mr. Willard was elected Master of Vermont State Grange, which office he made a full time enterprise, after selling his cows. He served four years as State Master.

In 1967 he contracted with Vermont Department of Agriculture to produce a Maple Marketing Manual. Later that year he was hired by the department as a Maple Marketing

Specialist. He was later promoted to director of the Markets division.

During his years at the department he worked extensively with Maple producers and played a major role in organizing the Vermont Maple Promotion Board, authored several editions of the Vermont Maple Quality Control Manual, managed the Vermont Farm Show for 17 years and the Vermont Building at Eastern State's Exposition for 12 years.

He retired in 1990, but has remained active in Maple Organizations, where he is referred to as "Mr. Maple."

JOHN KROLL

Mr. Kroll was born, raised and still resides on the same farm near Long Parry, Minnesota on the Western edge of Maple producing country. His great grandparents came to the farm in 1890, so some tapping of Maple trees has been going on since then. With the encouragement of a local forester, the family acquired an evaporator in 1960 and has been producing syrup commercially ever since.

After graduating from high school, John remained on the family dairy farm and married Delaine Schultz in 1950, with whom he had four children. One of the sons and family now continues the dairy part.

In 1987 Delaine worked hard to help make a success of the N.A.M.S.C. Convention in Duluth. Sadly, a year later, she died of cancer. During this time John had served on the board of the Minnesota Maple Producers and also became a voting director of the North American Maple Syrup Council of which he was chairman in 1986 & 1987.

In 1990 John married Susan Block and together they have continued the Maple operation. Recently they have been going to steam threshing reunions where Susan sells syrup and John enjoys the old steamers and tractors.

MICHIGAN ASSOCIATION ANNUAL MEETING

By John Anton

The thirty-sixth annual general membership meeting of the Michigan Maple Syrup Association was held on Saturday, January 13th, 1996 at the Holiday Inn in Grayling, Michigan. Attendance in the midst of the usual Northern Michigan winter was up over a third from the previous year.

The general meeting was conducted in the morning with the election of officers. Elected to a three year term was Earl Girard of Hesperia. Earl and Marilyn operate White River Sugar bush for the past eighteen years and offer a full line of maple products.

The special feature to the afternoon portion were the breakout sessions. Six topics were available.

1. **Sugarbush Management**, Tim Boonstra, Forest Consultant, Fairview.
2. **Tubing & Vacuum**, Rick Fogle, Sugar Bush Supplies, Mason.
3. **Lead — Issues & Updates**, Mary Douglas, President, MMSA, Mason.
4. **Candy Making**, Ron Kistler, Kistlecrest Farms, Ludington.
5. **Cream & Sugar**, Terry DeLaughary, DeLaughary Sugarbush, Bark River.

6. **Beginners**, Brian Vissers, Harmony Sugar Bush, Mason and Russell Kidd, MSU Extension.

The new Board of Directors elected Mary Fogle Douglas of Mason as its President. Mary is but the third President of the Association in the past fourteen years. Mary is the daughter of George and Helen Fogle, longtime producers of Maple Syrup. Mary has substantial responsibilities in Sugar Bush Supplies, Inc., a family owned business owned by the Fogle family for the past eighteen years. Sugar Bush Supplies has been a part of Michigan Maple for the past sixty-five years previously owned by Robert Huxtable, a 1985 Inductee to the North American Maple Hall of Fame. Other officers elected were:

Vice President — Terry DeLaughary, Bark River.

Secretary — John Anton, Lansing

Treasurer — Larry Haigh, Bellevue

The 1996 Michigan Maple Syrup Queen is Sarah Simpson. Sarah is the daughter of Al and Jayne Simpson of Charlotte. Sarah is a Customer Service Representative with First of Michigan, a Grand Rapids brokerage firm.

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A Reexamination of the Effects of Paraformaldehyde on Tapped Sugar Maples

I. Survey of Some Wisconsin Sugarbushes

By David R. Houston
USDA Forest Service
51 Mill Pond Road
Hamden, CT 06514

Introduction

Pellets containing paraformaldehyde (PFA) have been widely used to increase sap yields in tapped sugar maples. However, their use is controversial because in spite of past studies showing that both discoloration and decay are significantly greater in wood around tapholes treated with PFA (Shigo and Laing 1970; Walters and Shigo 1978, 1979), and in spite of anecdotal accounts that it injures cambium around tapholes and delays closure, proponents of "the pill" maintain that increases in sap yield are more beneficial (economically) than harmful (biologically) (e.g., Reynolds, 1989).

In this study, our objectives were to: (1) reexamine the effects of PFA on taphole closure, development of discoloration, and the incidence and severity of decay associated with tapholes; and (2) determine if these effects are influenced by timing of tapping and spout removal and flushing of tapholes.

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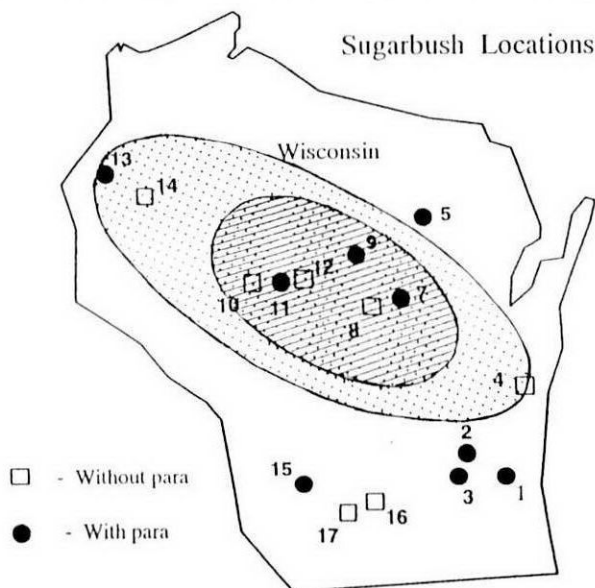
The study was conducted in two parts. The first was a survey of taphole conditions in Wisconsin sugarbushes with and without histories of PFA use, the second was an experiment that compared both taphole closure and the discoloration and decay that developed over time in trees treated or not treated with PFA. In this paper, I report the results of Part I, the survey of Wisconsin sugarbushes.

