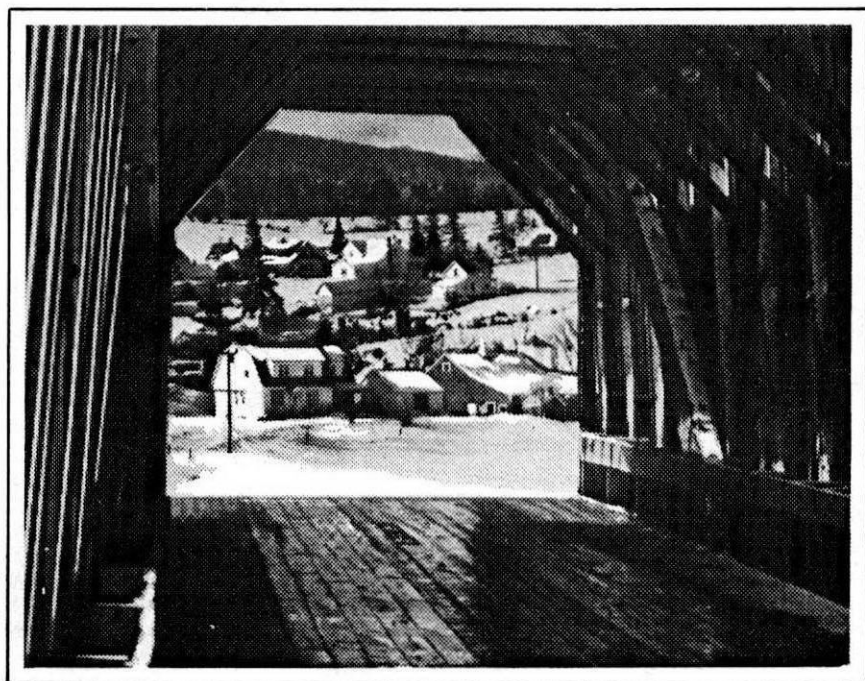


MAPLE SYRUP

DIGEST



Vol. 26 No. 4

December 1986

Address Correction
Requested to:
Bainbridge, N.Y. 13733

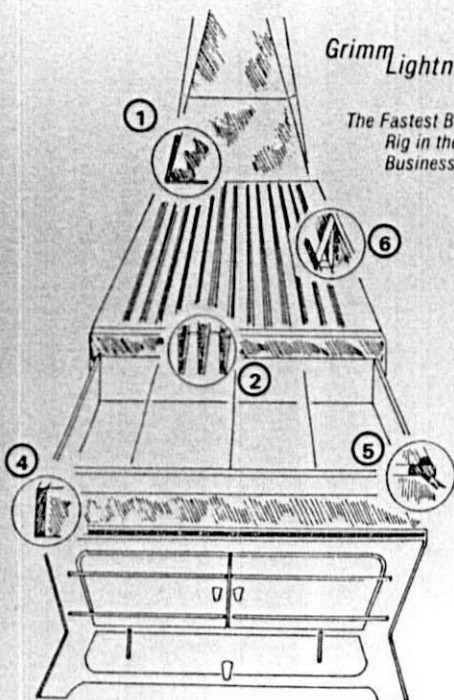
BULK RATE
U.S. POSTAGE PAID
OXFORD, N. Y.
PERMIT NO. 12

GRIMM

SINCE 1890

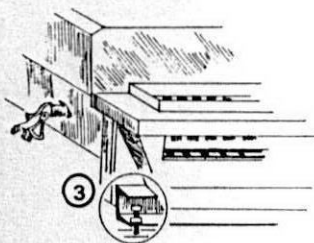
ALL AMERICAN

DURABILITY BY DESIGN COMPARE BEFORE YOU BUY



Grimm Lightning

*The Fastest Boiling
Rig in the
Business.*



- 1 LONGER LASTING PANS** 300 series high nickel stainless is more corrosion resistant than 400 series magnetic stainless steel.
- 2 FASTER BOILING TIME** 7% more flue area than 7 inch deep flues.
- LONGER ARCH LIFE** 4 inch u channel reinforcement over 3 feet, prevents spreading.
- 3 FASTER SET UP** leveling screws on arches over 3 feet wide makes it easy to keep arch level.
- 4 STRONGER SEAMS** double lock seam on pan corners.
- 5 SMOOTH REINFORCED CORNERS** knuckle reinforcements used on all pan corners
- 6 STRONGER PANS** side wall reinforcement on pans 4 feet and longer.

WE CARRY A COMPLETE LINE
OF SUGARMAKING EQUIPMENT AND SUPPLIES

CALL TOLL FREE
1-800-448-8003
VT 1-800-442-9848

Dealers Wanted

G.H. GRIMM CO. INC.
P.O. BOX 130
RUTLAND, VERMONT 05701

Season's Greetings



Elmer & Mary Kress

Kress Creations, Inc.

MAPLE SYRUP DIGEST

Official publication of the
NORTH AMERICAN MAPLE SYRUP COUNCIL

Published & Edited by:

Lloyd H. Sipple, RD 2, Box 126
Bainbridge, New York 13733
Phone: 607-967-7208

Published four times a year
(Feb., July, Oct., Dec.)

Postage paid at Oxford, NY 13830

Printed by:

La Tourette Rapid Reproductions Inc.
13 No. Canal Street, Box 598
Oxford, New York 13830

FIELD EDITORS

- CONN.** Darrell Russ 203-542-5090
Westside Rd., Norfolk, Ct 06058
- MAINE** T.A. Greene 207-787-2424
East Sebago, ME 04029
- MASS.** James Graves 413-625-9066
R.D. 1, Shelburne Falls, MA 01370
- MICH.** Frank Majszak 616-228-5835
R.D. 1, Baatz Rd.
Maple City, MI 49664
- MINN.** Lane Townsend 218-879-9112
24 Sugar Maple La.
Esko, MN 55733
- N. H.** Fred E. Winch, Jr. 603-938-2124
Warner Rd., Rt. 103
Bradford, NH 03221
- N. S.** J. L. Maxwell Spicer 902-392-2823
Spencers Island
NS, Canada BOM 1S0
- OHIO** Ture Johnson 216-834-4206
Box 241, Burton, OH 44021
- ONT.** Bill Robinson 519-529-7857
RR 2, Auburn, Ont., Canada
- PENN.** Robert McConnell 814-274-9143
Box 252, Coudersport, PA 16915
- VT.** Ray Foulds 802-864-6305
393 S. Prospect St.
Burlington, VT 04501
- WISC.** John Roth 715-289-3820
R.D. 1, Cadott, WI 54727
- N. ENG.** Sherb Doubleday 802-334-2793
Newport, VT 05855

Subscription Rates:

- United States: 1 yr. - \$2.00
3 yr. - 5.00
- Canada, US funds: 1 yr. - 3.00
2 yr. - 5.00

NORTH AMERICAN MAPLE SYRUP COUNCIL DIRECTORY OF OFFICERS

- John Kroll Chairman
Long Prairie, MN 56347 612-732-2575
- Michael Girard Vice-Chairman
Simsbury, CT 06070 203-658-5083
- Lynn Reynolds .. Secretary-Treasurer
Hortonville, WI 54944 414-779-6672

DIRECTORS

- Richard Norman 203-974-1235
Woodstock, CT 06281
- James Graves 413-625-9066
Shelburne Falls, MA 01370
- Bill Webber 207-778-4234
Farmington, ME 04938
- Frank Majszak 616-228-5835
Maple City, MI 49664
- Philip Cook 218-728-3587
215 Snively Rd. Duluth, MN 55803
- Arthur Merle 716-535-7136
Attica, NY 14011
- Gordon Gowen 603-835-6531
Alstead, NH 03602
- J.L. Maxwell Spicer 902-392-2823
Spencers Island, N.S. BOM 1S0
- Ture Johnson 216-834-4206
Burton, OH 44021
- Ronald Shaw 705-325-6878
Hawkestone, ONT L0L1T0
- Edward Curtis 717-253-3759
Honesdale, PA 18431
- Wilson Clark 802-325-3203
Wells, VT 05774
- John Roth 715-289-3820
Cabott, WI 54727

DIGEST ADVERTISING RATES

- 2 Page Spread \$395.00
- Full Page 210.00
- 1/2 Page Vert. or Hor. 115.00
- Column Inch 16.50
- Classified60¢ per word
- Deadline for copy: First of the
month preceding date of issue.

Editorial

A lot of research has been spent the past few years on better ways of making syrup. This includes RO's, preheaters, economizers, tubing systems and many other developments. Now, it seems, research is almost non-existent because the government just doesn't want to spend any money on it. There's a lot being done by our equipment manufacturers and even by the maple producers themselves, but one aspect of the industry we've almost lost sight of is the maple tree.

If there were no sugar maples there would be no maple syrup industry. It's that simple and no one can argue the point. But there has been very little done yet to preserve the maples. This tree is probably one of the most noble examples of our woody plants and I believe it was created primarily to provide the raw material for maple syrup. Otherwise, why would it produce so much sugar?

For many years the maples have been afflicted with defoliating caterpillars, acid rain, salt, blights, borers and sap streak, to name a few of its enemies. There's been much talk about its problems but so far very little has been done. Now, maybe something will be done, but it will cost money, a lot of money.

To get thing's started the North American Maple Syrup Council, at their annual meeting this October in Rutland, VT, passed a resolution to set up a system that would collect one cent per syrup container, regardless of size. This would be collected by the container manufacturers or distributors and passed on to a special account of the Council to be used only for maple research. This money would be administered by the research committee of the Council.

This means that each container will cost one cent more and, of course, this cost will be passed on down to the

ultimate consumer. Considering what the money will be used for, it seems justifiable and the fairest way to collect it. The Council agreed that the program should have a two year trial period.

I can't see how anyone can criticize this move by the Council. It had to be done. I also agree with Ed Curtis, Pennsylvania Delegate, who made the remark that "The maple tree's problems are bigger than any one industry can possibly solve. The whole continent must be involved."

The Council's move is only a start. We all hope it will get thing's rolling.

PRICING MAPLE SYRUP

Every year producers ask us how to figure prices for small containers. One of the talks at the Council meeting included the following system based on the percentage of the gallon price:

1/2 gallons - 56 to 60%

Quarts - - - 30 to 35%

Pints - - - - 19 to 22%

1/2 pints - - 11 to 15%

Which percentage you choose will depend on whether your business is "at the sugar house" or "Gift Shop", the type and cost of containers used, how much you value your time in handling small containers and, finally, how much the traffic will bear. This leaves a lot of unanswered questions but maybe it will give you something with which to start.

Steel barrel bungs w/gaskets: 2 inch \$7.40/doz; 3/4 inch \$4/doz., postpd.

Storage/Shipping cartons for quarts (12 jugs or 17 Davies cans) 50¢ ea.

Same for pints (holds 12 or 20) 45¢ ea.

5 gal cans \$4.50; quantity discounts

Warren Allen 315-346-6706

RD Box 254, Castorland NY 13620

(2 mi. from Maple Museum, in Croghan)

Small Brothers U.S.A., Inc.

FROM THE TRADITIONAL TO THE HIGH TECH

From Traditional Wood Fired
Evaporators to sophisticated
Reverse Osmosis machines,
SMALL BROTHERS is working to
serve sugarmakers with
better ideas!

