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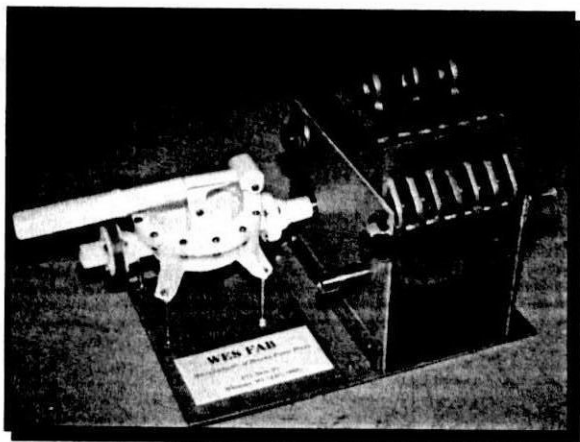
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MAPLE SYRUP COUNCIL**

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DEADLINE FOR COPY: First of the
month preceding date of issue

COVER: Russ Parsons sugarhouse,
Gorham, Maine.

GREETINGS FROM YOUR PRESIDENT



Well the 2000 sugaring season is over. The word I'm hearing is it was a mixed season. Some producers had about half a crop while others had as much as 200% of a crop. I guess it all depends on where you live.

In general, the maple industry is in pretty good health. There are no real pressing issues on the table, this is good for all of us. Sales continue to remain strong.

I would like to urge everyone that can to join us in Vermont in October for the annual meeting. There will be a lot of interesting subjects to be discussed, an excellent trade show is planned and tours of interest to all. It sounds like it will be a great show.

See you in Vermont,

Hank Peterson, President
North American Maple Syrup Council

FROM THE EDITOR

Another Maple Season has come and gone. For me it was about the same as last year. South of me they had a bad year — north of me they had a good to excellent year. Hope is what makes us go on from one year to the next. Hoping that next year will be one of those good years.

It seems odd that with the economy booming that advertisers would cut back . . . but that is what is happening. We lost two this month. I hope you will support the advertisers that support us and shun those that are conspicuous by their absence, or at the least voice your concern to them. Maybe they don't need to advertise but they could help support the industry's only official publication.

I want to apologize for not putting the sap prices in the February issue — it completely slipped my mind. Must be a sign of getting old.

Have a safe and happy summer.

Roy Hutchinson
Editor

**DEADLINE
FOR NEXT ISSUE
IS SEPTEMBER 1, 2000**

NEWS FROM THE IMSI AND MORE

Adulteration Testing Continues

The IMSI continues to randomly test syrup for adulteration. Samples have been collected by state and federal authorities as well as members of the IMSI. They are transferred to me and then shipped off to the testing labs for analysis. Samples have been tested from several points around the US, Canada, Asia and Europe. To date, no samples have been found to be adulterated. The IMSI is currently using a lab in Texas and the Eurofins laboratory in France. Tests are being run for all known sugars that could be used for adulteration.

International Maple Syrup Contest for Packers

The third annual international maple syrup contest for wholesalers and retailers that pack maple syrup will be held in Burlington, VT at the Maple Syrup International 2000 annual meeting of the IMSI. Winners receive a special gold medal plaque and publicity throughout the maple industry.

The winner of the International Category in 1999 was the Citadelle Maple Syrup Cooperative in Plessisville, Quebec. The Gift and Speciality Category was won by the Dakin Farm of Ferrisburgh, VT. Entrants submit their entry form and fee to the IMSI, the syrup is then purchased off the shelf by IMSI representatives and an international team judges the category winners. Entries must be received by October 1, 2000 for the 2000 contest. The International Category entry fee is

\$400, the Gift and Speciality Category entry fee is \$200.

For complete details on the contest, contact the IMSI Executive Secretary Larry Myott.

Regroupement Announces Its MapleMark Program

In March the Regroupement pour la commercialisation des produits du Quebec announced its new MapleMark program and presented its new logo at the FoodEx in Tokyo, Japan. This show of some 2,500 exhibitors from around the world hosted nearly 40,000 visitors. Maple was well represented in several locations and MapleMark marketing director Paul Chessman staffed the MapleMark exhibit in the Canadian Exhibition area.

The new logo is a red stylized maple leaf and a winner's ribbon. It will be accompanied on the maple syrup containers by a number representing the processor's registration number. Any product bearing this MapleMark will have met or exceeded the standards established by the program in all phases of production and packing. The certification programs various tests are designed to ascertain that consumer products are made of pure, authentic maple syrup. Addition of any foreign matter such as sugar renders the product ineligible for certification. The program is available to any member of the Regroupement, the marks will soon be seen on retail containers around the world.

The extensive handbook for processors outlines all standards that the product must meet. The raw materials (maple syrup) must be systematically inspected and graded to industry

standards that are higher than those set by the government. There are processing and packaging standards that must be met during all production steps from initial product delivery right up to the final packaging, including labeling that must comply with the country of sale. Of course there must be a paper trail of documentation.

I look at the MapleMark as another marketing tool in the industries pocket that will float the entire maple industry a little higher. The regulations behind this Mark and its enforcement that goes with it will ensure that our industry remains pure. Of course some of our folks have noted that it is in conflict with the IMSI logo on syrup packaging, I personally believe that this logo is not in competition but an enhancement that we need to embrace, not scorn. This may be a

program that individual state and provinces so called "seal of quality" programs may want to review for ideas to enhance the local programs.

You'll learn more about the MapleMark program at the International Maple Syrup 2000 meetings in Burlington, VT. For more information on the program, write to: MapleMark, 148 Route Kennedy, PO Box 220, Scott-Jonction, Quebec, Canada G0S 3G0 or email: mrcpeq@quebectel.com.

For information on the IMSI and its programs, contact: Larry Myott, Executive Secretary; 5014 Route Seven, Ferrisburgh, VT 05456-9782. Phone: (802) 877-2250, fax (802) 656-5422. President of the IMSI is Michael Herman available at Turkey Hill Sugarbush in Waterloo, Quebec (450) 242-1098.