Materials and Methods

In June 1991, trees in 16 sugarbushes (50 trees in each sugarbush) in Wisconsin where PFA had (9) or had not (7) been used in recent years were examined for external evidence of damage by PFA. Each owner was interviewed to determine the history of PFA use, method of sap collection, and other possible stress factors. Measurements were made of tree diameter at 1.4 m (DBH), crown canopy position class (1: dominant, 2: codominant, 3: intermediate, 4: overtopped), crown condition (1: healthy, <10% dead upper crown branches; 2: fair, 10–50% dead upper and outer crown branches; 3: poor, >50% upper and outer crown branches dead), and the number of tapholes that were open, oozing (an indication of microbial infection), or had cambium dieback. If present, the amount of cambial dieback (length x width) that occurred around (up to) three open tapholes was measured. Outer bark around open tapholes was carefully removed to reveal the extent of cambial dieback.

Results

The 16 sugarbushes surveyed were well distributed within the state (Fig. 1). Overall, there was no apparent correlation between the use of PFA and any of the taphole attributes measured (Table 1). Some sugarbushes with long histories of PFA use ranked among the lowest (least damage) for some attributed and among the highest for others, while several sugarbushes with high values had



never been treated with PFA (Table 2). Although there was no correlation between these attributes and tree size (dbh, crown canopy class), a significant correlation ($p = 0.02$, $R^2 = 0.28$) did occur between the amount of cambial dieback and tree condition.

Interviews with sugarbush owners and observations made in the sugarbushes revealed that many other factors, often unique to individual sugarbushes, influenced the external taphole attributes more than PFA. Poor practices such as over-tapping (too many tapholes in an area on a tree), tapping small trees in dense stands or old trees in poor condition, and leaving spouts in tapholes (sometimes many) were observed in some sugarbushes. Bark splits above and below tapholes resulting from inserting spouts too deeply or tapping into frozen bark (splits predominantly on northerly side of trees) were common in some sugarbushes.

The severe drought of 1988–1989 in Wisconsin adversely affected the condition of trees in some sugarbushes, especially in the central part of the state. The

Table 1. Average values for 50 trees in each of 16 sugarbushes in Wisconsin where PFA had (9) or had not (7) been used.

^a1 = dominant tree; 4 = overtopped, suppressed tree

^b1 = healthy, full crowned tree; 3 = poor tree, > 50% upper and outer crown branches dead

Item	Paraformaldehyde	
	(+)	(-)
dbh (cm)	40.1	39.3
Crown class (1–4) ^a	2.1	2.3
Condition (13) ^b	1.3	1.3
Open taps (no.)	3.0	3.2
Taps with dieback (no.)	2.1	2.3
Dieback area (cm)	5.3	5.2
Taps - open, oozing (no.)	0.6	0.4
Taps - closed, oozing (no.)	0.1	0.1

Table 2. Sixteen Wisconsin sugarbushes ranked by their mean values for several taphole attributes. Fifty trees were assessed in each sugarbush where PFA had (9) or had not (7) been used. For each attribute, sugarbushes are ranked as high (left), moderate (center), or low (right) with range of mean attribute values given in parentheses.

Attribute	Sugarbush numbers ^a		
	High values ^b	Moderate values	Low values
Open tapholes (no.)	14 11* 13* 8 (5.4 ... to ... 3.9)	15* 9* 2* 10 12 7* 17 16 (3.7 to 2.2)	5* 1* 3* 4 (2.1 .. to .. 1.6)
Tapholes with dieback (no.)	14 11* 13* 8 (4.8 ... to ... 2.9)	9 7* 17 15* 10 5* 12 16 (2.5 to 1.7)	2* 1* 3* 4 (1.5 .. to .. 0.9)
Dieback area (cm ²)	11* 14 9* 7* (8.7 ... to ... 5.7)	12 8 17 13* 5* 4 15* 10 (5.5 to 3.8)	1* 2* 16 3* (3.5 .. to .. 2.1)
Open tapholes oozing (no.)	11* 2* 7* 1* (.89 ... to80)	14 9* 12 8 5* 10 15* 17 (.78 to30)	16 13* 3* 4 (.26 .. to .. .02)

* = Paraformaldehyde used.

^aEach sugarbush was assigned an identifying number from 1 to 17 (no. 6 was not measured).

^bHigh values indicate poorer taphole conditions. For example, trees in sugarbush no. 14 had the most open tapholes, the greatest number of tapholes with cambial dieback, the second largest amount of cambial dieback, and ranked fifth from the highest in number of oozing tapholes.

sugarbushes where drought damage was most intense, as revealed through interviews with owners and others, are encircled in Figure 1. The stress history and other stand data, together with mean tree condition and mean cambial dieback for eight representative sugarbushes, are listed in Table 3.

Discussion

Anecdotal accounts that PFA retards taphole closure and causes cambial death around tapholes were not supported by this survey. Rather, it seems that other factors, including poor tapping practices and certain tree and stand stress conditions, are responsible. We had the opportunity to examine sugarbushes where a

Table 3. Stress histories and other data for eight representative Wisconsin sugarbushes. Sugarbushes are ranked as low (L), moderate (M), or high (H) based on their mean taphole dieback rankings (see Table 2)^a.