MODEL 1950
3x8



**LIGHTNING
EVAPORATOR**

5 Models to choose from
2'x4' to 6'x22'

Write For Your Exciting New Edition
of the SMALL BROTHERS CATALOG
with the latest in equipment.

**NEW — STAINLESS STEEL STORAGE TANKS
& STAINLESS STEEL SMOKE STACKS**

—The Producer Oriented Company—

SMALL BROTHERS U.S.A., Inc.

Franklin County Airport, P.O. Box 714, Swanton, VT 05488

802/868-3188

Send me a complete
FREE information catalog
and price list and nearest
distributor

Have your representative
contact me as soon
as possible

Name _____

Address _____

State/Zip _____

Phone _____

#Taps

VERMONT 1987 MAPLE MEETINGS

January 6 Rutland County
 January 7 Bennington County
 January 8 Windham County
 January 9 Windsor County
 January 13 Lamoille County
 January 14 Orleans County
 January 15 Franklin County
 January 16 Addison County
 January 20 Orange County
 January 21 Washington County
 January 22 Caledonia County

January 27 Barre Farm Show
 Annual Meeting, V.M.S.M.A.

For more details as to time and place
 call or write:

Larry Myott
 Chittenden Co. Ext. Agent
 4A Laurette Drive
 Winooski, Vt. 05404
 (802) 655-4452
 or
 Mr. George L. Cook
 Area Extension Agent-Maple
 R.R. #1, Box 2280
 Morrisville, Vt. 05661
 (802) 888-4972, 888-5556

DEADLINE FOR FEB. ISSUE JAN.-2

New York 1987 Maple Schools

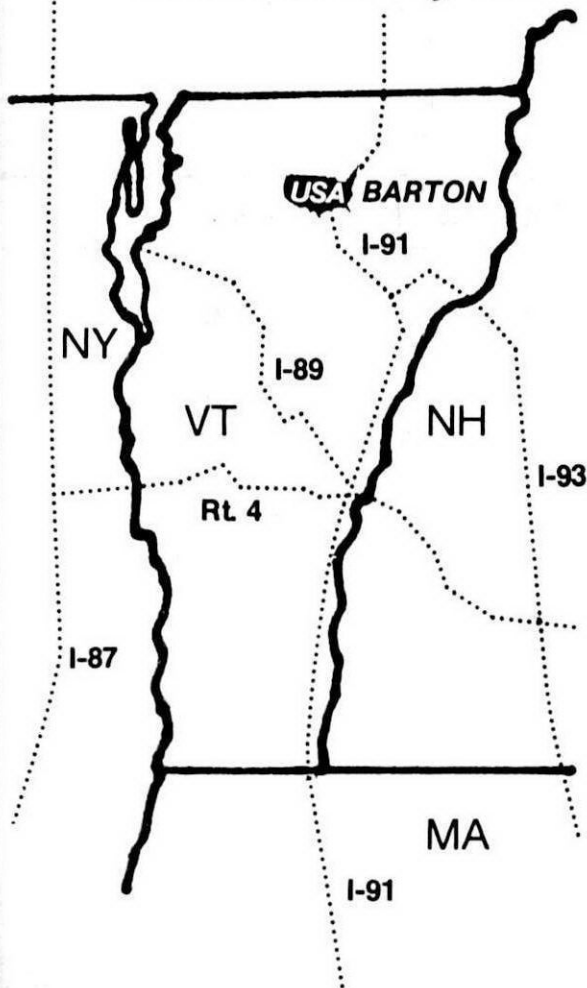
DATE	HOST COUNTY	HOST AGENT	TIME	LOCATION
1/15	Allegany	Contact county at 716/268-7644 for further information.		
1/16	Chautauqua	Contact county at 716/664-9502 for further information.		
1/17	Wyoming	Steve Childs 716/786-2251	10:00am 3:00pm	Byrnciff Resort on 20A near Varysburg - cost luncheon.
1/20	Cortland	Contact county at 607/753-5077 for further information.		
1/21	Chenango	Gerry LeClar 607/334-9971	10:00am 3:00pm	VFW, E. Main St., Norwich-cost luncheon.
1/22	Delaware	Tom Donnelly 607/865-6531	10:00am 3:00pm	American Legion, Delhi-cost luncheon.
1/23	Otsego	Wm. Gengenbach 607/547-2536	10:00am 3:00pm	United Methodist Church, 66 Chestnut St., Cooperstown-cost luncheon.
1/27	Warren- Washington	Mark Malchoff 518/623-3291	10:00am 3:00pm	Mohican Grange, Oneida Corners (Rt. 9L)-cost luncheon.
1/28	Clinton	Bill Pauling 518/561-7450	10:00am 3:00pm	Miner Ctr., Miner Inst. (West of Chazy)-cafeteria lunch or BYOL
1/29	St. Lawrence	S. Vandermark 315/379-2311	10:00am 3:00pm	Contact county for more infor- mation.
1/30	Lewis	Pat Beyer 315/376-6551	10:00am 3:00pm	Deere Hill Restaurant, Rt. ⁿ 12, between Lowville & Copen- hagen. Cost luncheon.

FOR FURTHER INFORMATION AND/OR DIRECTIONS, PLEASE CONTACT
 THE HOST AGENT OR COUNTY.

WATERLOO INC.

MAPLE SUGARING EQUIPMENT

CONVENIENTLY LOCATED IN BARTON, VERMONT



*Quality
Reliability
&
Service
Since
1919*

- **WATERLOO**
Evaporators
- **Seprotech**
SYSTEMS INCORPORATED
Reverse osmosis
- *Full Line of
Equipment*

CALL BUCKY SHELTON - BARTON, VT - 802/525-4103

HCR 63, BOX 35A, BARTON, VT 05822

OR TOLL FREE 1-800-363-8940 Waterloo, Canada

ERRATA

Sendak, Paul E.; Laing, Frederick M. The forced-draft wood grate. Maple Syrup Digest. 26(3): 19-22; 1986.

ACKNOWLEDGMENTS

The authors thank Steve Selby for providing the forced-draft wood grate; Howard Duchacek for providing engineering advice on the design of the study and calculation of thermal efficiency and heat balance for the tests; and Sumner Williams and Tim Mishkit for preparing the fuel, operating the evaporator, and collecting data.

FOOTNOTE

^{1/} The use of trade, firm, or corporation names in this publication is for the information and convenience of the reader. Such use does not constitute an official endorsement or approval by the U. S. Department of Agriculture or the Forest

TYLER MAPLE FARMS

Box 77, Westford, NY 13488
Phones - 607-638-5690
607-638-9474

For Sale - Waterloo, Grimm and Lamb equipment and supplies; New & Used.

Service of any product or service to the exclusion of others that may be suitable. page 19. The flue pan was covered with an aluminum steam hood fitted with a sap preheater.

The firebox was fitted with standard wood grates for comparison with the forced-draft grates.

page 20 (51.81 - 47.95) / 47.95

page 22. The following assumptions were made:

H. W. Cook Farm Service, Inc.



De Ruyter, N. Y. 13052

Serving the Maple Industry for
Over 60 Years



Leader - King Evaporators
Gas & Electric Tree Tappers
Bits, Filters, Spouts
Sap Buckets, Covers
(new and Used)
King Plastic Sap Bags
Metal Decorated Syrup Cans

Sugarhill Plastic Jugs
Rubber Candy Molds
Maple Cream Tubs
Lamb Tubing & Fittings
Pellets
Pellets
Storage & Gathering Tanks

Open daily 8:00 - 5:00

Phone: 315-852-6262 and 315-662-7208

Write for Free Catalog

U.S. MAPLE, Inc.



Producer owned and operated.

**Sugar makers with extensive tubing experience
concerned about quality and service.**



**Still Doing It
This Way?**

**★ Save labor and increase efficiency with a
modern U.S. Maple tubing system.**

Owner	Bascom's Sugar House - RR 1, Box 138, Alstead, NH 03602	603-835-6361, 835-2230
Owner	Troy Firth - 136 Mechanic St, Sparta, VT 05488	814-654-7338, 654-7265
Owner	Maple Syrup Supplies - PO Box 245, Pottersville, MI 48876	517-645-7305
Owner	Mayotte's Maple Products - RD 2, E. Fairfield, VT 05448	802-849-6810
VT	Beacon Feed Service - PO Box 56, Essex Jct., VT 05452	802-878-3306
	Francis Carlet - E. Peacham, VT 05862	802-592-3336
	Martin Collins - RFD 3, Putney, VT 05346	802-387-5757
	Bill Coombs - Box 186, Wilmington, VT 05363	802-464-5232
	Coombs Maple Products, Inc. - Jacksonville, VT 05342	802-368-7506
	Nate Danforth - County Rd, Montpelier, VT 05602	802-229-9536
	Hilton Foote - Cornwall Cider Mill Rd, Middlebury, VT 05763	802-462-2472
	Raymond Kinney - HC Box 230, E. Berkshire, VT 05443	802-933-4627
	Andy Messier - Box 337, Hardwick, VT 05843	802-472-5973
	Bill Moore - Morgan, VT 05853	802-895-2764
	Peter Purington - RD 1, Box 1900, Richmond, VT 05477	802-434-4385
	Bob Twitchell - RFD, Rt. 100, S. Londonderry, VT 05155	802-824-5295
NH	David Douglass - Center Conway, NH 03813	603-447-5120
	Bill Nichols - Nichols Hardware, Lyme, NH 03768	603-795-2214
	Richard Moore - Sunnyside Maples, RD 8, Concord, NH 03301	603-267-8217
	Frank Owen - Colebrook, NH 03576	603-237-4432
MA	Jeff Mason - Red Bucket Sugar House, Kinne Brook Rd., Worthington, MA 01098	413-238-7710
	Will Shattuck - Devon Lane Farm, Belchertown, MA 01007	413-323-6607
CT	Louis Berecz - 41 Washington Rd., Woodbury, CT 06798	203-263-3996
	Lamothe's Sugar House, 89 Stone Rd., Burlington, CT 06013	203-582-6135
ME	Smith's Maple Products - 36 Middle St., Skowhegan, ME 04976	207-474-3380
	Raymond Titcomb - Maine Maple Products, Farmington, ME 04938	207-778-3803
NY	Warren Allen - RD Box 254, Castorland, NY 13620	315-346-6706
	David Baitscholtz - Box 107, Rensselaerville, NY 12147	518-797-3402
	Frank Brodie - County Rt. 34, Westford, NY 13488	607-264-3225
	William Campbell - PO Box 129, Smyrna, NY 13464	607-627-6653
	The Davenport - 228A Brink Rd., Van Etten, NY 14899	607-589-6626
	T.B. Hobbs & Son - Ellenburg Center, NY 12934	518-594-3869
	Jeff Howe - RD 2, Ft. Ann, NY 12827	518-634-5317
	Charles Metzger - Crane Mt. Maple Products, Box 34, Warrensburg, NY 12885	518-623-2226
	David Nascimbeni - Glen Durham Sugar House, Cairo, NY 12413	518-622-6978
	Victor Putnam - RD 1, Cobleskill, NY 12043	518-234-4726, 234-4858
	Randy Sprague - 51 Maple Ave., Portville, NY 14770	716-933-6637
	Todd's Sugarhouse - Rt. 1, Box 470, Norwood, NY 13668	315-353-2808
PA	Dale Jeffrey - W. Salisbury, PA 15565	814-662-2904
MI	Dodd's Sugarshack - 1654 Dodd Rd., Niles, MI 49120	616-683-3283
	Elm River Sugarbush - Ted Johnson, Rt. 1, Box 104, Toivola, MI 49965	906-288-3434
OH	David Stump - New Washington, OH 44854	419-492-2731
WI	Jeff Nordby - Prairie Farm, WI 54762	715-455-1529
	Polak's Sugar Bush - Rt. 2, Merrill, WI 54425	715-536-4032

GREETINGS
FROM
THE
CHAIRMAN



I came home from our 27th Council meeting feeling strong about the future of the Maple Industry.