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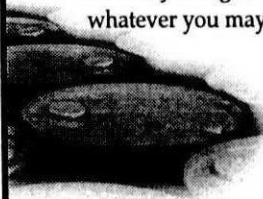


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MAINE MAPLING

By Dawn Bolduc

Everyone has a tale to tell about this year's weather. Up in our Can/Am border bushes, producers that were ready made 10 to 20% of their crop in that February flush—and it never stopped. In the St. Aurelie camps it was the earliest in a hundred years. April 19, was our last boil—a good two weeks ahead of other years. Many others south of here managed to get through Main Maple Sunday. We had quite a rash of calls from producers and packers from several states, checking on their silent, vaguely counted, supplier (Maine)—would we have enough for everyone? Maine is on the move—new counts are coming in—and more than one really big new bush (100,000 taps) started up this

spring, phasing into total production in 3 years, and there are many smaller sugarmakers in southern Maine increasing their taps using the newest technology on piping and vacuums.

Our extension maple specialist, Kathy Hopkins, has lined up some maple bushes for hands-on seminars this summer. Let her know what you need to know to make these meetings most helpful. Make a maple call to the Somerset County Extension office, get on her mailing list, every maple call is logged and matters in forwarding our presence as an important commodity. As these notes go to press there are a couple of county maple groups forming that will enhance the statewide MMPA. Membership has been greatly enhanced by the joining of the Dorchester Coop in northern Somerset County.

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NEW YORK STATE MAPLE TOUR 2000

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July 23-25, 2000

Plans are underway for the New York State Maple Tour to be held in the scenic Adirondack and Lake Champlain region of New York during July 23 through 25, 2000. The tour will be hosted by the Northeastern New York Maple Producers Association in cooperation with Cornell Cooperative Extension and the Cornell Department of Natural Resources.

The tour will be headquartered at Lake Placid in the Olympic Region but will visit many area maple operations in the tri-county region of Clinton, Essex, and Franklin Counties. In addition, maple operations in Clinton County affected by the infamous January 1998 Ice Storm will illustrate the impact the storm had on area sugar maples, and information will be shared on the recovery and research programs developed in response to the storm.

Tentative tour stops and activities follow:

SUNDAY, JULY 23

Early registration is available for early participants with options available for viewing industry exhibits (Trade show), a boat tour on beautiful Lake Placid, or a self-guided drive through the demonstration sugar bush with other points of interest at the

Uihlein Sugar Maple Field Station of Cornell University.

MONDAY, JULY 24

Tony Corwin's South Meadow Farm and Sugarworks near Lake Placid features a modern sugar house (construction of the sugar house was presented on the 1998 Cornell Maple Production School), 4,000 tap tubing/vacuum system, oil-fired evaporator with steam-away, and many successful maple marketing ideas. The maple operation is combined with a family owned bed and breakfast situated in a picturesque setting.

Paul Smith's College Sugar Bush located near Paul Smith's serves as a working educational field classroom experience for students attending the college. The sugar bush consists of approximately 1200 taps on tubing and vacuum, and sap is processed with RO and oil-fired evaporator.

The Rivermede Farm in Keene Valley is managed by Rob Hastings. Currently, sap from 1500 taps is collected on a tubing/vacuum system using reverse-slope units and processed with RO and an oil-fired evaporator with steam-away. Syrup and other maple products are retailed along with organically grown vegetables nearby at Rob's Rivermede Farm Market.

The Uihlein Sugar Maple Field Station of Cornell University will provide tours and discussion of various research projects including the demonstration sugarbush, ginseng demonstration plots, and sugar maple tree improvement program for high sap sugar concentration greenhouse and plantations.

A tour of the **Olympic Ski Jump Complex** near Lake Placid will pro-

vide a unique and interesting addition to the tour.

TUESDAY, JULY 25

David and Angela Swan's **Homestead Maple** near Chazy provides a fun-size sugar house designed to process sap from the 400 taps near their home. This stop will provide an array of answers for the questions regarding the construction of a smaller but functional practical sugar house. Some great maple marketing ideas will be presented also.

A sugarbush demonstration at **Parker's Maple Products** near West Chazy will provide new information on ice damage related research. A team led by Dr. Betty Wong of the USDA Forest Service will provide an overview of the research entitled "Impact of the 1998 ice storm on carbohydrate storage and utilization of sugar maple" at a plot site in one of the Parker sugarbushes.

Wayne **Brow's Sugarhouse** near West Chazy will be operating again for the 2000 maple season after a rest of 2 years following the ice storm. Wayne has reduced tree debris resulting from the 1998 ice storm and has re-established the tubing sap collection system in the 4,000 tap sugarbush. The modern sugar house features a RO, oil-fired evaporator, and efficient vacuum and sap handling system. Also at the stop, Cornell University personnel will explain research plots established on the site as part of the "Sugarbush ice storm monitoring project".

Sanger's Sugar House near West Chazy provides a modern roadside sugar house where many breakfasts and dinners have been served over

the years. An oil-fired evaporator with piggy-back handles the sap from 1200 trees. The Sangers have also planted hundreds of sugar maple seedlings over the years.

Please mark the dates for this interesting and informative maple event. The tour will be centered in a high use tourist region so early registration is essential. The registration deadline has been set for June 27, 2000. Tour registration mailings will be mailed in April or:

For information regarding the tour you may contact: Beth Spaugh, Cornell Cooperative Extension of Clinton County, 6064 Route 22, Suite 5, Plattsburgh, NY 12901. Phone: (518) 561-7450, E-mail: eas9@cornell.edu **OR** Lewis J. Staats, Uihlein Sugar Maple Field Station, 60 Bear Cub Road, Lake Placid, NY 12946. Phone: (518) 523-9337, E-mail: ljs20@cornell.edu.

For information specific to tour registration and lodging, please contact: Brenda Goulette, Lake Placid Essex County Convention and Visitor's Bureau, Olympic Center, 216 Main Street, Lake Placid, NY 12946. Phone: (518) 523-2445, E-mail: brenda@lakeplacid.com.

Check the Tour web site at: www.cce.cornell.edu/clinton/ag or you can call the Lake Placid Convention Bureau at 800-447-5224, ext. 109.

Also of interest to maple producers is the Vermont Maplerama 2000 held July 27 through 29 in Orleans County with headquarters at Jay Peak Resort. The dates for the New York Maple Tour and Vermont Maplerama offer an opportunity and convenience for those who would like to take in both events with one day for travel between the two.