Sugarbush (no. and rank)	Location (town- ship)	Collection method	Mean		Mean taphole dieback (cm ²)	PFA history	Other stress, etc. ^b
			Mean DBH (cm)	tree condition (1-4)			
3 (L) ^d	Mayville	tubing	34.0	1.18	2.12	10 years	Young, vigorous stand but "no syrup in 1989"
2 (L)	Lomira	buckets	51.7	1.26	3.33	15 yrs-but not in 1990 and 1991	No apparent drought
16 (L)	Rock Springs	tubing	42.6	1.04	3.16	None	No drought effects Large, old trees left after logging
4 (L-M)	Cleveland	buckets	41.4	1.38	4.09	10 of 15 yrs to 1987. Didn't tap in 1991	Some effects of 1988 drought. Vigorous stand in good condition.
8 (M-H)	Tigerton	tubing vacuum	32.7	1.20	5.48	1-2 years, but not in past 5	Severe drought in 1988 and 1989; many small, suppressed tapped trees, overtapped, stand over stocked
12 (M)	Owen	tubing	35.6	1.70	5.50	None	Severe drought, 1988-89
11 (H)	Owen	buckets	37.5	2.00	8.72	1989-1991	Same stand as (12) but trees have marked top dieback and are in poorer condition
14 (H)	Cumberland	buckets	48.3	1.22	7.39	None for last 10 years	No drought effects noticed; trees are old. Long history of tapping

^aLow (L) rank indicates poor taphole condition, high (H) good condition. Thus, tapholes in sugarbush no. 3 had the least cambial dieback; those in sugarbush no. 14 had the most.

^bComments derived from interviews with owners and my observations.

variety of practices and conditions occurred. The severe drought that had occurred 3 and 4 tapping seasons earlier had a significant effect. Tapholes made in 1988 were often still open in 1991 on trees in areas most severely affected. Also, tree condition, as expressed by crown dieback, generally was poorest in those areas. Other studies have shown similar effects resulting from other stress. Cambial dieback and reduced closure occurred around wounds made in sugar maples that had been experimentally defoliated (Wargo 1977).

Although much of the cambial dieback I observed was associated with poor tree condition resulting from drought, old age, or suppression, it was clear that improper tapping practices also were very important. Setting spouts too deeply or when bark was frozen caused bark to split and dry out above and below tapholes; using dull drill bits left frayed and ruptured bark and wood and probably contributed to the establishment of microorganism invaders of bark, cambium, and wood. Internal damage to sapwood related to the use of PFA could not be assessed in this survey. Those effects will be described in a subsequent paper.

Acknowledgments

I would like to thank the National Maple Syrup Council who funded this study, Grant No. 23-660. Also, I acknowledge with appreciation the assistance of J. Cummings-Carlson, Wisconsin DNR, who helped us locate the Wisconsin sugarbushes and reviewed the manuscript, and the many sugarbush owners who let us poke and prod their trees.

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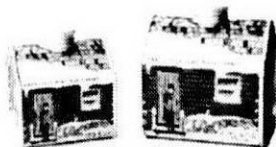
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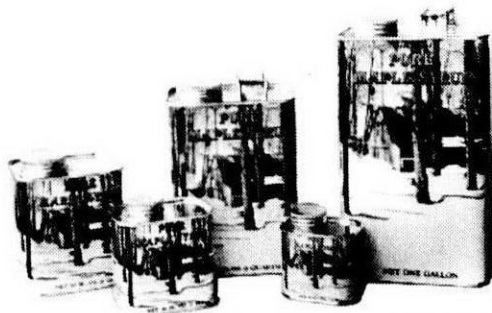
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The 29th Annual Vermont Maple Festival proved to be a success in every way and as the weather cooperated about 55,000 people descended upon the City of St. Albans. Chair, Henry Marckres of Craftsbury, said that "crowds were the biggest ever and Maple was King in St. Albans."

The new Vermont Maple King and Queen were crowned at the annual Maple Awards Banquet. Gene Branon, 20, of Fairfield was selected 1996-97 King. He is the son of Dan and Helen Branon and was born into maple sugaring. He is employed full-time on the family farm. Queen April Purinton of Bristol also comes from a long line of sugarmakers and is a part time employee of Dakin Farm in Ferrisburgh. She is a senior at Mount Abraham Union High School.

Henry Marckres announced the

chosen Grand Marshall for the 1996 Parade was Larry Myott, UVM Extension Maple Specialist. Myott is a past Chair of the Festival and has served on the Board of Trustees for 10 years. He has been instrumental in developing the festival a true state wide festival in honor of the maple industry.

The festival has been growing steadily for many years and in the last few years has become a major event in the Vermont fair system. Hosted throughout the City of St. Albans, the festival includes many and varied food concessions, an antique show and sale, a fine craft show and sale, pancake breakfasts with lots of maple syrup and a carnival area.

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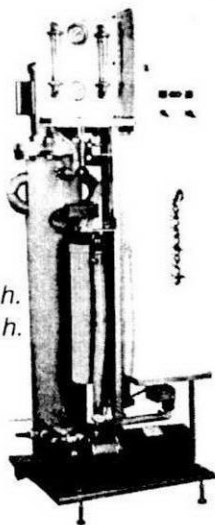


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UTAH'S MOUNTAIN MAPLES: SWEET AT 8,000 FEET

**A sugaring season
in an unexpected locale.**

By Dane Leavitt

A New York State Maple Producers Association (NYSMPA) plaque is proudly posted in my office. Neil Wright,¹ my mapling mentor, arranged my membership.² He suggested I justify this honor by writing about my first sugaring season. I obey – suspecting my membership is subject to Neil's probationary whims, for I live and produce maple syrup in Southwest Utah, not New York.

I reside in Cedar City, an ideal³ community of 18,000 people located at 5,800 feet above sea level. Our town sits at the base of 12,000 foot mountains.⁴ Sixty miles to the south lies the Mojave Desert, with elevations below 2000 feet. Las Vegas, 175 miles to the southwest, is the nearest large city.