Syrup makers never let their optimism evaporate! The fact that we're willing to contribute to the funding of our research speaks well of our wanting to be in the business a good long while.

Thanks to the Vermonters for their hospitality and good planning. Personally, it brought me much pleasure to see so many of you again.

Sincerely
John Kroll

CONNECTICUT NEWS

By Darrell Russ

At the Nov. 8th meeting of the Maple Syrup Producers Assoc. of Connecticut, all officers were re-elected. They are: Richard Norman, Woodstock, President; Elmer Sinclair, Danbury, Vice President; Ken Sherrick, Middletown, Coordinator and Barbara Atwood, New Hartford, Clerk.

New Directors, East are: Glenn Boies, Woodstock; Steve Broderick, Brooklyn; Paul Williams, South Woodstock. New Directors, West are: Newell Atwood, New Hartford; Mike Girard, Simsbury and Rob Lamothe, Burlington.

Next meeting is scheduled for Woodstock, Saturday, Feb. 7. Registration will begin at 9:30 with sugarbush tours in the morning and business meetings in the afternoon.

HOURS:

Mon.-Fri. 7:30-5:00
Sat. 8:00-12:00

RR 1, Box 138
Alstead, NH 03602



**Bascom's
Sugar House**

FREE CATALOG

603/835-6361
or 603/835-2230



ONE STOP SHOPPING - LARGE INVENTORY at factory direct prices

25 NEW AND USED EVAPORATORS IN STOCK.

SERVICE - PROMPT, DAILY UPS and truck shipments. Technical advice. Personnel always on the premises.

MAPLE SYRUP - We buy any amount of bulk syrup. We sell syrup retail, wholesale, and bulk. Immediate pricing or future contracts available.

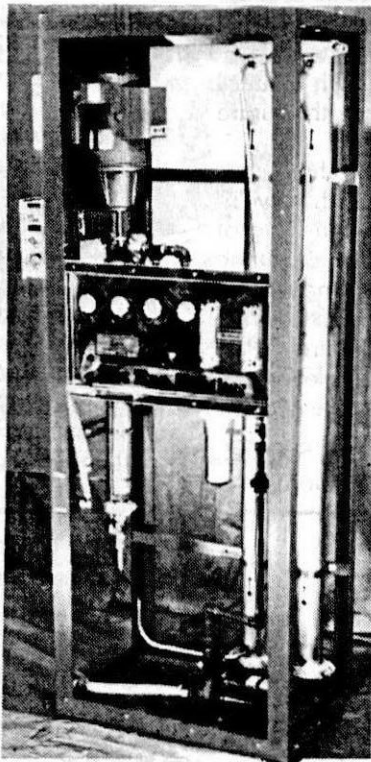
- Grimm and Small Brothers: evaporators, gathering and storage tanks, filtering equipment, and accessories.
- U.S. Maple tubing ■ Buckets
- Sugarhill & Kress jugs ■ Syrup cans
- Glass bottles ■ Drums
- Reverse Osmosis - Osmonics and Sap Brothers

CUT BOILING TIME
TAKE 75% OF THE WATER OUT OF YOUR SAP WITH
THE SAP BROTHER

The Sap Brother Reverse Osmosis Machine not only saves boiling time but allows you to make more syrup in a smaller space by removing 75% of the water from your sap before boiling.

The Sap Brother is designed and manufactured by Small Brothers under license from Osmonics, using the famous "sepralator" membrane.

Small Brothers has been distributing RO Machines longer than anyone in the maple business and their long standing



relationship with Osmonics has given them the experience they need to give you the service you need at a price you can afford.

Sold to you—
Delivered, Installed with a complete "Clean In Place" System.

Available in 5 sizes:

100*
250*
400*
600*
1000*

*gallons per hour

—**WARANTEED**—
—**PARTS**—
—**SERVICE**—

THE SAPBROTHER REVERSE OSMOSIS MACHINE. AN
OPEN FRAME VERTICAL CONFIGURATION.

BACKED BY THE 2 BIGGEST NAMES IN REVERSE OSMOSIS

**AN ALL OSMONICS MACHINE AT
SMALL BROTHERS PRICES**

FEATURES:

- Maintenance Free Direct-Drive "Tonka Flo" Pump
- Automatic Low Pressure Shut-down
- Stainless Steel Pressure Vessels
- Quietest Machine in the Industry
- Easy to operate

CALL OR WRITE

—The Producer Oriented Company—

Small Brothers U.S.A., Inc.

Franklin County Airport, P.O. Box 714, Swanton, VT 05488

802/868-3188

ONTARIO REPORT

The Ontario Maple Syrup Producers Association are proud of two of their locals.

The Southwestern local hosted a summer picnic on August 9th. The group met at Ralph Watts sugar bush and pancake house with a 3,000 tap tubing operation. The second stop was at Marvin Chambers sugar camp with a 2,000 tap tubing operation and a R.O. Machine. The last stop of the day was a tour through the Picard Peanuts plant. This was attended by 35 local producers of the area.

The Lanark District held a sugar bush management field day on Aug. 16 with registration at Vernon and Judy Wheelers Sugar camp. Two sugar bushes were visited in the area which are managed by the Ministry of Natural Resources in cooperation with the producers. The 50 people who attended were able to see the improvements that have been done and discuss these with the Ministry personnel.

The Ontario annual meeting was hosted by the Algonquin Maple Producers at the Lumina Resort at Dwight, Ontario on Oct. 3 and 4. Speakers included Allan Dolan, who talked about the Gypsy Moth situation in Ontario. Dr. Maria Franca Morselli from the University of Vermont speaking on storing sap at different temperatures and the temperatures of different means of collection of sap and microorganisms in tubing. Lynn Whalen from the University of Vermont spoke on scanning tubing with a microscope, off flavours of syrup due to bleach contamination and about the use of U.V. Lights in the sugarbush. David Marvin of Johnson, Vermont spoke on the IMSI and the outlook for International Maple Syrup market. Our last speaker at the meeting was Michael Perley who is the coordinator of the

RICHTER'S SUGAR HOUSE

Now serving the West Virginia Area
in Maple Sugaring Equipment

- Small Brother's
Lightning Evaporators
- Maple Experts Tubing
- Kress Jugs - The Best

Also used King Sap Bags, Buckets &
Spouts-All Excellent, very good prices

Rt. 2 - Box 7A - Pickens, W. Va. 26230
(304) 924-5404

Canadian Coalition on Acid Rain. At the evening Banquet our new President, Bob Jakeman of Beachville was introduced. The Shaw family of Orillia were given the Ontario Maple Syrup Award. This is not an annual award but only given to those whom the Directors of the Association feel have given of time and resources above and beyond the call of Maple. The second day the group went to Bob Hewitts Sugar bush near Kearney. The Hewitts have over 5,000 taps on vacuum tubing. Clarence Coons had a sugarbush management demonstration at the Hewitt Bush.

MAPLE SYRUP EQUIPMENT

SMALL BROTHERS

Lightning Evaporators

U.S.
MAPLE



**CHRISTMAS
GREETINGS**

**WOODBURY
SUGAR SHED**

ROUTE 47
WOODBURY, CONNECTICUT 06798
203-263-3996

TAP ROOTS

Syrup Color

At one time or another you've probably heard someone say, "The first syrup is always the lightest and every run after that gets darker." This may have been true years ago and it's possible it could happen sometimes now, but if it does, it's probably your own fault.

Years ago, Dr. Willits of the Philadelphia Laboratory, along with his bacteriologists Aaron Wasserman and John Kissinger, found out that about 99% of the color in maple syrup was caused by bacteria in the sap. They proved they could make an almost colorless, extra light grade of syrup the entire season by keeping the sap aseptic, or nearly free of bacteria.

The sugar in maple sap is sucrose.

SUGAR BUSH SUPPLIES CO.

- COMPLETE SUPPLIER TO THE MAPLE PRODUCER
- WE STOCK BACON JUGS, LAMB TUBING SYSTEM
- AUTUMN LEAF CANS, LABELS & CREAM TUBS
- LEADER, KING, VERMONT EVAPORATORS NEW & USED
- WE BUY USED EQUIPMENT & MAPLE SYRUP

**Give Us A Call or
Write For Catalog**

2611 Okemos Road
Mason, Michigan 48854
Tel - (517) 349-5185

The heat encountered in the evaporating process has little effect on pure sucrose so little color is formed. The result is a very light colored syrup. Bacteria break down the sucrose into invert sugars such as glucose and fructose. Invert sugars are very susceptible to heat damage and the high heat under the evaporator pan causes color formation. The result may be anywhere from Medium Amber to Grade C. The higher the bacteria count in the sap, the darker the syrup. This was proven by Sipple, Kissinger and Willits in 1965 - 1967 and again substantiated by Dr. Maria Franca Morselli and Mary Lynn Whalen in 1984.

The flavor of syrup is also affected by bacteria. There are several different kinds of bacteria in sap and each one affects the flavor a little differently. This is why it's hard to make two batches of syrup exactly alike. Generally speaking, though, the darker the syrup, the stronger the flavor.

It's impossible to produce sterile sap or at least very much of it, and even harder to keep it that way long enough to get it into the evaporator. However, there are things you can do to help.

All sap equipment, (buckets, tubing, tanks, etc.) must be clean to start with. This should get you off to a good start but sometimes the very first syrup made is medium or even dark amber grade. Why?

Quite often it takes a week or two to tap the trees and get enough sap to start boiling. Some of this sap is old and, even in clean equipment, it has been seeded with airborne bacteria which causes the color. Then you get another run right away and make light syrup. The first gathering got rid of the contaminated sap and the fresh run was handled quickly enough to prevent bacteria damage. Usually, the lightest syrup is made in the middle of the season when better runs keep the equipment

washed out. As the season wears on, the containers get dirtier and dirtier and the syrup darker and darker.

This does not have to be the rule. Usually, after a warm spell in the middle of the season, when your syrup color changes to dark amber, washing the equipment will help. Wash all buckets with a chlorine solution (1 part clorox to 40 parts water). A clean detergent squirt bottle works good to flush out the spile and tap hole with the same solution.

Tubing takes care of itself to some extent because it is trans-lucent and allows U V rays from the sun to penetrate and kill bacteria. You can help by injecting some of the clean, chlorine washing solution in the top end of the tubing lines and let it work down through the system.

Never allow leaves, seeds, twigs or other debris in the sap. They cause

color from the tannin they contain. Also a rubber rain guard, a 1 1/2" x 2 1/2" rectangle of inner tube with a 3/8" hole punched in it and slid on over the end of the spile that goes in the hole before it is driven in the tree, will eliminate rain water from running down the bark and following the spile out into the bucket.