NEW ICE STORM PUBLICATIONS RELEASED

1. Effects of Ice Storm Damage and Other Stressors on Sugar Bush Health and Sap Productivity— Literature Review and Synthesis.

(English Only) — Price \$8.00 plus shipping (U.S. or Canadian Funds).

2. Series of Six Extension Notes — Ice Storm Recovery of Sugar Bushes.

a. Impact of the 1998 Ice Storm on sugar Bushes and Summary Management Recommendations — ISBN #1-896392-66-0.

b. Tapping and Sap Collection Techniques in Ice Damaged Sugar Bushes — ISBN #1-896392-67-9.

c. Harvesting and Maintenance in Ice Damaged Sugar Bushes — ISBN #1-896392-68-7.

d. Operating to Minimize Ice

Storm Impacts on Tree Health — ISBN #1-896392-69-5.

e. Protection of Ice Damaged Sugar Bushes — ISBN #1-896392-70-9.

f. Determining the Nutritional Health of Sugar Bushes and the Role of Fertilization and Liming — ISBN #1-896392-71-7.

(English and French) — Price: \$10.00 plus shipping (U.S. or Canadian Funds) for the set of six extension notes.

These publications were prepared under the Canada-Ontario Agreement for Ice Storm Economic Recovery Annex A, Assistance for Agricultural Sector and Rural Communities in Eastern Ontario.

You may order these publications from: Ontario Maple Syrup Producers' Association — Promotion Store, RR #2, Millbrook, Ontario, Canada L0A 1G0. Phone/Fax: 705-932-2653; E-mail: kennedys@nexicom.net.

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UPDATE ON THE MAPLE TUBING SANITATION RESEARCH IN ONTARIO

By Pierre-Alain Blais
College d'Alfred

University of Guelph, Ontario

In the Spring of 1998, a research project was initiated at the College d'Alfred sugar bush to develop alternative sanitation methods for maple producers using plastic tubing systems¹. The research project was continued in 1999 and will continue for a third season in Spring 2000. Although the results are only preliminary, the development of alternative sanitation methods that may reduce reliance on chlorine is looking very promising.

Plastic tubing systems are often used to minimize labor costs associated with collecting large volumes of sap on modern maple operations. They also reduce traffic in the sugar bush. But these advances in technology brought new challenges for producers in the area of sanitation.

Microbes Grow in Sap

Tubing collection systems may become so contaminated by microbes that the market value of the final products is affected. Even newly installed tubing systems may become loaded with microbial contamination. Some researchers think that the presence of a moderate population of bacteria and yeast may even be necessary to fully develop the maple flavor.

Very high levels of microbial contamination in the sap usually result in darker, stronger tasting syrup. Bacteria

may adhere to the inner surface of the tubing and surround themselves with polysaccharide gum which protects them from sanitation agents, making it more difficult to control their populations.

Sanitation Methods

When the weather warms up and the sap appears cloudy with high microbial loads, it may be necessary to perform a sanitation treatment **during** the season. Diluted chlorine bleach (500 ppm or 0.05%) is currently the only recommended sanitizing agent in Ontario for maple tubing systems. While it can help to maintain lighter grades, it may leave undesirable residues in the syrup as well as in the environment. To ensure a pure maple product, the first sap flow is often discarded after treatment. These limitations have made maple syrup producers seek more acceptable, yet efficient sanitation and cleaning methods.

The alternative sanitizers under consideration are hydrogen peroxide and strong acids. Hydrogen peroxide (H₂O₂) is essentially a water molecule with an extra oxygen atom that readily dissociates. Oxygen, a strong oxidizer, destroys the microbes and reduces organic matter, leaving no apparent residues (except that many products contain a stabilizer in very minute amounts). The mineral acids, on the other hand, must be rinsed carefully. The acid wash may lift some of the mineral deposits which harbor bacteria, provided the contact time is long enough.

¹Research at the College d'Alfred Looks at Solutions for Maple Tubing Contamination, Maple Digest 11A: 25-27.

To Sanitize Or To Clean

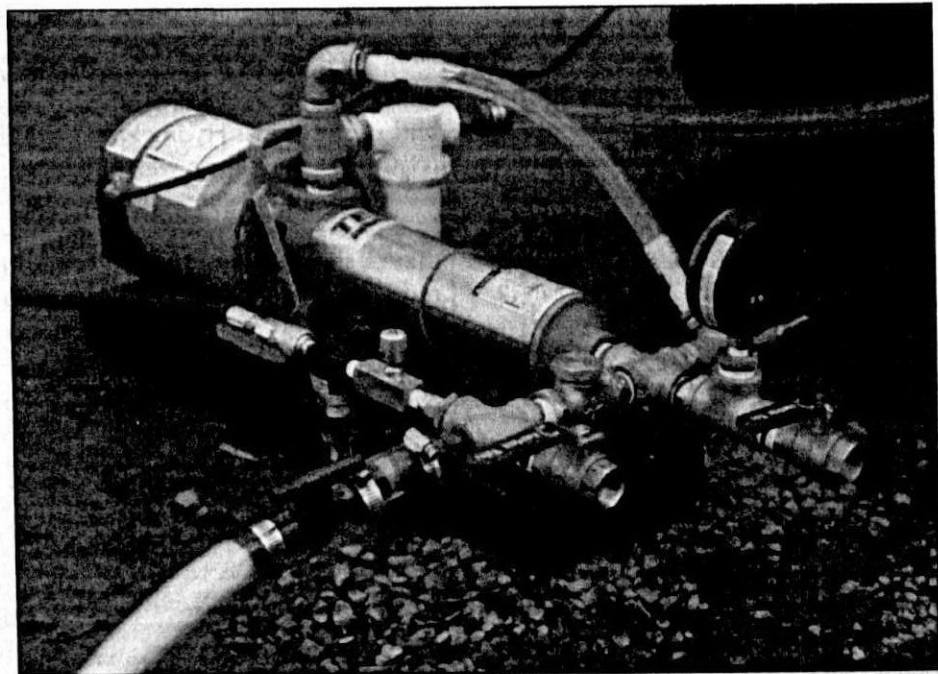
Sanitizing really means reducing excessive microbial loads. It is usually done during the season using diluted sanitizers and short contact times in the tubing. Cleaning of the tubing is more involved, as the aim is to remove the contaminants (the soil) that adhere to tubing inner walls, and would more likely be performed after the season has ended, using vigorous washing with compressed air and/or stronger chemicals, possibly combined with longer residence time in the tubing.