My mapling adventure started with an Internet e-mail inquiry to an on-line maple producer asking if sugar maples could be grown on property located at 8,500 feet, and if so, how long would it take for the trees to reach sufficient size to produce maple syrup.⁵ The inquiry was forwarded to Cornell University, and apparently from there to Neil, who wrote me a courteous hand-written note on February 14, 1996. I followed with a phone call on February 20. Neil told me *Acer Saccharinum* is hardy, and could possibly grow at 8,500 feet, but that it would be 30 years before the

trees reached tapping diameter.

Nearing age 40, I felt planting now to begin sugaring at 70 was beyond my usual planning horizon.⁶ Neil nonetheless took my telephone order for two books⁷ about maple syrup, and agreed also to send an equipment catalog.

I read both books and studied the catalog. My curiosity was engaged by descriptions of producing maple syrup from what one author called "poor man's maples,"⁸ varieties other than *Acer Saccharinum*. In the mountains above Cedar City (and in other Utah mountains) grow some scrub-like maples, known locally for their brilliant reds each autumn. These maples are smaller than the trees pictured in the books Neil sent. However, some of the trees are between 10 and 14 inches in diameter.

I called the U.S. Forest Service and spoke with the local expert. He called the trees "Mountain Maples," noting they grow in damp places, often amongst scrub oak, usually in the 7,000 to 9,000 foot elevations. He doubted the local Maples would produce sap suitable for syrup, but knew of no one that had tried. A close friend, Steve Kunz, speculated that Southern Utah's early settlers were sugar hungry during the pre-railroad times. Some of the early pioneers had New England origins. Perhaps they had tapped the Mountain Maples.⁹ I later spoke with Alva Matheson, a well-known local historian, now well into his 90s, but sharp of memory. Alva knew of no prior maple tapping in our area, in times pioneer or modern.¹⁰ Nor did Utah's commissioner of Agriculture, Cary Peterson.¹¹

Our family has a few acres in the mountains above Cedar City upon which grow some Mountain Maples. Spurred by Steve's speculation, I decided to tap a few and see what would happen. I called Neil on March 4 and ordered four spiles, 50 feet of Lamb's tubing, and a tapping bit.

On Saturday morning, March 9, Neil's package arrived. I purchased four used plastic food buckets and lids (4 gallon capacity) from a local bakery. By now it was 1:30 p.m. Until May our mountain ground is inaccessible other than by snowmobile or snowshoes. We own no snowmobile.

I drove as far as possible in my four wheel drive pick-up. In fact further than possible. A snow bank stopped my progress at Walter Murie Creek (7440' elevation). By the time I shoveled the truck free it was 3:45 p.m. I was seven miles short of our property and known maples of sufficient size.

The day was temperate. I had daylight until 6:15 or so. My long-suffering wife Ruth had agreed not to call out the posse unless I failed to return by 8:00 p.m. I strapped on my snowshoes and bucket-burdened backpack and started the climb.¹²

By 5:30 p.m. I reached the trail's summit (8,617 feet). The remaining 3.5 miles was flat country. I might reach our place by dark, but if I continued, I would not get back to town before Ruth rallied the search and rescue folks. Fortunately, our mountain neighbor, Sandy Webster, had some 12" maples by the trail. Given the circumstances, forgiveness was easier than permission.¹³ I tapped four of Sandy's trees,¹⁴ descended

without incident, and arrived home well before curfew.

The following Monday, March 11, I called Neil, reported my tapping, and ordered four more spiles. I also mailed Neil Mountain Maple leaves, which appeared (to this untrained eye) more like *Acer Saccharinum* than any other variety noted in Sweet Maple or Backyard Sugarin, having the characteristic lobes and smooth edges.

Late Wednesday afternoon (March 13) I repeated Saturday's trek (excepting the stuck truck) with my 13-year-old son Dixon's Boy Scout troop. They wanted in on the action. We were exhilarated by the one gallon of beautiful clear sap collected from the buckets.

With Ruth, me, and our six children watching the steaming stove with rapt (and crowded) focus, we boiled the sap in four successively smaller pots. We boiled too long. We got about a quarter-cup of light-colored and wonderful-tasting taffy. It lasted six seconds, and that long only because not all spoons could access the pot at once. It was a satisfying moment (with an emphasis on "moment"). The next morning (March 14) I called Neil and ordered 20 taps, 100' of tubing, hydrometers (sap and syrup) and a test cup.

On Saturday, March 16, an expedition of four set out on borrowed ATVs intending to reach the tapped maples and hopefully our property beyond. The adventurers were Dixon, my daughter Skye (age 9), our friend Curtis Jones, and me. The ATVs bogged down in snow short of the tapped trees. We hiked the balance and carried out four gallons of sap – along with the

buckets and taps. The location's impracticality outweighed the considerable romance.

The retreat was no surrender. Curtis had earlier suggested I ask Tom and Corinne Williams if I could tap some maples on the Williams' ground located high in Right Hand Canyon along a *remote but* accessible road. I hoped the Williams would say "yes."

That night we made the kitchen a sauna. Steam added temporary texture and life to painted walls. The four gallons boiled down – and then over. Neil laughed at the retelling. We lost about half of the final product, made a mess of the stove, but learned the lesson about pot-watching vigilance. We managed to retain about 3/4 cups of syrup, which was light in color. The Boy Scouts enjoyed a well-earned sampling.

Ruth and I made the 15 minute drive to the Williams' property. The road's upper reaches were snowpacked and slick – but passable. We found suitable maples 20 to 50 yards from the roadway at two locations, one at around 7,800 feet (lower grove) and the other at around 8,000 feet (upper grove). I called Tom and Corinne. They said "yes."