With a little care taken and a few wash jobs during the season there's a good chance of making light syrup all season. And don't let anyone tell you "buddy" syrup is always black. I've seen buddy syrup many times that was almost water white. That's when it really turns your stomach.

**DEADLINE FOR
FEB. ISSUE JAN.-2**



WRITE NOW FOR YOUR COPY OF THE

NEW! SAPSUCKERS GUIDE

Never before published information about plastic tube network construction that will save you countless hours & frustration.

- NEW LEAK DETECTOR SYSTEM, so simple and inexpensive you'll wonder why you never thought of it before.
- BACKGROUND INFORMATION on where leaks occur and why you should be concerned.
- LIST OF DO'S & DON'TS used by Sugar Makers all over North America, compiled over the past 10 years.

The little stones in your shoe make the trip seem long. If you use tubing for sap collection, write for your free copy of

THE SAPSUCKERS GUIDE---You'll be glad you did.

SUGAR CAMP, INC.

ROUTE 2 - BOX 337, RAPID CITY, MICHIGAN 49676 - PH. 616-331-6328

QUALITY OF SYRUP PRODUCED FROM SAP COLLECTED FROM DECLINED MAPLES

Maria Franca Morselli and Mary Lynn Whalen
Maple Research Laboratory
Botany Department
College of Agriculture and Life Sciences
University of Vermont
October 1986

PROGRESS REPORT

Decline condition was assessed on 21 maples on the basis of 5 criteria (Newbanks and Tattar, 1977) during the summer and early fall of 1984 and 1985. The trees were divided into three groups: 6 healthy maples, 6 maples declined on a roadside where sodium deicing salt has been and is currently used, and 3 maples declined in a sugarbush for unknown reasons.

A total of 103 saps were aseptically collected from the 21 trees in the spring of 1985 and 1986, and analyzed for pH, invert sugar, sodium, phenol, chloride, and total solid concentration. A total of 61 sap samples were boiled to syrup (31 from healthy, 24 from declined roadside, and 6 from declined sugar-

bush maples). A total of 19 ground-water samples were taken from the soil under the roadside trees (11 on the roadside and 8 on the field side) and analyzed as for sap. Groundwater at the sugarbush site had been previously analyzed. Analysis of variance and Duncan's multiple range test were used for the statistical analysis of the sap, syrup and groundwater data.

Sap appearance, pH, total solid concentration, invert sugar and phenol levels did not show significant changes as related to tree decline, nor did syrup sugar grade, pH, invert sugar and phenol levels.

The roadside declined trees differed significantly from the other two groups of maples for sap sodium and chloride levels ($p = .05$). Both had mean values in excess of 10 ppm. Average sap sodium content of healthy sugarbush maples has been previously reported by Whalen and Morselli (1984) as 0.42 ppm (sap samples = 234). Sodium levels were significantly higher in the groundwater collected at the roadside site than in the groundwater at the sugarbush site.

American Maple Products

Newport, Vermont 05855

- produces maple syrup,
- Buys bulk Maple Syrup from other producers,
- packs Pure Maple Syrup,
- makes Maple Candies, Maple Sugar and Maple Butter,
- wholesales these products to the retailer
- and supplies leading food manufacturers with Bulk Maple Syrup or Maple Sugar.

CAN WE HELP YOU WITH YOUR MAPLE REQUIREMENTS?

TEL: 802-334-6516

Flavor of syrups produced from saps of declined sugarbush maples was found equivalent to the flavor of syrups produced from saps of healthy trees. Syrup produced from declined roadside maple saps were significantly different in flavor than syrups produced from saps of the other two groups of trees. An off-flavor described as "salty" by 4 tasters was found in 20 of 24 syrups processed from declined roadside tree sap, and it was correlated with sodium and chloride levels significantly higher ($p = .05$) than in the syrups processed from the saps of the other trees. The "salty" flavor is similar to the off-flavor found in syrup processed from experimentally bleach-treated saps (Morselli et al., 1985). Roadside tree syrups had mean sodium values in excess of 80 ppm and mean chloride values in excess of 50 ppm independent of method of analysis.

We conclude that the significance of our results on syrup flavor from the declined sugarbush maples is limited by the small number of syrups processed from saps collected from that group, in

comparison with the much larger data base from the other two groups of trees. However, the results clearly indicate the absorption of sodium and chloride from deicing salts into groundwater and maple sap of roadside trees, and the effect of combined sodium and chloride on the syrup flavor. Soil permeability may have been affected by the high levels. We recommend that sap from maples situated on roads where sodium deicing salts are used not be combined with sugarbush sap.

We acknowledge the North American Maple Syrup Council for their partial funding of the 1986 season.

REFERENCES

- Morselli, M.F., M.L. Whalen, and K.L. Baggett. 1985. Characteristics of maple syrup processed from bleach-treated sap. *J. Food Protection* 48:204-206.
- Newbanks, D., and T.A. Tattar. 1977. The relationship between electrical resistance and severity of decline in *Acer saccharum*. *Canadian J. Forestry Research* 7:469-475.
- Whalen, M.L., and M.F. Morselli. 1984. Sodium values in maple syrup. *Maple Syrup J.* 4(1):10-11.

300 & 500 GALLON PICK-UP TRUCK TANKS



- Low profile and center of gravity
- Specifically designed for use in pick-up trucks
- 36-month warranty.
- Fits most standard pick-up beds.

- Molded in gallonage markers.
- Lightweight
- Durable
- Material U.V. stabilized for greater field life

For more information,
Specifications and prices,
write or call

WRIGHTS SUGAR HOUSE

Little Chief Maple Products
28 Liberty St. (315) 245-1434
CAMDEN, NEW YORK 13316

Hold the Syrup!



Hussey Bacon™ Jugs are made expressly for holding fine syrup. From the sturdy gallon size to the 3.4 ounce Sampler, the entire family of jugs is molded from the best virgin resin and rigorously tested to ensure quality.

Syrup producers have relied on our quality for years, and customers love the appealing old fashioned color and texture.

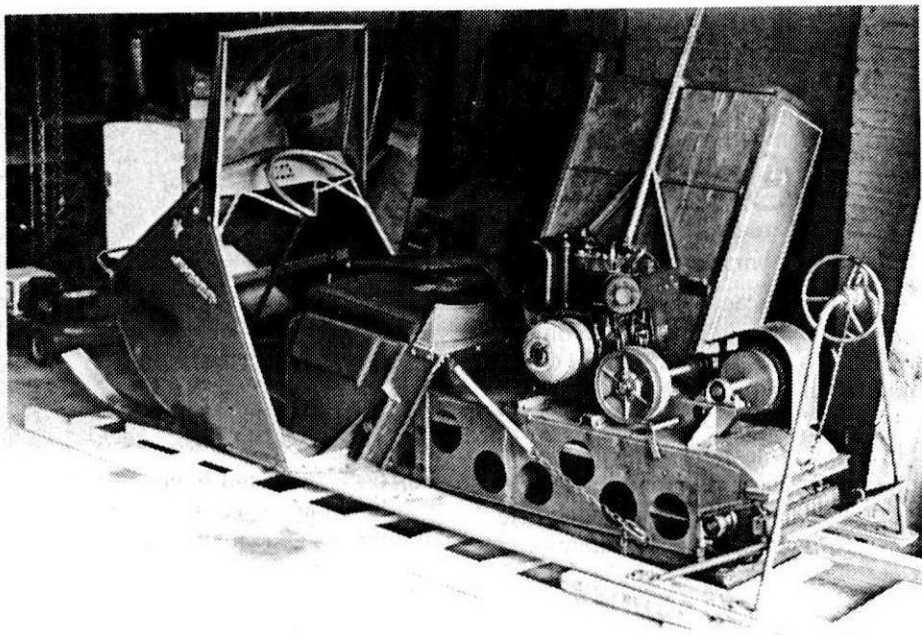
The famous Hussey Bacon™ Jugs are available in 8 oz., pint, quart, half-gallon, gallon and the 3.4 oz. Sampler. We also have embossed Maple Leaf Flasks in 14 oz. transparent plastic that shows off your finest syrup. Flasks may also be ordered in the traditional Hussey Bacon™ color. Custom printing and grade labels are available for all jugs, and we offer individual mailer cartons and multi-pack shippers.

The complete Hussey Bacon™ story is in our booklet, **Pure and Simple**. For your free copy, write us. And be sure to call us for the name of the dealer nearest you.



PLASTICS COMPANY, INC.
65 Middlesex Road
Tyngsboro, MA 01879
617-649-7345 (in MA)
800-451-8500 (Out of State)





YOUR AMERICAN MAPLE MUSEUM

by Fred Schneider

The Museum recently acquired a 1961 Polaris Snow Traveller which is now on display in the Lumber Camp Room. Donated by Robert M. Lamb of Bernhards Bay, NY, the machine is so large that it had to be dismantled to be moved to it's present location on the second floor.

It has a 10 horse power Kohler 4 cycle engine and a winch on the rear to raise the track. Because of it's weight, this was necessary when the operator got it stuck he could raise the track to help get going again.

Mr. Lamb was the Polaris distributor at one time and was instrumental in introducing these machines to Northern New York. Although it hasn't run in many years, with a little engine work it could once again travel the snowy fields and woods.

While they were used for recreational

purposes, there were some used for farm chores and in sugar bushes. With their wood cleated tracks, low speed and tremendous power, they could pull heavy sleighs and were even used to skid small logs. However, if it got stuck, it sometimes meant walking to get help to get going again.

Hugh Worden, Museum President, indicated that this is a popular exhibit and children love to sit on it and travel make believe trails.

We are grateful to Mr. Lamb for his kind donation and to the volunteers who worked to get it into the Museum.

EVAPORATORS & SUPPLIES

New & Used

**LAMB TUBING & FITTINGS
ORDER EARLY & SAVE**

ROGER C. SAGE
4449 SAGE ROAD
WARSAW, N. Y. 14569
Tel: 716-786-5684

MAPLE IS US

By Lynn Reynolds

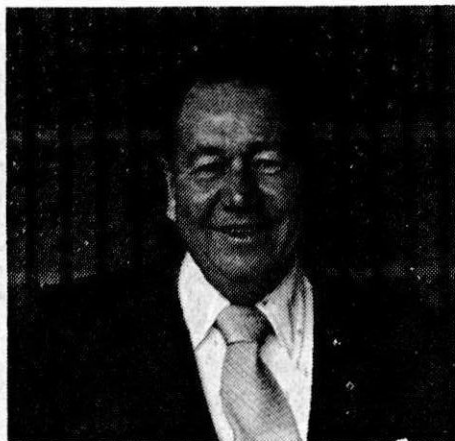
Maple is a Delicacy, Maple is Versatile, Maple is Necessary, Maple is Wonderful, Maple is an Art, Maple is a Craft, Maple is an Industry, Maple is about Trees, and Maple is Us.

However, unless something is done soon nationally and internationally to control the devastation of our maple Forests from atmospheric pollutants and the resulting "Maple Decline", THERE ISN'T GOING TO BE ANY MAPLE.