Some Highlights of the 1999 Season's Testing

During the 1999 maple season we performed three "in-season" sanitation treatments, using the same method as last year: a relatively short contact time in the tubing (10 min-

utes) and diluted sanitizers. The four sanitation methods evaluated during the season were: a water wash with compressed air (no chemical option), chlorine bleach at 500 ppm, hydrogen peroxide at 1000 ppm, and an acid wash (Tub-O-Net® at 0.4%). The three chemical sanitizers were used without compressed air. A 500 ppm chlorine dilution is obtained by diluting 1/2 L of 10% bleach in 100 L of water. Each treatment was immediately followed by a water rinse to ensure that no residues were left in the tubing.

In order to perform the water wash, a specialized tubing washer system was purchased from Mr. Glen Goodrich's Maple Farm in Vermont (see photo). Better control was obtained with the air-water pressure washer than last season. The turbulent water wash did act as a sanitizer by removing an excess microbial load,



and was as efficient as the chemical sanitizers.

That second season of testing confirmed the hypothesis that temperature during sap flow has a tremendous effect on maple sap microbiology. Since Spring 1999 in Eastern Ontario was warm with a few cool days, sap flows were slow and the sap heated up inside the tubing. High microbial loads resulted, mostly in the million bacteria per milliliter.

Recent research in Quebec has shown that good quality maple syrup may still be made out of sap containing up to 10,000,000 bacteria per milliliter, the microbes may become encrusted on the inside of the tubing and favor further contamination of sap. A lower contamination level would leave the tubing in a much cleaner state.

Despite weather conditions conducive to high microbial loads, all sanitation treatments (with a short 10 minutes contact time) were efficient in reducing the contamination levels. The reductions, ranging from 53% to 98%, were not as large as expected (99% wipe out). The aim was not to completely eliminate the microbial population (which is very difficult), but to keep them at a controllable level.

A taphole closure survey conducted during the summer also revealed that the lines treated with a chemical sanitizer seemed to have a more rapid closure than the line treated with just water. These are strictly preliminary results that need to be confirmed for a second season, as many other factors are at play.

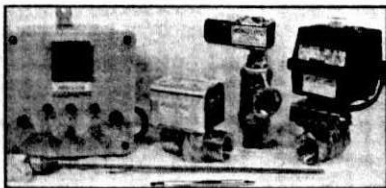
Conclusions

The 1999 results emphasized the effects of spring weather pattern on the

contamination levels of maple sap in tubing systems. These results must be confirmed by another year of testing in Spring 2000. Hopefully, we will have weather conditions that will allow to testing the sanitation methods over a range of more typical conditions. Further studies will look at longer contact time (30 min.) of the sanitation treatments in the tubing in order to achieve better control of microbial populations, despite unfavorable conditions.

This research project received support from the following organizations: Ontario Maple Syrup Producers Association, North American Maple Syrup Council, Agricultural Adaptation Council of Ontario, Eastern Ontario Model Forest Group, Ontario Ministry of Agriculture, Food and Rural Affairs and CDL Maple Sugaring Equipment, Inc.

The research reports are available from Mr. Dave Chapeskie, R.P.F., OMAFRA Provincial Agroforestry Specialist, (613) 258-8302.



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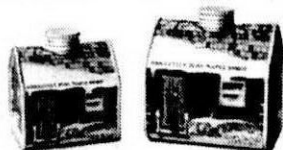
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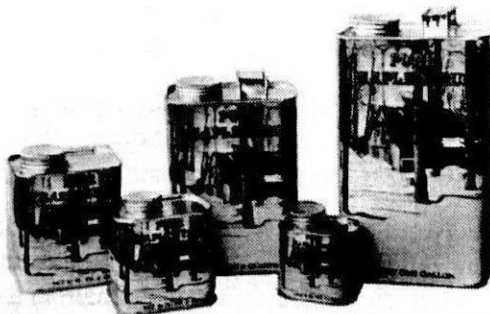
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MAPLE SYRUP INTERNATIONAL 2000 TO BE HOSTED IN VT OCTOBER 25-28

By Larry Myott

The Vermont planning team working out the details of the joint NAMSC/IMSI annual meetings at Burlington, VT has been very busy putting the final touches on elaborate plans. Hosting 400 sugarmakers from 14 or 15 states and provinces is no small job and the volunteers who take on such a job are to be given great praise. The committee challenged itself to make this annual meeting the best possible in providing educational opportunities for sugarmakers and their guests and still keep it affordable for the everyday sugarmaker. There will be more educational sessions, posters, technical reports and tours than any joint session in recent history. Of course the committee hasn't forgotten entertainment and the need for sugarmakers to relax and play at these sessions too!

The meetings will be held on October 25 thru 28 at the Sheraton Hotel and Conference Center in Burlington, VT. Vermont's Queen City is easy to get to with its International Airport less than two miles from the conference center. It is also located right off exit 14W of Interstate 89, you can't miss it.

The 2000 session sponsorship committee has raised about \$20,000 in sponsorship that will help to keep this meeting affordable and still provide those little extras that make a meeting successful. The many sponsors will be highlighted throughout the convention

for their generosity and commitment to the maple industry. As a result of this generosity, many of the sessions will be provided with simultaneous English/French translation services.

The sessions will begin on Wednesday, October 25 with the North American Maple Syrup Council's director's meeting that afternoon. The evening will be a get acquainted social with registration continuing.

On Thursday, October 26 the IMSI directors will meet over breakfast with a two hour session. The NAMSC general session will start at 10 a.m. continuing throughout the day as needed. The International Maple Syrup Council general session will be called to order at 3:00 p.m. That evening will be a luxurious sunset dinner cruise on Lake Champlain, while searching for the often sighted Lake Champlain monster, Champ. An invitation only session will be held on Thursday for Extension, Research and Regulatory personnel to share their programs with each other.