By Saturday, March 23 my children and I had 26 taps in place and 18 gallons of sap in the refrigerator (move over coleslaw). Our work was done early each morning before my work and the children's school. It was time for our first "big" boil-down. We moved outside to a covered patio. Using a series of large canning pots over four propane¹⁵ camp burners, we produced 6.5 cups of fancy-grade syrup. I thought it beautiful. Ruth found humor in my fixation with holding bottles of our maple syrup to

the light. I sent a bottle from this first hydrometer-tested batch to Neil. He later said it "had a very delicate taste." I assumed "very delicate" meant "good," and for several minutes lost all perspective about humility.

We collected and boiled sap twice each week over the balance of the season, usually on Saturday and once mid-week. I was aware I should collect daily, but my work commitments made daily attention impossible. The high elevation, cool temperatures, and lingering snow apparently helped preserve the sap despite the less than ideal gathering schedule.

Our best run was 40 gallons between March 30 and April 3. March's final five days, and April's first five days counted for over half our sap totals – and produced exceptional quality syrup. In all we gathered 192 gallons of sap and produced 58 cups (3.625 gallons) of syrup, a sap to syrup ratio of 53:1. The ratio during most of the season was 48:1 (one cup of syrup for each three gallons of sap).¹⁶ The sugar concentrations waned towards the season's end. I perhaps ought to have packed-in the buckets a week or so earlier than I did. The last two gatherings were "yeasty" and not as worthwhile, though surprisingly light in color.

The sap flows were much more significant from the lower grove. About three quarters of the sap came from the lower grove's 15 taps, while only a quarter came from the 11 taps in the upper grove. The lower grove had an active spring nearby, and tended to have larger trees.

Much of the syrup produced is

“fancy” or “light amber” grade. As expected, towards the season’s end the syrup darkened, and also became less transparent. Only one day’s production (April 11, a very hot day) was darker than the medium grades. All-in-all, we are pleased with the quality of this first season’s production.

In mid-March I confessed my folly to several co-workers, including JoNell Hone. JoNell said she and her aunt, Gloria Bulloch, wanted to try tapping some maples on their land located just below the Williams’ place. I imparted all my expertise (which took five minutes), supplied them two taps and buckets, plus some tubing. JoNell and Gloria made syrup, and were soon back wanting to know how to order equipment. We called Neil. JoNell and Gloria soon had a dozen or more taps going. They also enjoyed their first mapling season, producing around 40 cups of syrup.¹⁷ We compared notes often, finding roughly the same sap flow patterns and sugar concentrations.

Observations from my first season – elementary to seasoned sugarers, but revelatory to me – include:

- With carefully dosed exposures, spouses can evolve from merely tolerant to quite supportive of a mapling venture. Several of the batches were finished and bottled the next morning by Ruth.
- Mapling affords some great talks with your children. Each of our six children helped gather sap. The older ones also helped with the boiling process, particularly Parker, age 11. I believe mapling will become a memorable tradition in our family.

- Things get exciting when the hydrometer finally bobs off the bottom of the test cup.
- One’s self-esteem is boosted if the final product is fancy, or at least light amber.
- Minimizing boiling pan sap depths and drizzling cold sap into a warming pan, greatly speed the boil-down process.¹⁸
- After fighting boilovers on a small pan atop an easily controlled propane burner, I have admiration for anyone who masters a wood-fueled 6’x16’ outfit.
- I now understand why the stuff costs so much at the store.¹⁹
- Lifting each sap bucket’s lid is an adventure. How much treasure today?
- Early mornings amongst the maples enhance peace and perspective.
- Neil was right about three coffee filters helping my sugarsand problem. Neil was right about most everything else he told me.

Our family looks forward to the next sugarin’ season. We hope to tap 100 trees. The goal requires some serious “offseason” preparation. We will search for suitable trees this summer and give attention to our boiling facilities. Whether we will use buckets or do pipelines to central collection points will depend on the sites found. Neil: I’ll be calling.

We are planning a family vacation, likely in the summer of 1997. The trip’s focus may include upstate New York and some fact-finding fieldtrips

to some "real" maple syrup producers. I am hoping the trip will add to our sugaring knowledge, give me a chance to personally thank Neil and Fran, and, of course, add some legitimacy to that NYSMPA plaque hanging in my office.

¹ Neil and his wife Fran own Wright's Sugar House, Camden, NY. Neil is a 78-year-old sugar producer who has been patient with my phone calls and free with much-needed advice.

² Neil paid the \$11 and surprised me with a NYSMPA membership. I apparently passed the character check.

³ Given the opportunity, my "Chamber of Commerce spiel" speaks of Cedar City's Shakespearean Festival, Southern Utah University, proximity to Zion, Bryce, Grand Canyon, Canyonlands and Capitol Reef national parks, the presence of a Walmart store, etc.

⁴ Except for this slight embellishment (the actual top elevation is about 11,400 feet), elevations in this article are taken from applicable 7.5 Minute Series (Topographic) maps, United States Department of the Interior, Geological Survey.

⁵ I am yet mystified by my fascination with making maple syrup. Until I tapped my first tree on March 9, 1996, I had never seen it done. I recall owning only three small containers of pure maple syrup, two being gifts from a Nova Scotia business associate. But fascinated I am, and have been since early childhood. I recall first sensing the romance of hanging buckets from an early 60s childhood reader called "The Biggest Bear," which featured a not-quite-domesticated bear cub, grown to maturity, and wreaking havoc in the family's sugarhouse. I half suspect some genetic link (to sugaring – not the bear). My Leavitt progenitors were among New England's early settlers,

and surely sweetened their diets with the available resource.

⁶ I turn 40 on May 13, 1996. Perhaps unacknowledged mid-life crisis is an explanation for my interest in tapping maple trees. If so, there are worse manifestations of crisis.