I serve you as a link between the Scientific Community and the Maple Producers with a very deep concern in my heart. My concern is for trees dying as a result of maple decline and its ultimate devastation to our industry. The destruction is already of critical proportions in many areas throughout the Eastern United States and Canada; and, is now visibly evident in the mid-west. I have seen the damage. I have experienced the decline. I have felt the loss. I am expressing to you my most sincere concerns for our industry.

A year ago, a survey was conducted by the Research Review Committee through the Maple Syrup Digest. The response was not huge nor was it necessarily scientific, but it was revealing. The following facts came from that survey:

- 1) Factors causing "Maple Decline" and "Acid Rain" were correlated directly and for all practical purposes, the causes were interchangeable in the eyes of the producer.
- 2) 74% indicated that acid rain was a cause of maple decline.



- 3) 64% indicated environmental pollution as the cause of acid rain and the resulting maple decline.
- 4) 75% reported maple decline in their maple sugar bushes.
- 5) 18 States and Provinces reported maple decline.
- 6) 88% urged research for determining causes of maple decline and acid rain damage.
- 7) 89% urged participation of the North American Maple Syrup Council to raise funds and to contribute to such research.

In the January-February issue of the International Wildlife Magazine, an article titled "What's Killing Canada's Sugar Maples" appeared. The article describes a maple syrup producer who had over 5000 maple trees with over 11,000 taps in 1979 and did not have enough trees left in 1984 to make any syrup. In four years, acid rain had destroyed the sugar bush. You can see the enormity of the natural resource loss, but please recognize the personal devastation and financial disaster.

The North American Maple Syrup Council, as a result of the survey, be-

cause of personal knowledge of damage, and other reports such as the disaster described above, took strong action last year by unanimously supporting and adopting a resolution to petition and support legislation to aid in the reduction of atmospheric pollution and deposition.

The Council also took a giant step by actually contributing funds to two proposed research projects which have already been completed and reported on. Bob and Florence Lamb deserve a warm thank you on behalf of the entire maple industry for contributing to these two projects and actually making them possible.

The Council has made a magnanimous effort to create and promote research which is designed and dedicated specifically to the maple syrup industry. The industry can be proud that the North American Maple Syrup Council is now charting its own course in what kind and how much research will be conducted for our own industry. We now know that State, Provincial, and Federal funds are going to be very limited, if not completely eliminated, and it is doubtful if adequate funding will ever be available for a specific small industry research project again. HOWEVER, we must never stop trying for such funding.

At Rutland Vermont, during the

recent annual convention of the North American Maple Syrup Council, the board of directors made the most important decision of our industry's life. This decision was, "That all container manufacturers be solicited to voluntarily collect a one cent per maple container manufactured and that these funds be turned over to the North American Maple Syrup Council for the express purpose of maple related research".

We care deeply about our maple syrup industry, our maple trees, our environment and our America. America the beautiful can remain beautiful with all of our help. Acid rain is a man-made environmental monster that we must tame. The Directors of the Council have provided an instrument to help tame this monster. In all sincerity, I would not understand why anyone, in or outside the maple industry, would not want water more pure to drink and the air cleaner to breathe. I urge all container manufacturers, all container representatives, all producers, and all other parties concerned, to support this resolution of the Council as I believe your funds will produce research which will help make our forests strong, healthy, and productive again.

What is good for maple is good for all of us. And remember, Maple is an industry, Maple is about Trees, and Maple is Us.

It's Christmas!

Wishing you
seasonal joy abloom
with love and peace.

The Reynolds Family
Aniwa, Wisconsin



1986 NORTH AMERICAN MAPLE SYRUP COUNCIL CONVENTION

By Lynn Reynolds
Secretary, NAMSC

The Vermont Maple Sugar Makers Association hosted the 27th annual meeting of the NAMSC on October 27 & 28, 1986, at The Centre, Holiday Inn, Rutland, Vermont.

John Kroll, President, NAMSC convened the meeting at 8:00 AM Monday morning. The business meeting included reports from all 13 member States and Provinces, 12 of the reporting States and Provinces seemed to have two things in common in that production for 1986 was extremely poor and that prices were significantly higher. The exception was Ohio where production was approximately normal. But low production was not about to dampen the spirits and enthusiasm for an enjoyable and productive convention.

Peter Garrett, Principal Forest Geneticist, NE Experiment Station, gave a presentation concerning the research they have completed to answer the following questions: 1) Do some trees respond differently and can that response be passed on through the seedlings in a way that we can capture and use the best trees?; and 2) Is the amount of ray tissue in trees of this species related to yields and would it be possible to use ray tissue as an indirect indicator of the potential yield of a tree?. Results have not yet been tabulated, but the answers to these questions should be forthcoming. Another interesting item in Peter's presentation is that New Zealand will start to tap planted sugar maples in approximately 15 years.

Dr. MariaFranca Morselli, UVM, gave a slide presentation and report on "Quality of Syrup Produced From Sap Collected From Declined Maples". No significant affect was noticed on the

quality of syrup except for roadside trees. The roadside tree syrup indicated an absorption of sodium and chloride from deicing salts and an "off flavor" effect on the syrup.

Mike Girard reported on the "Tax Free Status and Incorporation" progress of the NAMSC. All of the resolutions concerning the work the committee had done was passed and the go-ahead to proceed with both a "Tax Free Status" and "Incorporation" was given by the Council. Mike will proceed with both.

An address to the Council was presented by Cheryl Rezabek, Environmental Specialist and Jane Cummings, Forest Pathologist, Wisconsin Department of Natural Resources. Their talk was titled, "A History of Decline and Mortality of Sugar Maple in Wisconsin". Cheryl reported on the acceptable levels of atmospheric pollutants in Wisconsin by virtue of a recently passed law, and provided us with an interesting variety of studies concerning lake and forest acidity monitoring. Jane followed with an over-view of the history of maple decline in Wisconsin and some of the causes that have been determined over the years. Their presentation, though regional in perspective, certainly is international in scope.

The Maple Syrup Digest report was given by its editor, Lloyd Sipple. Lloyd was optimistic concerning the financial aspects of the Digest and provided us with insights of the operation of the NAMSC publication.

A Committee Report for "Fund Raising" produced probably the most important and far-reaching proposal upon which the Council has had to act in recent meetings. Frank Majszak presented a motion, "That all container manufacturers be solicited to voluntarily collect a one cent per maple container manufactured and that these funds be turned over to the NAMSC for the express purpose of maple related research

A TIME TO SAY

Thank You



*Season's Greetings and Best Wishes
for the New Year.*

sugarhill
MAPLE CONTAINERS

Dick, Janet & Sis

ch". Further motions produced the mechanics and administration necessary to perform these fund collections. All resolutions were passed.

The Research Review Committee presented a recommendation for contributing \$1,000.00 to a proposal submitted by the Wisconsin Department of Natural Resources for "Investigation of Sugar Maple Decline in Wisconsin". With the prospect of further funds becoming available, the committee recommended larger contributions to this project in the future. The Council approved the recommendations. Lynn Reynolds addressed the problems of maple decline and the funding requirements necessary for future research.

The location for the 1987 annual meeting was confirmed for Duluth, Minnesota on October 22-24, 1987. The 1988 meeting was set for New Hampshire and a tentative location was approved for Maine in 1989.

Ture Johnson presented information

on an acid rain study and led a discussion concerning "An Acid Rain Partnership". Hilton Farley and Ken Bascom joined the discussion describing the cooperation between New Hampshire and Ohio.

Close of the business meeting did not begin or complete the total agenda of the convention. The convention began Sunday evening before the first business session with a fantastic Vermont Welcome Program. A smorgasbord consisted of all Vermont products and was absolutely delicious. A delightful promotional video presentation by the Lockharts started the entertainment. This was followed by a most interesting slide presentation by Win Way, Extension Agronomist, U of Vermont. His theme was "Heritage & Heyday - the past may be our future". But the highlight of this evening was the dedication of the NAMSC Program Book to Everett Willard. His contributions to the maple industry are too numerous to count.

Technical presentations started with Lew Staats, Cornell U, providing an over-view of vacuum effect on sugar content and yields when applied to tubing, Gabriel Tucker, also of Cornell, updated us on genetics research concerning the sugar maple tree. Dr. Mariafranca Morselli, U of Vermont, told how syrup quality can be improved with proper use of in-line ultraviolet sap treatment.

Marketing presentations began with Everett Willard describing how the Vermont Department of Agriculture contributes to the maple industry in many ways, especially in marketing. Larry Myott, UVM Extension Agent, showed the value and necessity of pricing maple syrup to insure that a profit is made. The Executive Director of the IMSI, Paul Lamontagne, surveyed the worldwide markets for pure maple products. He gave us the status now and the large potential for the future of markets throughout the world.

THE SYRUP MAKER'S DREAM

 **SAP TUBING**

**SMALL BROS. & GRIMM
EVAPORATORS**

SAPSUCKER VACUUM PUMPS

**OSMONICS & MEMTEK
R. O. MACHINES**

KRESS & SUGARHILL JUGS

**DAVIES CANS and MANY
OTHER ITEMS TOO**

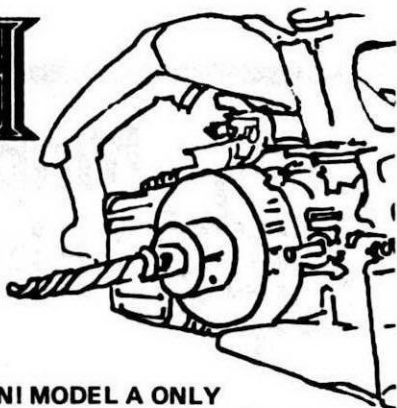
ORDER NOW AND SAVE!

**SCHAMBACH'S MAPLE SYRUP
EQUIPMENT & SUPPLIES**

7288 Hayes Hollow Road
West Falls, New York 14170
(716) 652-8189

EZ TACH

TAPPERS TO FIT MOST CHAIN SAWS



MODEL A

Fits most Homelites, Stihls, Poulan and McCulloch, etc. This model fits most saws with outboard clutch. Comes with one 7/16 left hand bradpoint bit and allen wrench. \$50 plus \$2 for shipping cost. Extra 7/16 bradpoint bits....\$10 each.

REMEMBER-BY USING A CHAIN SAW TO TAP WITH, YOU CAN CHOOSE YOUR OWN SPEED.

CAUTION! MODEL A ONLY

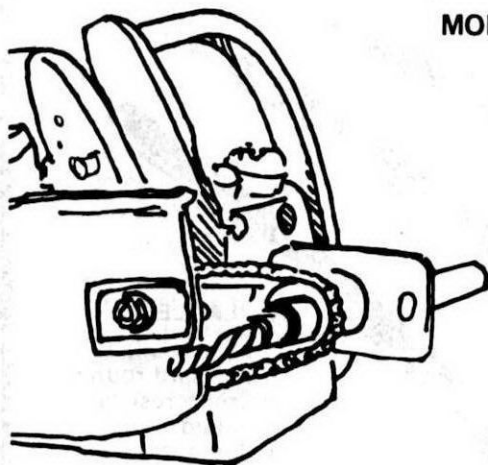
Do NOT run either model with excessive speed. Run your saw at a fast idle. Stop the taper from turning with your gloved left hand. Then place against the tree and let go. Rev the motor just enough to cut the hole. Hold with the gloved hand and remove.