During the day on Thursday there will be companion tours in central Vermont visiting famous landmarks such as Ben & Jerry's Ice Cream, the Ski Capital of the east at Stowe and more. Friday's sugarmaker industry tours will offer a unique spin to these international sessions. The tours committee has set up dix different tours, some of them overlap but all are going to offer some dynamic and useful educational opportunities for sugarmakers and their companions. The six tours will be offered in the registration packet to be mailed in early July and you'll get a chance to select your first and second choices. Tours include visits to sugarmakers and their facilities, maple related businesses and farm markets, the Cabot Cheese plant,

maple related businesses and farm markets, the Cabot Cheese plant, Otter Creek Brewery, the Proctor Maple Research Center, and New England Container Corporation. There are nine maple sugarhouses on the tours to be selected from. At least one tour bus will be allocated as French speaking with a French tour guide/interpreter.

The International trade show is promising to be one of the most professional and largest shows in the history of these joint sessions. Show Chair Gary Gaudette of Leader Evaporator Company reports that he has 40 booth spaces allocated and more than half are committed before the mailing goes out to potential exhibitors. The trade show opens on Friday afternoon following the tours. There will be a "Taste of Vermont" buffet in the Trade show that evening with cash bar and special entertainment.

On Saturday, October 28 the day starts off in the exhibition hall with a Vermont pancake buffet breakfast. The

trade show goes all day. At 8:00 a.m. the NAMSC continues until the technical sessions open at 9 a.m. At 11:00 a.m. is a joint session of the NAMSC and IMSI will take care of any business that concerns both organizations, before a special special buffet luncheon in the exhibition hall. Technical sessions in the afternoon will be concurrent with several sessions to choose from. These will include some special programs designed for sugarmakers, research findings and more. Complete details will be in the July mailing. The Saturday companion tour will include the largest crafts show in northern New England, taking place just a few miles away or shopping in the local malls.

Saturday evenings banquet will have some special ongoing entertainment along with the awards for the maple syrup contests, both sugarmakers and packers. Presentation of the Lynn Reynolds Maple Leadership Award and more from both the NAMSC and IMSI.

To make sure that you get the full details of the **"Maple Syrup International 2000"** meetings in Burlington, VT, Oct. 25-28, please fill out the following form and mail it back to the committee: *UVM Extension - MS2K, PO Box 53010, Burlington, VT 05405-3010*. Requests can be faxed to 802-656-5422. The mailing with complete details will be posted in early July.

Please send me all the details of the 2000 joint meeting of the NAMCS/IMSI:

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Sugarmakers who have attended in the last three years should automatically be on the mailing list. However, if your address has changed please send in this form and note a change of address.

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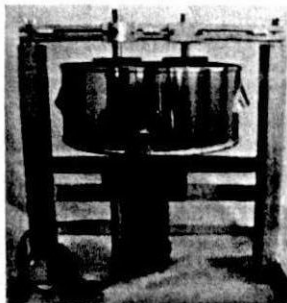
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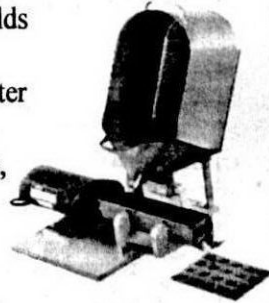
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NEW YORK MAPLE SUNDAY GROWING

Commissioner Rudgers Visits V.V.S.

On Sunday, March 19th, thousands of New Yorkers enjoyed the sweet tastes of maple as maple producers across the state played host to New York's Official Maple Sunday. Scheduled for the first Sunday after St. Patrick's Day, the annual statewide Maple Sunday event is growing in popularity as sugarmakers sponsor activities to recognize the New York State Maple Industry and celebrate this year's maple syrup season.

In western New York and Wyoming County, where the concept of New York Maple Sunday originated, more than 20 regional maple producers hosted open houses of their maple



Commissioner Nathan Rudgers, of the New York State Department of Agriculture and Markets, presents Neil Wright, Honorary Member of the Board of Directors of the New York State Maple Producers Association, with a Proclamation from New York State Governor George Pataki declaring March 19th, 2000 as *New York Maple Sunday*.

operations in conjunction with pancake breakfasts sponsored by area fire departments.

In recognition of Maple Sunday, Commissioner Nathan Rudgers, of the New York State Department of Ag and Markets, attended an official New York Maple Sunday Syrup Season Kickoff Ceremony at the Vernon-Verona-Sherrill (V.V.S.) High School, Verona NY. As part of the V.V.S. FFA's Maple Sunday, Commissioner Rudgers tapped the official "Maple 2000 Tree" at the V.V.S. High School.

After tapping the tree, Commissioner Rudgers read an official Proclamation from New York State Governor George



After tapping the New York Maple 2000 Tree, Commissioner Rudgers hangs a sap bucket on a spout as part of the festivities at the Vernon-Verona-Sherrill FFA Maple Sunday.

Pataki declaring March 19th, 2000 as the official New York Maple Sunday. The proclamation recognizes the importance of New York State's Maple Industry and supports statewide efforts to promote pure maple products. Commissioner Rudgers presented the Governor's Proclamation to Neil Wright, Honorary Member of the Board of Directors of the New York State Maple Producers Association.

As part of the day's festivities, the V.V.S. FFA sponsored a Pancake Breakfast and several maple demonstrations. Through a very generous contribution from an anonymous donor, 129 farmers and their families were honored for their efforts as our nation's food providers with a free pan-

cake breakfast as part of V.V.S.'s Maple Sunday. More than 440 people were served pancakes, sausage, and fresh, pure maple syrup.

Half-hour guided tours of the V.V.S. Agriculture Department's Maple Syrup Laboratory were conducted. The school's facility includes a sap filtration system, sap preheater, "Piggyback" heat exchanger, reverse osmosis machine, and setup for a 1,000 Tap Operation. More than 200 tour participants viewed the process of processing maple sap into maple syrup using a modern maple evaporator. In addition to the tours, maple sugar and maple cream demonstrations and a backyard sugaring for the hobbyist workshop were conducted.