⁷ Sweet Maple, by James M. Lawrence and Rux Martin, Jointly Published by Vermont Life and Chapters Publishing Ltd (1993); and Backyard Sugarin', Third Edition,, by Rink Mann, The Countryman Press, 1991.

⁸ Sweet Maple, at pp 42-45.

⁹ My conversation with Steve took place shortly after receiving the books from Neil. It was largely the enthusiasm created by Steve's suggestion that the "pioneers must have done it" which emboldened the first tapping expedition.

¹⁰ Telephone conversation with author, April 27, 1996.

¹¹ Conversation with author, April 9, 1996, St. George Utah. My discussion with Commissioner Peterson was a casual personal talk about my family's fun with this "Utah-impractical" endeavor. His comments were made and received without any intent they represented exhaustive research concerning any past maple sugaring activity in Utah.

¹² The beauty encountered on this excursion deserves more than a footnote, but that's all it gets, given the article's purpose. I hiked in alone, and passed no one either way. The only sound was snowshoes on spring snow. The sights were of the Pine Valley mountains, Cedar Valley some 2000 feet below, and the barren oaks, aspens and maples against a blue winter sky. My hike was motivated by more than maples. I love to spend time on Kanarra Mountain. Truth be known, a desire to find a constructive excuse for spring visits into our place was the motive which first compelled the *Internet inquiry*.

¹³ Upon returning I called and received the blessing of Sandy's son – who commented that if I was dumb enough to walk up there on snowshoes to drill holes in trees, he had no objection to their being his trees.

¹⁴ My drilling method was "minimalist." I clamped vise-grips to the bit's chuck-end, turned the bit with the vise-grips and pushed with a gloved hand. (I purchased and used a cordless drill on future taps.) I used plastic spiles with Lamb's tubing. The tubing was run into the plastic buckets through holes drilled before embarking. The buckets rested on the ground, buried under two feet of snow. I was counting on the snow, in that I knew my first opportunity to return would be the following Wednesday.

¹⁵ All the boiling meant frequent trips to a nearby propane retailer to refill three 5-gallon propane bottles. No one camps or barbecues in Cedar City in March. I was sure the retailer wondered about my repeated, and often late-night fill-ups. Worrying they suspected an illicit Meth lab, I explained it was all quite innocent – I was boiling maple sap. "Say what!!!!?" he replied. I quelled no suspicions by the explanation.

¹⁶ Backing into the Jones' Rule (Rule of 86) tells me our sap's sugar percentages

averaged 1.62% ($86/53 = 1.62$) over the entire season. Excluding the final week, the percentage was 1.79% ($86/48 = 1.79$).

¹⁷ Out here we measure maple syrup in cups – not quarts, gallons or tons. Perhaps the next edition of "Sweet Maple" will list Utah on its graph of major maple syrup producing regions. Then again, perhaps not. Gloria Bulloch and JoNell Hone ordered some of those little bottles from Neil. I'll do that next year. The official unit of measurement in the Southwest Utah Association of Maple Producers (SUAMPs) will likely be the 100ml bottle.

¹⁸ Over the season we progressed from an evaporation rate of under two gph to over six gph. During the "off-season" I anticipate some pan improvements which should boost us into the respectable range.

¹⁹ We'd have to charge \$75/gallon just to pay for automobile, propane, glass and other hard costs. And this assumes that I really did "need" that three-burner outdoor camp stove. But no complaints; we will remember and enjoy "sugarin'" all year as we eat our inventory and share it with others.

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NEWS FROM OHIO

By Tom Hoffman

Annual Meeting and Tour November 3 & 4, 1995

Mohican State Lodge in Central Ohio was the site for Ohio's 9th Annual Meeting and Fall tour. Friday afternoon featured a tour of Malabar Farm, the 900+ acre farm of Pulitzer Prize-winning author, Louis Bromfield. In addition to works such as *Early Autumn*, *Wild is the River* and *Malabar Farm*, Louis Bromfield was known for his conservation tillage experiments and use of cover crops to revitalize the soil. Now administered by the Ohio State Parks, Maple Syrup is still produced on the farm with hundreds of visitors viewing the operation each spring. The farm received national attention when it was the location for the marriage of Loren Bacall to Humphrey Bogart.

Friday evening's meeting featured Willis Brown speaking on the "Ohio Proud" program for promotion of Ohio Agricultural Products, review of the past year's Maple Association activities and a report on the recently concluded NAMSC meeting held in Ontario, Canada. After the banquet we were entertained by an inspirational trio from Fredericktown Methodist Church.

The first stop on Saturday's tour was Ned and Janice Mosher's Christmas tree farm/maple operation. Ned taught syrup making for twelve years while teaching in the Westerville Schools. They demonstrated digging and balling of live trees and shaking and wrapping of cut trees for easy transport. Presently producing syrup

from their 200 taps on a 3 X 8 foot wood fired evaporator, they are planting "supersweet" trees as they cut more and more of their 20,000 pines, firs, and spruce. They hope to phase out the Christmas tree operation and "take it easy" making syrup.

Our next stop was Jim and Sherry McFerren's operation just outside Bellville. Jim and his brother built a brand new sugarhouse complex at the lowest point of the farm which allows sap from their 2000 taps to flow by gravity through a 2" underground mainline. They boil on a 5 X 14 foot wood fired rig with preheater. It took over 100 tons of fill to build the road through low land to the sugarhouse. Maintaining the family tradition, they built a separate sugarhouse for the kids where they boil sap from 100 buckets on a hobby evaporator with hoods. The interior walls are finished and the building is heated!

The final stop was John and Nancy Wagner's 400 tap operation equipped with a new Steam-Away. His 3 X 8 foot wood fired evaporator was operating when we arrived so everyone could see the Steam-Away in action. The top of the unit was removed so we could stand on a platform and see the bubbling inside. Many producers expressed interest in this product.