IMPORTANT!

Make sure we have make, model and chain pitch. PLEASE!

MODEL B

This model fits most chain saws. Runs with a short piece of saw chain. Has a short fork in place of a saw bar with another sprocket out front. \$85 plus \$2 for shipping cost. Extra bradpoint bits, \$10 each. Comes with 7/16 left hand bradpoint bit. With the unit on the saw and the chain guard in place, hold the taper and pull the chain tight, then tighten the bar nuts.



1/4" 99 100 101

USE THESE SAMPLES TO CHECK CHAIN PITCH.



.325"

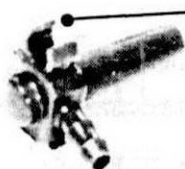


3/8"



Maple Experts Tubing

The creators of this new line of tubing have 25 years of experience in maple tubing. The system was developed in conjunction with Small Brothers to better serve the needs of sugarmakers.



Side clip for ease in rolling up your lines



Long tapered plug for secure fit

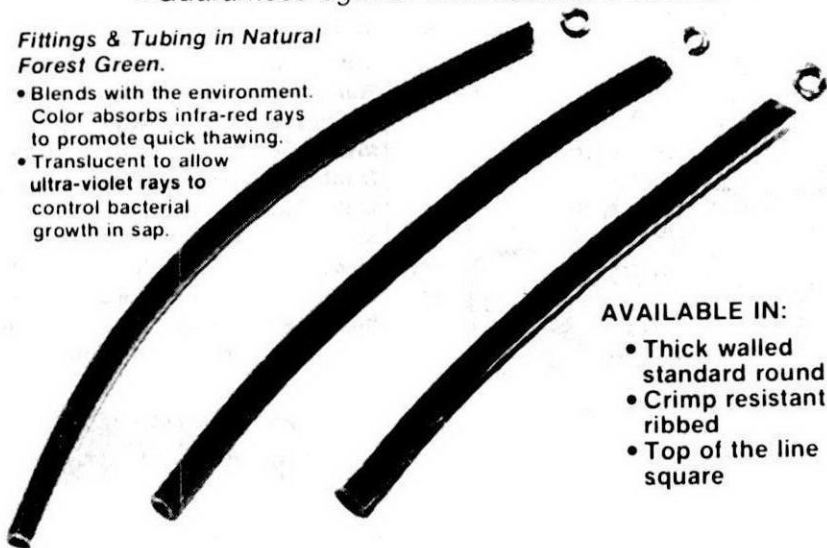
Nail hole for year round installations

Ultra sharp fitting ribs spaced for super grip

VACUUM TIGHT FITTINGS THAT ARE COMPATIBLE WITH OTHER BRANDS.
• *Guaranteed against manufacturer's defects* •

Fittings & Tubing in Natural Forest Green.

- Blends with the environment. Color absorbs infra-red rays to promote quick thawing.
- Translucent to allow ultra-violet rays to control bacterial growth in sap.



AVAILABLE IN:

- Thick walled standard round
- Crimp resistant ribbed
- Top of the line square

MAPLE EXPERTS SYSTEM

DISTRIBUTED BY

SMALL BROTHERS, U.S.A., INC.

FRANKLIN CO. AIRPORT • PO BOX 714 • SWANTON, VT 05488 • 802-868-3188

Vermont maple syrup producers provided presentations which covered subjects of environmental concerns, practical research, production methods, marketing, and profitability, along with local applications of all of these. Vermont maple syrup producer representatives included Doug Rose, Green Mountain Sugarhouse, Sam Cutting, Dakin Farm, Don Harlow, Harlow's Sugar House, and Dave Marvin, Butter-nut Mountain Farm. These presentations were well attended, were interesting, and were very useful for all producers.

The Rutland Holiday Inn seemed to go the extra mile in making everyone feel welcome and comfortable. The food was extraordinary and I am sure no one went home with that empty feeling. A great deal of thanks must be extended to this facility and its staff for their dedication to our convention.

A square dance was provided for entertainment on Monday evening. This event had other music for dancing and was a unique way to allow everyone to know each other, to relax, and begin to enjoy ourselves. It was a great success and seemed to set the tempo of a relaxed manner for the rest of the convention.

Two tours were conducted, one for the spouses who chose to go and the other for all of the general attendance. The spouses' tour was a trip to the Shelburne Museum, Shelburne, Vermont. The general attendance tour included visits to the Vermont Marble Exhibit, The Sugarhouse at the Vermont State Fair Grounds, and a visit to the Sugar & Spice Sugarhouse and Restaurant. Phil Moore was a most gracious and informative host.

The final night of the NAMSC convention was highlighted by the banquet. This was a gala affair meeting with approval from all in attendance. Welcomes were offered by Everett Willard, the MC, Bill Clark, President

VMSMA, and John Kroll, President NAMSC. Bob Lamb generously presented outstanding maple achievement awards and plaques to the following deserving individuals: Michael Girard, Simsbury, CT; Clarence Coons, Kempville, Ontario; A.R.C. Jones, McDonald College, Quebec; Bill Clark, Wells, VT; Arthur Merle, Attica, NY; Sherb Doubleday, Newport, VT; and Roger Sage, Warsaw, NY. Bob Lamb always seems to remember those that do so much and receive so little for their efforts. Thanks Bob. The guest speaker at the banquet was John Page, a retired Vermont Extension Agent. John not only provided a series of hilarious stories and jokes, but made all of us North American Maple Producers actually laugh at ourselves. He showed us that by working together with understanding, we really have eliminated most of the barriers that we had falsely created between each other in the past. And, by so doing, we really can call ourselves the North American Maple Syrup Council.

Wednesday, the International Maple Syrup Institute held their regularly scheduled annual meeting. When the IMSI and the NAMSC hold their meetings in connection with each other, it certainly seems as though the international cooperation is greatly enhanced within the maple syrup industry. Pledges of cooperation were exchanged between the two closely associated International Maple Organizations.

MAPLE LABELS

Required information on
Pressure Sensitive Labels for
SYRUP - CREAM & SUGAR

Use on Plastic, Metal or Glass.

For color Samples & Prices

WILLIAM L. CHALMER ASSOC.

150 Traverse Blvd.
Buffalo, N.Y. 14223

716/877-6016

The IMSI was convened by President Dave Marvin and the usual business portion of the agenda was conducted. Presentations included Dr. Richard Klein, U Vermont, discussing maple decline; Prof. A.R.C. Jones, McDonald U Quebec, "Mapleaid in Quebec"(Air Pollution in the Maple Industry - What are the alternatives); Mme Lise Robitaille Ministry of Energy, Mines and Resources Quebec, concerning maple dieback in Quebec; and Richard Ayres, U. S. Clean Air Coalition Washington, D.C., "The Outlook for Legislation in 1987". Another grand luncheon was served in connection with the IMSI meeting.

In conclusion, an energetic, successful effort on the part of the participants. A very successful and productive convention on the part of the North American Maple Syrup Council. It would be

impossible to thank all involved in this success, or to give proper credit where credit is due. However, The North American Maple Syrup Industry certainly wants to thank Bill Clark and the Vermont Sugar Makers Association, all of the Rutland County Maple Producers and their Spouses, the Extension Service Staff of the University of Vermont - Rutland, all who participated in the various portions of the programs and agendas, and especially Bridget Bowen, County Extension Agent - Rutland, who did so much for so many, to make this wonderful 27th annual convention of the North American Maple Syrup Council a huge success.

See all of you next year in Duluth, Minnesota for the 28th annual convention.

FIRTH MAPLE PRODUCTS

Stocking a full line of equipment needed by the maple producer

Buying all grades of bulk syrup

We provide advise on sugarhouse design and on the setup of complete tubing installation.

U.S. MAPLE TUBING

SMALL BROTHER EVAPORATORS

SAP BROTHERS REVERSE OSMOSIS

SUGARHILL JUGS

DAVIES CANS

Located 4 mi. west of Spartansburg Pa. on Rt. 77

Call: 814-654-7265 Sugarhouse
814-654-7338 Home

*it
boils down
to one
thing...*



MAPLE IN **METAL**

- ♣ Can Sizes - One Gallon to ½ Pint.
- ♣ Proper Capacity for Hot Pack Maple Syrup.
- ♣ Tested and Approved by State of Vermont, Dept. of Weights and Measures.
- ♣ Warehouse Stock in Barre, Vermont Cleveland, Ohio.
- ♣ Metal Provides Much Longer Shelf Life.
- ♣ No Oxygen or Moisture Vapor Transfer.
- ♣ No Cancer Causing Compounds Used.
- ♣ Don't Settle for Less - Maple Deserves the Best.

- FOR CANS
- CARTONS
- SHIPPERS
- STATE LABELS

See Your Dealer or Contact Us

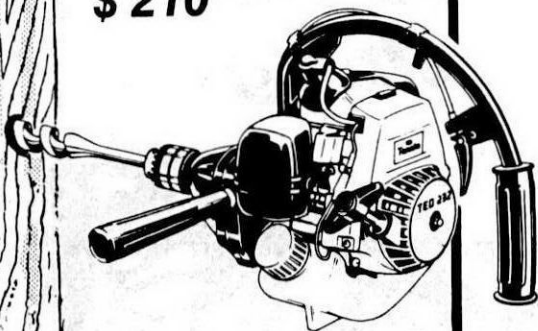
●
Dealer Inquiries Invited

MAPLE SUPPLIES COMPANY

West Second Street (P.O. Box 895)
Barre, Vermont 05641
(802) 479-1827

GAS-POWERED DRILL WORKS ANYWHERE.

\$ 210



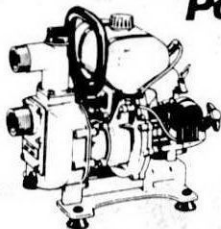
- **two-year limited warranty** on all parts and labor.
- easy-start transistorized electronic ignition with **five-year warranty**.
- heavy-duty reduction gearbox.
- heat-treated gears for a lifetime of service.

1" N.P.T.

\$ 184

1 1/2" N.P.T.

\$ 230



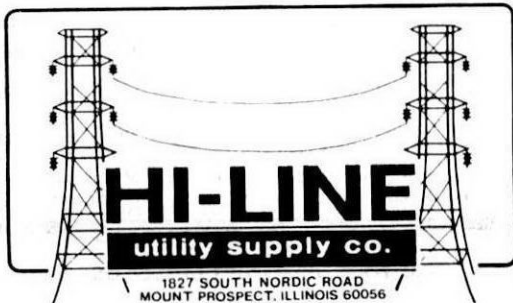
Portable Pumps

- **two-year limited warranty** on all parts and labor.
- easy-start transistorized electronic ignition with a **five-year warranty**.
- comes standard with a strainer and couplings.
- engine components engineered for exceptional durability.



Chainsaws

- **two-year limited warranty** on all parts and labor.
- **five-year warranty** on the transistorized electronic ignition.
- chain brake
- bucking spike
- anti-vibration system
- automatic, adjustable chain oiler
- engine components engineered for exceptional durability.



1827 SOUTH NORDIC ROAD
MOUNT PROSPECT, ILLINOIS 60056

800-323-6606

SAP

U.S.A.



CANADA

TRAP!