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NEWS FROM THE AMERICAN MAPLE MUSEUM

By Eleanor Allen

By the time you read this, the American Maple Museum will once again be open for the summer season, having celebrated its 23rd reopening on May 20, 2000. The festivities included a large display of maple equipment and a crafts fair on the Museum lawn, as well as a pancake breakfast and chicken barbecue, and of course the crowning of the New York State Maple Queen.

The highlight of the day was the induction into the Maple Hall of Fame of three people whose achievements have been in the marketing of maple syrup among other things. Richard Haas is best known as the founder of Sugarhill Containers. Warren Wells, himself a producer of maple syrup, has been working to promote maple syrup as officer and past President of the New York State Maple Producers Association. And last, but not least, Gary Gaudette, of Leader Evaporator Company, a manufacturer of maple syrup equipment who is also a producer of maple syrup himself.

During the months of July and August, the Museum will be open Monday through Saturday, 11 AM until 4 PM. In June and September it is open on Friday, Saturday, and Monday, or by appointment. Summer activities scheduled thus far include a pancake breakfast in conjunction with the Croghan Lumberjack Festival on June 10th and 11th, and a lawn concert on the evening of July 12th with

the Atkinson Family performing bluegrass music. Group tours are always welcome and can be arranged by calling 315-346-1107. Also, if you wish to visit the Museum on your way to or from the NY Maple Tour or the Vermont Maplerama, you can call in advance and we will try to have the Museum open for your visit. The mailing address for the Museum is P.O. Box 81, Croghan, NY. 13327. Please come visit your Museum!

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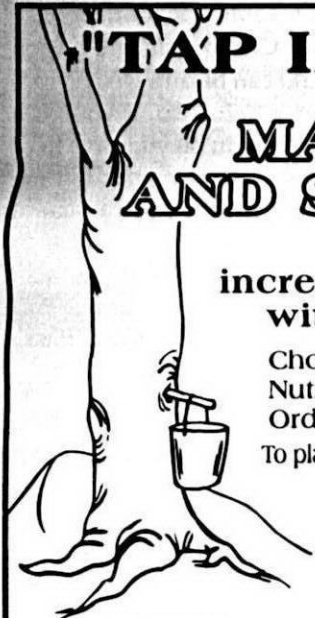
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GREETINGS FROM NOVA SCOTIA TO THE MAPLE INDUSTRY AS A WHOLE

By Avard Bentley

The maple season came a couple weeks early this year. The season ended about four weeks early. This was a saving on labor cost. Warm weather was the culprit in this area.

Some producers that were ready for the early run had a good year and on the other hand producers that were not ready just had a fair year.

Some of the lightest syrup was made and also some of the darkest syrup was made. Sales appear to be stable.

With the Provincial new budget, it appears that Nova Scotia may be left without a Maple Specialist (the first time in forty years). It seems a shame that the little fellow is the one getting hurt in all the Government cuts instead of cutting administration and their overhead. When something appears to be working and benefitting the farmer, Government in all of their glory and wisdom say this cannot be and the program is cut (let the farmer worry about himself) and money will go to the big business.

The Maple Producers' Association of Nova Scotia will have their Annual Field Day the first Saturday in October 2000. Place to be announced later.

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TAPPED OUT

Maple Syrup Production is a Disaster

By Jackie Helstrom Cummins

So little maple sap ran through the taps this year that the Ohio maple syrup crop is being declared an official disaster.

Ohio and Pennsylvania maple syrup producers did so poorly this spring, those who managed to salvage 50 percent of their normal crop consider themselves among the fortunate.

Although production varies from area to area, and from maple tree stand to maple tree stand within an area, most producers have reported getting about 20 to 25 percent normal sap collection. Some producers in the Geauga County area, where the greatest amount of Ohio maple syrup is produced, harvested as little as 10 percent.

Grade B Syrup. Not only was the sap flow down, but what was gathered produced a dark Grade B syrup that cannot be sold as table syrup.

In Morrow County, OSU Extension agent Steve Ruhl said there was some high quality syrup produced from the first runs, but that it went bad all at once and very fast.

Denny Northrup, who produces syrup on 50 acres near Corry in Crawford County, PA, reported producers got about 75 percent production in his area, but his report was not the rule across Pennsylvania.

Jim Finley of the Forestry Resources Department at Penn State said all the reports he has heard are

that production is down to about 25 percent of normal.

Disaster Assistance. In the heavy syrup producing areas of Ohio, the Federal Farm Service Agency offices have been taking applications for disaster assistance.

FSA, through the USDA's Non-Insured Assistance Program, is able to provide monetary assistance to producers who have suffered at least a 50 percent loss.

Although there is a time limit for filing such requests, the speed with which local FSA offices has reacted has been variable.

In Ashtabula, Geauga and Lake counties, the district office at Orwell moved to declare a disaster March 14. The application deadline for producers in those counties was April 5.

According to Steve Maurer, executive director of the Ohio FSA, all offices have been notified and asked to contact their producers.

"We want to make sure that no one who needs this kind of assistance gets left out," Maurer said.

To date, the Pennsylvania state office has not received any inquiries about such assistance.

Requests for assistance are filed with the various local offices, and then go to the state office for approval and on to Washington where final approval is given.

Producers cannot file for benefits after the assistance has been approved.

No Firm Figures. Since records for maple syrup production are not kept by the Ohio Department of Agriculture, an absolute monetary figure of the loss that Ohio producers have sustained is not available.

But, according to Tom Hoffman of Bath, secretary of the Ohio Maple Producers Association, there are between 600 and 800 commercial producers in the state, who produce about 100,000 gallons of maple syrup annually.

With maple syrup selling at its highest grade at \$30 a gallon, the loss can be pegged at well over \$800,000 for the state.

And since many of Ohio's producers maintain a mail-order business for their syrup, some are going to have to purchase syrup from Canada this year to fill orders and not lose their steady customers.

"There are two things that are important with maple syrup — quantity and quality," said Frank Goodell of Shalersville, Ohio, who has 200 acres of maple trees in Portage County. "Either one can be a disaster. This year they were both disastrous."

Worst Ever. According to the maple producers, while they have had some down years, especially in the 1970s when winter didn't seem to want to come to an end, there has never been anything quite like this year.

"The main thing that happened," said William Brown of Fredericktown, Ohio, in Knox County who runs 3,000 taps, "is that we had summertime in February. That was bad news all the way."