1996 Maple Institutes

The January meetings were well attended at all three locations and featured tubing presentations by Dr. Melvin Koelling from Michigan State University. His advice was helpful to those contemplating a tubing network or wanting to improve an existing system. Greg Passewitz from The Ohio State University covered marketing

practices and advertising that producers could use to increase profits. Dr. Randy Heiligmann from OSU presented a detailed look at evaporator efficiency, and how various accessories such as pre-heaters, and wood-savers actually affect boiling efficiency.

Updates on the proposed state grading standards and Ohio Proud programs were also presented.

1996 Syrup Season

Southern Ohio reported a short season with a prolonged warm spell in late February causing taps to dry up before the weather cooled down in March. Only 1/4 — 1/2 of a crop and

darker than usual was reported. Central Ohio also reported darker than usual syrup with production below normal. Northern Ohio production varied depending on when the trees were tapped. Producers who tried to catch the thaw at the end of February collected very little sap since the ground was frozen solid. Their taps dried up by mid-March. Those who didn't tap until March found the sap still running in April, though darker in color than normal. Some producers made only medium and dark syrup. Production for these "late-tappers" was average to well above average. This made for a hectic three week season.



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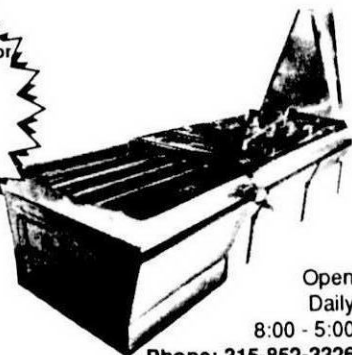
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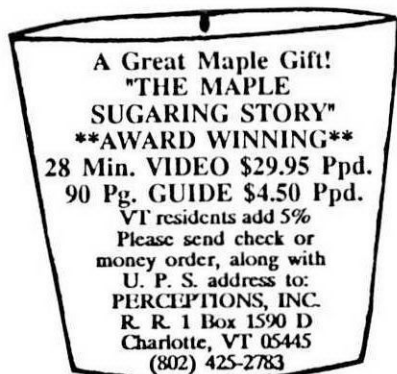
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MASSACHUSETTS NEWS

Warm weather in mid-February saw some of the approximately 250 maple producers in Massachusetts out setting their taps, hoping for an early run. Those that did get set early were rewarded with some early syrup. Most everyone else boiled for the first time sometime during the first ten days of March, and the season lasted to the 10-15 of April. Very little light amber syrup was made in Massachusetts this year, with the preponderance of the crop being medium and dark amber. Although a very few producers made mostly light amber syrup, a huge volume of dark amber seemed to be the rule. For the

1996 season, the sap sugar content was about average, color was darker than normal, and quantity over all was about 20% above average.

The Massachusetts Maple Association will have its annual summer meeting and picnic the last weekend of July. Call (413) 628-3912 for more information.



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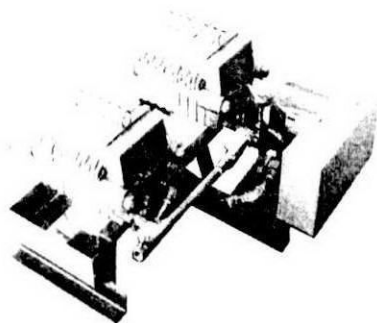
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VERMONT MAPLERAMA

By George Cook, UVM Extension
Maple Specialist

Vermont Maplerama 1996 will be held on August 1, 2, and 3. This year's program will be held in Orange County, in the Heart of Vermont Maple Country, at Vermont Technical College in Randolph Center.

The University of Vermont Extension System is a cooperative partner in hosting Vermont Maplerama 1996. Additional partners in the planning and development of this unique educational opportunity are: the Orange County Maple Sugarmakers Assoc., the Vermont Maple Sugarmakers Assoc., the Vermont Department of Agriculture, Food & Markets, and the Vermont Department of Forests, Parks & Recreation.

Vermont Maplerama 1996 has been planned and developed by a committee of Orange County Sugarmakers. This enthusiastic group, lead by Nate Pero and Gerard Stevens, has been working for over a year to bring you a truly entertaining maple experience.

Vermont Technical College is located in Randolph Center, the geographic center of Vermont. Watch for signs to Vermont Maplerama 1996, just off Exit 4, Interstate 89, in Randolph. Registration and the trade show will open at 5:00 p.m. in Judd Gym and we will hold a welcoming social from 7-9:00 p.m. Thursday, August 1. We expect that the Trade Show will be one of the largest ever. It will be open not only the evening of registration, but throughout Maplerama.

We will have demonstrations, the newest in technology, an international maple syrup contest and some of the friendliest Vermonters you'll ever meet. This year's Maplerama is expected to host 350 producers from 12 to 15 different states and provinces.

The Vermont Maple Tour will wind serenely through some of Vermont's most scenic and photographed hills and valleys. You will enjoy not only new technology, but nostalgic traditions of yesteryear, demonstrations, and more.

During Friday and Saturday, August 2 & 3, there will be tours to maple sugarhouses and sugarbushes around the county, with a special banquet Friday evening. Tour stops will offer a wide variety of maple sugaring operations.

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REMINDER

Research Proposal Guidelines

Research projects may be submitted for consideration based on the following guidelines:

(1) Proposals must be received no later than July 1, 1996 for consideration in 1996. Proposals received after that date will be considered in 1997.

(2) Proposals shall be complete and detailed in content. However, proposals shall contain a short concise cover statement briefly explaining cost, scope, objective, procedure, and anticipated value to the maple industry.

(3) Proposals shall contain detailed estimated cost breakdown, within the detailed report.

(4) Proposals shall be submitted

with a minimum of forty (40) complete copies.