BERLINER PLASTICS—

INNOVATOR IN MAPLE SUPPLIES

Berliner Plastics has a full line of MAPLE PRODUCTS including the ORIGINAL FORM-ULA GREEN WEATHER RESISTANT GRADE TUBING/ORANGE LO-HEAT MAINLINE: PERMGLASSTM USDA Color Comparator and New 3 Year Guaranteed, \$15.00 Retail Kit NEWLY REDESIGNED SPOUT WISNAP LOK CAP/TEE/"Y", etc.!

TUBING SYSTEM DISTRIBUTORS:

CONNECTICUT:

Woodbury Sugarshed, Rt 47, Woodbury, CT
06798 203-263-3996

MAINE:

Bill Webber, Farmington, ME
04938 207-778-4234

MASSACHUSETTS:

Mt. Esther Maple Products, Whately, MA
01093 413-665-4848 or 665-4442
Al Hubbard, 373 North Street, Dalton, MA
01226 413-684-3418 or 634-8821
Paul Zononi, Zoar Road, Rowe, MA
01367 413-339-6622

MICHIGAN:

Terry DeLoughary, Bark River, MI
49807 906-466-2305
Lucille Lesh, 2985 Everette, Harrisville, MI
48740 517-724-5475
Ken Sleder, County Rd. 611, Mayfield, MI
49666 616-263-5895

NEW YORK:

Erie County: Brian Fahey, 6161 Genesee Rd
Lancaster, NY 14086 716-759-2962
St. Lawrence Co.: Jim Woodrow, Rte. 2
Hermon, NY 13652 315-347-2395
Otsego/Del. Co.: Fred Knapp, Fly Creek, NY
15337 607-547-2732
Oneida Co.: Bill Von Matt, Box 630, W
Thomas Rd, Rome, NY 13440 315-336-5768
Ch. & Cal. Co.: Gary Peterson RD6 Box 192
Jamestown, NY 14701 716-665-3378
Lewis/Jeff. Co.: Warren Allen, RD, Castor-
land, NY 13620 315-346-6706
Gen. & Wyo. Co.: Dave Graziplene, North
Java, NY 14113 716-457-9640
Sul. & Ora. Co.: Vern Meyer, Long Eddy, NY
12760 914-887-4108
Col & Grne. Co.: Scotty Burdick, 335 East
Rd., Stephentown, NY 12168 518-733-5591
Albany/Rensselaer Co.: Kim Lincoln,
Columbia Hill Farm, RD 2, Averill Park, NY
12018 518-283-2896
Clinton Co.: Barry Branon, 54 Cogan Ave.
Plattsburgh, NY 12901 518-563-1063
T.J. Hobbs, Ellensburg Center,
NY 518-594-3869
Chen. & Mad. Co.: Kold Run Maple Products
(G. Cushman), Box 103, Plymouth, NY
13832 607-334-8688

OHIO:

John Martin, State Rte. 96, Bucyrus, OH
44820 419-562-4861
Sanford Hartman, Box 140, Cty. RD 19,
Millersburg, OH 44654 216-674-1453

PENNSYLVANIA:

John Deets, RD 5, Titusville, PA
16354 814-676-1097
J. Curtis Dom, Box 56, Wellersburg, PA
15564 814-324-4414

WISCONSIN:

John Roth, Roth's Sugar Bush, Route 1,
Cadott, WI 54727 715-289-3665

VERMONT/NEW HAMPSHIRE:

(B. Shelton, Distribution Coordinator)
Ora. & Wash. Co.: Bill Gehr, RD 2, Barre, VT
05641 802-479-2891

Wash. Co.: Rick Lloyd, RR 2, Box 237, Ran-
dolph, VT 05060 802-728-3729

Caledonia Co.: Bucky Shelton, Sugarwoods
Farm, RFD 2, Glover, VT
05839 802-525-3718

Essex/Ori.: Bucky Shelton, Sugarwoods
Farm, RFD 2, Glover, VT
05839 802-525-3718

Lam. Co.: Bucky Shelton, Sugarwoods Farm,
RFD 2, Glover, VT 05839 802-525-3718

Fra. Co.: New England Container, 18 Depot
St. Swanton, VT 05488 802-868-3171

Addison Co.: Bob & Deb's Sugarhouse, RD 1
Brandon VT 05733 802-247-5566

Gil Goodyear, Bristol, Vt. 802-453-4825
Ruford Brace, Huntington, VT
05462 802-434-2382

Chittenden Co.: (Open)

Rutland R.C.M.P.: Ed Merrow, RD, Danby, VT
05739 802-293-5378

Windham Co.: Chas. Lockerby, Brockway
Mills Rd., Springfield, VT
05156 802-885-4807

Gary Rapanotti, P.O. Box 828, Springfield
VT 05156 802-885-4250

Windsor Co.: Chip Kendall, S. Woodstock, VT
05071 802-457-1473

Dave Harlow, RFD, Ludlow, VT
05149 802-228-7151

Benn. Co.: Doc Gaines, RD 2, Box 60 N.
Bennington, VT 05257 518-686-5505

Bliff Wyman, Route 115, Jefferson, NH
03584 603-586-4587

Dean Wilber, NH, Maple Lane Products,
RFD 10, Box 415 Concord, NH
03301 603-224-0820

CANADA:

Don Atkinson, RR 1, Barrie, Ontario
L4M 4YB 705-728-5848

Ken McDonald, 38 Hillside Ave., Truro, Nova
Scotia 902-895-1770

Jacques Morin, Valcourt,
Quebec 514-761-6458

BERLINER PLASTICS • Mike Berliner, Pres.
1973 LAKE AVE. • LAKE LUZERNE, NY 12846 • (518) 696-2478

NOTICE

On October 28, 1986 in Rutland, Vermont, The Board of Directors, North America Maple Syrup Council unanimously passed the following resolution:

"That all container manufacturers be solicited to voluntarily collect a one cent (1¢) per maple container manufactured and that these funds be turned over to the North American Maple Syrup Council for the express purpose of maple related research.

In those cases where manufacturers are not willing to collect the one cent (1¢) per container, then a representative of the Council will contact all distributors and packers and establish a means to receive that one cent (1¢) per container on all containers not otherwise covered.

This proposal is to have a two year trial period.

Be it further resolved that the Board of Directors of the North American Maple Syrup Council hereby establish, effective November 1, 1986, the following procedures for the administration of research contributions of one cent (1¢) per container on all containers which are manufactured for, shipped to, or utilized by, the Pure Maple Syrup Industry of North America, for the purpose of packing, storing, or selling pure maple syrup. The contribution of one cent (1¢) per container shall apply to all types and materials of containers including, but not limited to metal, glass, plastic, or any other material which is or can be used to contain Pure Maple Syrup.

The following procedures will be implemented for administration of this one cent (1¢) per container which will be exclusively utilized for research dedicated to and deemed necessary for, the welfare of the Pure Maple Syrup Industry of North America; and, as

recommended by the Research Review Committee and as approved by the Directors of the North American Maple Syrup Council:

- 1) The administration shall be a function of the Treasurer of the Council. The Treasurer shall pursue, establish and implement the fund raising system for the purpose of research contributions as has been approved by the Directors of the Council.
- 2) The Treasurer shall provide confidentiality as to any sales figures, shipment volumes, total sales volumes, or individual shipments, which are shipped and invoiced by any Container Manufacturer or its designated Representatives.
- 3) The Treasurer shall be allowed moderate expenses for postage, telephone, and other miscellaneous expenses for the express purpose of pursuing, establishing, and implementing this funding program. All expenses shall be audited and approved annually or at any time as deemed necessary by the Directors of the Council.

LAMOTHE'S SUGAR HOUSE



Small Brothers
Lightning Evaporators
Sap Brother
Reverse Osmosis Machine
Lamb Natural Flow Tubing
U.S. Maple Tubing
Tanaka Power Tappers
and Pumps



Member of
MSPAC

**Maple Syrup-Maple Sugar Candies
Maple Syrup Equipment**

Rob & Jean Lamothe 89 Stone Road-RFD #3
(203) 582-6135 Burlington, CT 06013

IN STOCK:

LAMB TUBING SUPPLIES

Electric Tappers

GORDON H. GOWEN

Tamarack Farm

Alstead, N.H. 03602 835-6531

- 4) The Treasurer shall establish legal and legitimate financial accounts in the name of the North American Maple Syrup Council Research Fund.
- 5) Disbursement of research funds shall be the joint responsibility of the President and the Treasurer of the Council.
- 6) The Treasurer shall coordinate and inform the Research Fund Committee and the Board of Directors of actions, recommendations, results, changes, or problems.
- 7) The Treasurer shall present an annual status report at the Annual Convention of the North American Maple Syrup Council.

**BRODIES
SUGAR BUSH**

**SMALL BROTHERS
EVAPORATORS**

SAP BROS. & OSMONICS R.O.

MAPLE EXPERT TUBING

U.S. MAPLE TUBING

SAPSUCKER VACUUM PUMPS

BACON & SUGARHILL JUGS

NEW & USED EQUIPMENT

FULL LINE OF SUPPLIES

**OTSEGO COUNTY RT 34
SOUTH VALLEY, N.Y.**

TEL. (607) 264-3225

WESTFORD, N.Y. 13488

8) The Treasurer is responsible to, and shall provide any or all information to the Directors of the Council as they deem necessary, with the exception of individual financial information of Container Manufacturers, their Representatives, or Maple Container Purchasers.

9) The Treasurer shall accept any contributions or donations from any maple syrup related or other source.

10) Any contribution will be accepted at any time; however, for budgeting purposes, it is requested that all funds collected on containers be received by the Treasurer on or before July 1 of each year."

Contributions shall be in the name of and forwarded to The North American Maple Syrup Council Research Fund, c/o Lynn H. Reynolds, Treasurer, Route 2, Box 326 Hortonville, Wisconsin 54944.

RESEARCH FUND COMMITTEE

1) Lynn H. Reynolds, Treasurer NAMSC, Route 2, Box 326, Hortonville, WI 54944 Phone 414-779-6672

2) Frank Majszak, Director NAMSC, Route 2, 3493 Baatz Road, Maple City, MI 49664 Phone 616-228-5835

3) Andre LaPrade, Maple Supplies Company, West Second Street, P.O. Box 895 Barre, Vermont 05641 Phone 802-479-1827

4) Juan Reynolds, Reynolds Sugar Bush, Inc., Route 1, Aniwa, WI 54408, Phone 715-449-2057

5) Paul Richards, Richards Maple Products, 545 Water Street, Chardon, OH 44021 Phone 216-286-4160

6) Roger Sage, NY State Maple Producers Assoc., 4449 Sage Road, Warsaw, NY 14569 Phone 716-786-5684

7) Steve Selby, Small Evaporator Company, C.P. 160, 423, Rue Principale, Dunham, Quebec, Canada JOE IMO Phone 514-295-2451

8) Ronald Shaw, Director NAMSC, Route 1, Hawkestone, Ontario, Canada L3V 6HI Phone 705-325-6878

ARCHIE'S SUGARBUSH

Dear Mr. Editor:

My wife, she sez, "Honest Archie," sometimes she calls me truthful Archie, "why don't you tell that nice Mr. Editor man about the drouth?"