In Geauga County, according to OSU Extension agent Les Ober, the whole season came tumbling down when the thermometer shot up to 80 degrees Feb. 24, and then stayed above freezing day and night for 10 days.

In order for the sap to run, producers are looking for more typical early

spring temperatures, rising into the 40s during the day and then back below freezing during the night.

Each time the temperature rises above freezing, the sap starts to rise in the tree. In a normal season it will run for three or four weeks, rising for several runs each week.

Season Over Fast. This year, there were two or three runs, and then the season was over for most producers.

In some areas, temperatures in the middle of March dropped back down, and some producers who kept trying even after the early runs had quit, did get some good quality sap in the middle of March.

But most producers said their sap just kept getting darker, and then the trees began to bud out, after which the sap is worthless.

Buddy syrup, Hoffman said, has a very distinctive taste, which he said is disgusting.

Maple syrup is graded by color, going from light amber to medium and dark amber. Almost all of the syrup produced this year was very dark, Grade B, syrup that had a very low sugar content.

"There *will* be maple syrup," Hoffman stressed. "It will come down from Quebec, where they are now in the process of harvesting a very good crop."

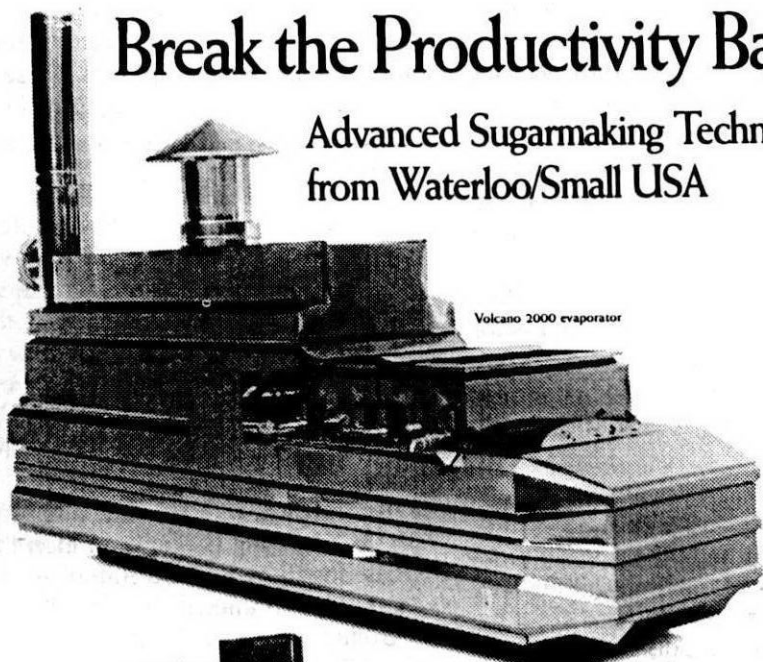
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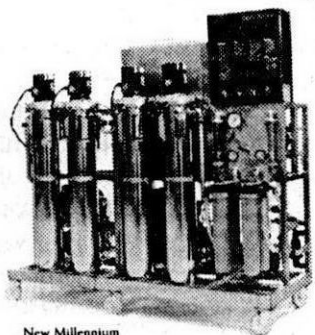
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THE PENNSYLVANIA MAPLE SYRUP INDUSTRY

By

*M.C. Demchik, J.C. Finley,
A.L. Davenport and R.D. Adams
Pennsylvania State University
Cooperative Extension
7 Ferguson Building
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University Park, PA 16802*

Maple is an old but developing industry in Pennsylvania. While the industry is currently fairly small, it contributes significantly to rural economies. Increasing the total production of maple syrup and the proportion of syrup converted to value-added products (such as maple cream) can increase the importance of this industry as an alternative forest crop.

To increase the importance of the maple industry in Pennsylvania, the Pennsylvania Maple Syrup Producers Council, the Ben Franklin Partnership Program, the Pennsylvania Hardwood Development Council, the Pennsylvania State University, the Pennsylvania State University and Cornell University formed a partnership to fund an extension program that included the hiring of an extension specialist. The goal was to develop programs that would encourage new producers, increase the efficiency of established producers, and increase the receipts from maple syrup (by encouraging production of value-added products). Targeting extension programs was difficult, because there was little information about the size of producers or the types of equipment

used by the Pennsylvania maple industry. Indeed, producer interest in these programs was not known, although a key component in the establishment of the program was industry support.

To better understand Pennsylvania producers, a survey was developed and distributed statewide to 412 maple producers. The objectives of this study were (1) to determine current equipment use, (2) to determine how and in what form maple products are sold and (3) to determine perceived industry Extension needs. We received 212 responses and of these 191 respondents indicated that they still produced syrup. Inference from the estimated number of producers in the state puts this number at about one quarter of the total producers in Pennsylvania.

INDUSTRY CHARACTERISTICS

While sugaring is a well-established farm business in Pennsylvania, many new producers are still entering the business. Operations varied in age from 0 to 160 years old; however, most were less than 35 years old. Indeed, about 1 in 5 operations had been producing for less than 10 years.

While ownership of a sugarbush is one of the easier ways to acquire maple sap for processing, nearly 1 in 5 producers rented all their taps or bought sap. However, the remaining four fifths did own a sugarbush, although many of those that owned sugarbushes (2 in 5 producers) still rented some trees. About one quarter of the producers used roadside trees and about 1 in 10 purchased sap. Because many producers rented trees, this market is probably well devel-

oped in at least some areas of the state.

Tubing has taken over the maple industry in Pennsylvania. In general, about 1 in 5 producers used only buckets and these producers tended to be smaller in size, averaging a little more than 400 taps. The majority of producers used tubing for part (nearly half of the producers) or all (about a third of the producers) of their taps. Producers that used only tubing were often much larger, averaging nearly 2600 taps. Producers using both buckets and tubing averaged more than 550 buckets and more than 1400 taps on tubing.