(5) Proposals must contain a complete reference section listing and explaining any similar or duplicating research previously accomplished. Proposals for duplication of previously completed research must contain detailed explanations of why such duplication is warranted.

(6) Results or progress of funded projects must be presented annually at the convention of the NAMSC and must be published in the Maple Syrup Digest as soon as possible after completion.

(7) Send proposals to: Lynn H. Reynolds, Research Committee, North American Maple Syrup Council W10010 Givens Road, Hortonville, WI 54944.

Remember: July 1 Deadline.

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NEW YORK NEWS

By Marion Wells

New York Maple Producers had a good year — some say an exceptional year, production wise. Most producers didn't make as much light amber as they'd like — although many had no trouble making their share. All agree, the weather pattern this season was far better than a year ago. It kind of goes to show you that cold nights are just as important as warm days.

The big news from Western New York is about the fabulously successful Maple Sunday held on March 17, 1996. Fifteen producers from Cattaraugus, Erie, Genessee, Orleans, and Wyoming counties agreed to open their sugar houses to the public between 10 A.M. and 4 P.M. Fortunately the weather cooperated, the sap ran, and the people turned out in droves. From several hundred to 1000 people stopped at some producers. They saw how the sap was turned to pure maple syrup, and had samples of syrup, sugar, and maple cream. One producer offered horse drawn wagon rides. Nearly everyone sold out

of product before closing. The association is anticipating doing the same thing next year with perhaps double the number of sugar houses open. Several producers who were not members of the association are asking how they can become members for next years Maple Sunday.

Maple festivals have been in full swing even though the weather didn't always cooperate. It was a rainy, cold day for the Medusa Maple Festival on April 13. Evelyn Gardner from Potter Hollow was selected Maple Queen.

The 26th annual Central N.Y. Maple Festival at Marathon was held April 13 & 14. Attendance was off because of the unseasonably cold, rainy weather. Some take the special excursion train ride from Syracuse. This years Maple Queen is Bobbi Ellwood.

Schoharie County celebrated its 31st annual maple festival at Cobleskill on April 27, 1996. Angie Wright who is from Cobleskill-Richmondville was chosen Maple Queen, while Amanda Cammer from Gilboa is the alternate. Angie represented Schoharie County in the state contest at Croghan on May 11, 1996.

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COMING EVENTS

ONTARIO ANNUAL MEETING

July 18, 19, 20, 1996
Best Western Motor Inn, Cobourg, Ontario
Contact: Ken McGregor 519-232-4596

NEW HAMPSHIRE SUMMER MEETING

July 20, 1996
The Sugar Shack, Ken & Harriet Gowen, Barrington, NH
Meeting 10:00, Program "Maple & Tourism"

NEW YORK STATE MAPLE TOUR

July 22 & 23, 1996
Lake George, New York
Contact: Lisa Campbell - RR 3, Box 3050, Salem, NY 12865
518-854-7669

VERMONT MAPLERAMA

August 1, 2, 3, 1996
Vermont Technical College, Randolph Center, VT
Contact: George Cook, UVM Ext, Morrisville, Vermont 05661
802-888-4972 Deadline for Registration is July 10, 1996

37th ANNUAL MEETING OF THE NORTH AMERICAN MAPLE SYRUP COUNCIL

October 15-18, 1996
Lansing, Michigan
Contact: Mary Fogle Douglass, 2611 Okemos Road, Mason, MI 48854
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MAPLE WEEKEND A SWEET SUCCESS

By Barbara Lassonde

The New Hampshire Maple Producers Association first began celebrating Maple Sunday in 1992, and after three successful years, expanded and renamed it Maple Weekend. Each year, the Governor signs a proclamation designating the fourth weekend in March as New Hampshire Maple Weekend.

Maple producers from across the state plan special events to attract and educate the public on the springtime harvest. They offer tours of the sugarbush and sugarhouses, and explain the entire process. Some give cream and candy demonstrations, as well as free samples. Others offer hay or sleigh rides, cross-country skiing, musical entertainment, tours of livestock barns, sugaring off parties, and displays of antique sugaring equipment.

Each year the enthusiasm for Maple Weekend grows, and people come to New Hampshire from all over the Northeast to visit a sugarhouse and learn how maple syrup is made. This year, many sugarhouses were bursting at the seams with visitors on Maple Weekend, and producers reported record-breaking sales.

Maple Weekend is mentioned in our February press release, along with other maple news, and our March press release focuses only on Maple Weekend, and encourages the public to visit a sugar house. Each year, producers who wish to participate in Maple Weekend, fill out and return a form listing any special activities they have planned. This information is compiled by county and sent to the media along with the March press release.

In the days leading up to Maple Weekend, producers often appear on radio and television stations, promoting the upcoming event, and this year the media gave us superb coverage.

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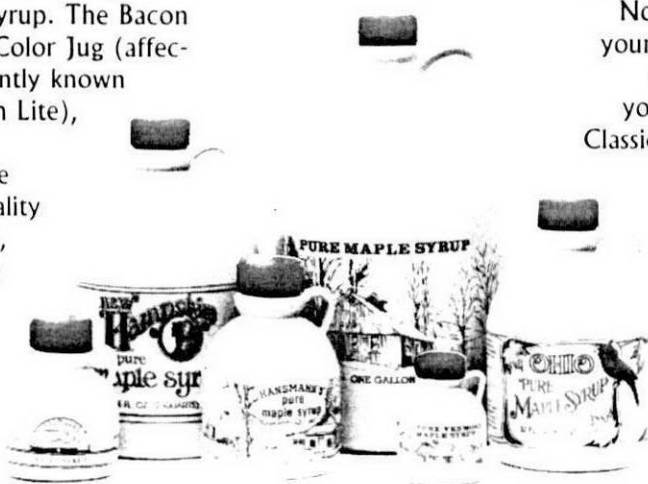
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