While tubing systems were used on the majority of maple sugaring operations, these systems followed widely varying designs. Overall, half of the producers on tubing systems used ground systems and half used aerial systems. About one eighth of these ground systems used old vented tap technology. Converting the ground systems, especially the vented ground systems, to aerial systems could increase an individual producer's production by more than 40 percent (Blum 1967). This increase is primarily due to natural vacuum absent in vented systems. Few producers (one sixth of the producers with tubing systems) use mechanical vacuum. Particularly during poor years, mechanical vacuum can increase sap production (Keelley and Staats 1989). While the benefits of mechanical vacuum will vary between systems, due to differences in the tubing layout and weather conditions, mechanical systems will consistently outperform gravity systems.

More than three quarters of produc-

ers with less than 5000 taps used wood fired evaporators (approximately 90 percent of the producers are in this size range); however, three quarters of the larger operations with greater than 5000 taps used fuel oil (approximately 10 percent of the producers are in this size range). Relatively few producers used any other heat sources including LP, steam and coal.

While advancements in technology are expensive additions to a maple operation; many items can be fabricated or can be purchased for reasonable cost by even small producers. As would be expected, larger producers tend to own more advanced maple technology. In general, the bigger a producer was, the greater the likelihood of owning a preheater, UV light sap treatment, a finishing rig, a vacuum tubing system, a refractometer, a reverse osmosis machine, a Piggyback™/Steam-Away™, automatic drawoff, a filter press and a steam hood. While greater investment in equipment is expected and appropriate as operations get larger, many of the smaller operations do not take advantage of equipment that could save time and money (for example preheaters and wood-saver blowers).

MAPLE PRODUCT SALES

The way producers sold/used their syrup also relates to operation size. Small producers (less than 100 taps) use most of their syrup for personal consumption. Sugarhouse sales dominated product marketing for producers with 100-5000 taps; however, producers with 1000-5000 taps also sold significant volumes of their syrup in bulk. As producer size increased above

5000 taps, these producers sold more syrup through retail outlets. While value-added products can be big money makers, only 7 percent of maple syrup is actually converted to these delicious treats. Three fifths of maple producers make no value-added products at all.

MAPLE PRODUCTION

Because we believed Pennsylvania had about 900 maple syrup producers, we thought that the Pennsylvania Department of Agriculture's estimate of the value of the maple industry (less than 2 million dollars in sales from approximately 67,000 gallons produced in 1999) was low. Based on the total number of taps reported by producers surveyed, we estimate that these producers had about 300,000 taps. If each tap yields about a quart of syrup, as is often the reported yield per tap, the producers in this sample made 75,000 gallons of syrup. The annual survey conducted by the Pennsylvania Department of Agriculture showed about 67,000 gallons last year. Though we received responses from less than 200 current producers, we have a database of over 500 producers in the state. We believe the actual number of producers in Pennsylvania is about 900. Therefore, we think the state's estimate of annual maple production is very low.

PERCEIVED EXTENSION NEEDS

This survey demonstrated that many opportunities exist for extension to help in increasing the production of maple syrup in Pennsylvania. With the low number of producers purchasing sap, the advantages and disadvantages of increasing this market could be

explored in cooperative extension programs. In addition, many producers are still using solely buckets. Because these producers may be able to expand their operations if they switch to tubing, extension programs could target conversion from buckets to tubing. For those producers using tubing systems, mechanical vacuum may be the next upgrade for their system. Developing extension programs to demonstrate economical methods of incorporating mechanical vacuum could dramatically increase production. Overall, increasing knowledge about and acceptance of these technological advancements could be a role for extension programs.

Production of value-added products from maple syrup was shown to be quite low in Pennsylvania. Because these products can greatly increase a producer's income from maple syrup production, extension could target programs on value-added products production (both traditional such as maple cream and non-traditional such as maple meat glazes).

Finally, while knowledge of opportunities for increasing production or sale value is useful to cooperative extension agents, knowledge of programs that are of interest to the producers is also necessary. When asked what type of extension programs captured producer interest, tubing installation and sugarbush management and health were the most popular. Producers also showed interest in information on the Pennsylvania Department of Agriculture inspection guidelines and new regulations regarding maple syrup.

As with other maple producing states, Pennsylvania also has a state

maple tour. The state maple tour rotates through the five different maple regions in the state, with a tour occurring once every five years in each region. This tour provides producers with exposure to other maple operations and new ideas about maple production. Four questions sought to determine ways to improve interest in the maple tour. Slightly less than half of the producers wanted to attend the Pennsylvania Maple Tour but of these, two-thirds were also interested in going to tours in other states. Surprisingly, of those interested in attending the state maple tour, most were only interested in traveling less than 2 or 3 hours. For this reason, rotation of the maple tour through the regions seems to be a very good idea. In addition, other agricultural attractions are frequently included in these field tours. About one third of those surveyed were interested in this portion of the field tour.

CONCLUSIONS

The extension program in maple has already been of value to the maple industry in Pennsylvania. We anticipate increased opportunities for programs across the state targeted at bringing new producers into the industry. While increasing the number of producers will increase maple production, this survey also demonstrates that many opportunities exist for increasing efficiency of established producers. Increasing the use of tubing systems as well as improving the efficiency of existing systems could greatly increase production with nominal increases in labor. Increasing the use of size appropriate technology such as preheaters and wood-saver blowers could increase efficiency and long-term profits. Finally, increasing the amount of syrup converted into value-added products could greatly increase producer profits. All of these changes will increase the total eco-

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conomic value of maple syrup production in Pennsylvania. While a small industry, maple syrup production has a long history in Pennsylvania. The current partnership of the Pennsylvania Maple Syrup Producers Council, the Ben Franklin Partnership Program and the Pennsylvania State University is helping to increase production and efficiency in this long established industry.

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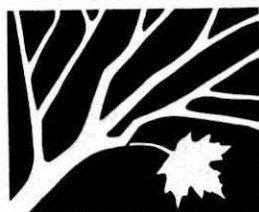
State Cooperative Extension Offices and the Pennsylvania Department of Agriculture that provided lists of maple producers in the state. We also wish to thank all the producers that took the time to respond to this survey.

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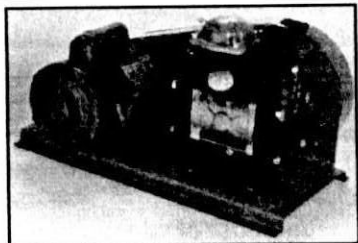
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