Well, it wuz like this: The year before the Great Blizzard the atmosphere musta been storing up moisture so it could dump it all at once. It never rained the whole year.

It quit raining in April and when the leaves came out on the maples in May they sucked up all the water there wuz and left everything bone dry. Since it didn't rain all summer we had plenty of sun to make a crop of sugar. In fact, too much. The leaves made sugar till about August when they dried up and fell off. Still no rain all fall. By then, it wuz so dry the bullheads had to climb up the river banks onto the flats every morning and lick the dew off the grass just to get a drink.

Well, we tapped as usual the next February. Have to start early to get all 80,000 tapped. We didn't realize we'd have such a high sugar content. We found we had to bore the holes up on quite a slant so the crystals of sugar could roll out into the buckets. Just no moisture at all.

This wuz great. Didn't have to boil it at all. Just mix water with it from our 600 ft. deep well we had to drill the fall before. Everything went fine 'till the Food and Drug boys stopped in to find out how we could make syrup with no steam coming out of the sap house. They said adding water to sugar was adulteration and wouldn't let us sell it

Since we didn't have any hay to feed our horses because of the drouth, we saved the brush from cutting sap wood and put some syrup on it. They ate it pretty good. Thought it was coarse alfalfa, but we never did find out how it

SHOW OFF YOUR FANCY SYRUP IN JUGS BOTTLES JARS BEST IN GLASS

we also carry many
types of plastic containers
including the kress jugs.

Send for complete list.

M. R. CARY CORPORATION
P.O. Box 122
Salina Station
Syracuse, N. Y. 13208

would work out. About the time they got used to eating it, they died.

Your Truthful friend
Archie



- Small Brothers Evaporators
- R.O. Machines
- "Maple Experts" Year round Tubing
- Kress Jugs-colors available
- Lamb Tubing-Syrup Cans
- Glass Bottles and Cream Jars
- Bacon and Sugarhill Jugs
- Sugar Molds and Steel Drums
- Good Used Equipment Available

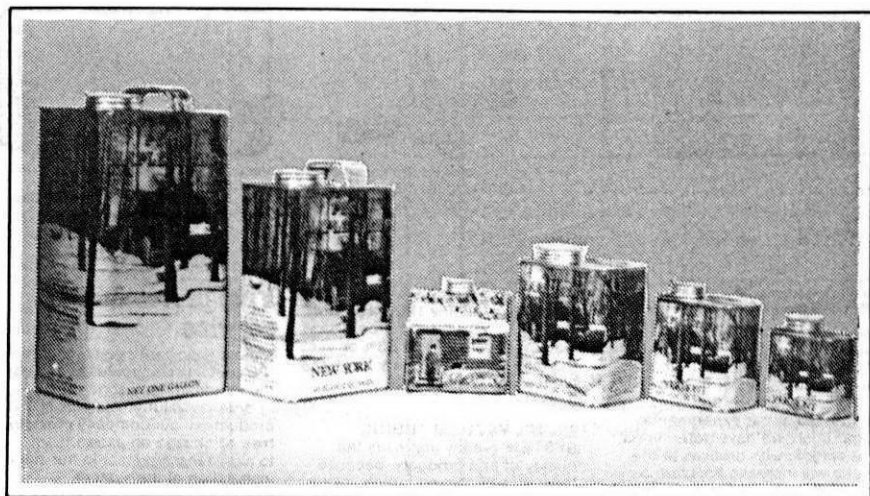
Increase production 65% with the New Piggyback Pan and your present evaporator—it really works!
Advice and Service on everything we sell. - Free Catalogs available.
CALL TODAY FOR A LOW PRICE QUOTE.

Victor E. Putnam Telephone:
Maple Hill Farms 518-234-4858
R. D.#1 or
Cobleskill, NY 12043 518-234-4726

*** Good Looking**

*** Good Price**

*** Good Quality**



We are the only manufacturer of a true Maple Syrup can.
Made in Maple Country — We would appreciate your support.
Thank you

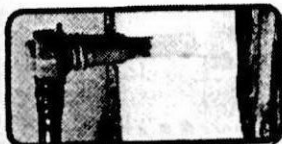
New England Container Co.

18 Depot Street
Swanton, Vermont 05488
(802) 868-3171



Vacuum tubing system ...for maple sap gathering

the system which can double the yield
of your sugar bush



The sap is taken from the tree with use of a 5/16" threaded spigot. The sap then flows through 5/16" tubing to the main lines.



A double fork is used to connect the 5/16" secondary lines to the main line.



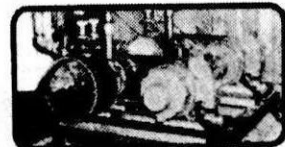
The main lines convey the sap to the sugar house.



In the sugar house, the sap flows into a vacuum release tank, which is connected to a pressure regulating tank.



The T-Plug is designed to hold the pressure, allowing the system to be easily cleaned and flushed in the bush.



Vacuum pumps are used to create a suction in the release tank. This vacuum action causes the sap to flow through the tubing to the sugar house at increased flow.

Exclusive features

New threaded spigot, equipped with grooves at the intake, serves to draw the sap from the new growth layers of the tree. As a result of numerous tests conducted at our experimental sugar bush, we have determined that spigots with grooves at the intake will increase flow rate by 20 to 30% over ungrooved spigots.

New protector cap, is required to keep the outside of the spout clean during the off season.

New hardness controlled 5/16" tubing, reinforced with lateral ribbing which prevents its collapse, such as when sharply bent around a tree or used under high vacuum pressure. It will also withstand high pressure needed during cleaning.

Advantages in comparison to buckets

The IPL VACUUM TUBING SYSTEM can easily double the

yield of your sugar bush.

Once installed, the **IPL VACUUM TUBING SYSTEM** requires little maintenance and only 33% of the manpower necessary for the old method of collection in buckets.

The **IPL VACUUM TUBING SYSTEM** greatly improves the quality of end products, because the sap is conveyed rapidly inside the tubing to the sugar house, and is protected from deterioration caused by weather and handling.

Free professional service

A most important point is that the **IPL specialist estimates at no cost** the needs of each sugar bush. In order to insure maximum production, our company provides **free of charge** an expert team to assist the producer in the initial installation of the system.

It is absolutely essential that a company provides this service to the producer.

Call or write for the IPL dealer nearest you.

Name _____

Address _____

Zip code _____

Tel. (_____) _____
area code

Number of taps _____



HEAD OFFICE
PROVINCIAL INDUSTRIES LTD
140 COMMERCIALE, ST-DAMIEEN
BELLECHASSE, QUE. GOR 2Y0
TEL (418) 789-2880
TELEX 051-3973

USA BRANCH
SCHAMBACH'S MAPLE
SYRUP EQUIP. &
SUPPLIES
7288 HAYES HOLLOW RD
WEST FALLS, NY
716/652-8189

1987

Sappin' Season

IS JUST
AROUND THE CORNER

ARE YOU READY?

ORDER NOW & SAVE

New and Used Equipment

**Evaporators
Grimm-Small Bros.**

Tubing

Jugs, Cans, etc.

**Sugar bags, Boxes
Molds, Cream Jars &
Labels**

**We're buying & selling
bulk Maple Syrup**

*Season's Greetings
to all customers*

SMADA FARMS

Rt. 41
Greene, N.Y. 13778
607-656-4058

CLASSIFIED

FOR SALE: Memtec R-75 RO; 5' x 13 Leader evaporator, complete, 5 x 10 Waterloo flue pan; 5' S.B. woodsaver; 42 x 12' Leader; 2 x 4 and 2 x 5 gas finishers and other used equipment. Call 607-656-4058 for details. SMADA FARMS on Route 41, Greene, NY 13778.

U.S. MAPLE TUBING DEALERS WANTED. From PA & Western NY contact Troy Firth 814-654-7338; From N of Rt. 90 in NY contact David Mayotte 802-849-6810; From S of Rt. 90 in NY contact Bruce Bascom 603-835-6361.

AMERICAN WOOD SPLITTER, 8hp, 2 stage pump, 40" stroke, very good condition. \$950.00. 6 x 10 tin flue pan and preheater, \$1700.00. 6 x 7 SS flue pan, \$600.00. 6 x 4 syrup pan, \$550.00. Base stack & pipe for 6' arch, \$150.00. Bainbridge, N.Y. (607) 967-7228.

Complete Vermont Evaporator pan with self supporting arch, 6' x 16' \$2500.00, Filter tank, 3' x 1 1/2' x 2' \$75.00, 630 Buckets, lids and spiles \$1,000.00. We are located in southwestern Pa. in Somerset, Co. near the Maryland border. (814)662-4234

WANTED: Large quantities of SAP. We will buy your sap or rent your trees, picked up or delivered. Price incentive paid for volume, location, length of contract. We will cover most parts of Montgomery, Saratoga, Fulton, Herkimer, Otsego, and Schoharie counties. FOR SALE: 6000 gal. vacuum tank \$2100.00. 4200 gal. tanker SS, \$1300.00 Adirondack Maple Co., Box 8, Fonda, NY 12068. (518) 853-4022

FOR SALE: 3 x 10 Leader evaporator. 12 years old. Complete and ready to use. \$1800. Eric Hamerstrom, Roscoe, NY 12776 (607) 363-2345

FOR SALE: 2 used Grim 1,575 gallon round bottom storage tanks. \$395. each. Moore's Sugar Bush Shop-RD#1, Medusa, New York 12120. (518) 239-4843.

NATURAL & L.P. GAS BURNERS

ELMER WINTER

11171 Sission Highway, Route 75
North Collins, NY 14111
716-337-3937 716-337-3682
ORDER BY DEC. 1, 1986

Leader Evaporator

Now the Proud Manufacturers of



Gary Gaudette (left) of Leader and Bill Coombs chat beside the SPRINGTECH RO Machine at the NAMSC Annual Meeting in Rutland, Vermont.

Leader has been manufacturing evaporators and quality equipment since 1888. They pride themselves on being innovative and up to date. And that's probably the reason they took over manufacturing the SPRINGTECH Reverse Osmosis Machine from Bill Coombs. They

had worked with Bill for many years and knew he had a superior product that had been time tested in the field.

The folks at Leader are proud of the SPRINGTECH acquisition and are especially pleased that Bill will continue to work closely with them to make the SPRINGTECH RO a continued success.

Complete Suppliers of Maple Syrup Equipment

FOR MORE DETAILS CONTACT YOUR
LOCAL REPRESENTATIVE OR CALL

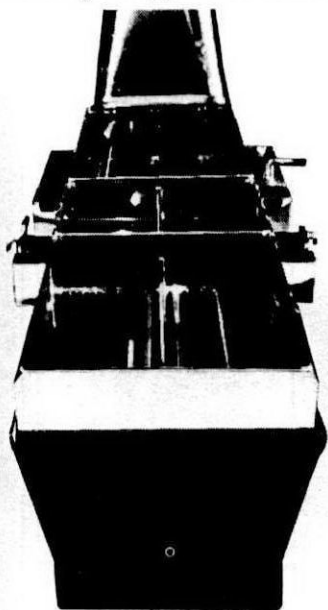
Bruce or Randy at

802/524-3931; 524-4966

LEADER EVAPORATOR CO., INC.
25 STOWELL ST.,
ST. ALBANS, VERMONT 05478

ator Co., Inc.

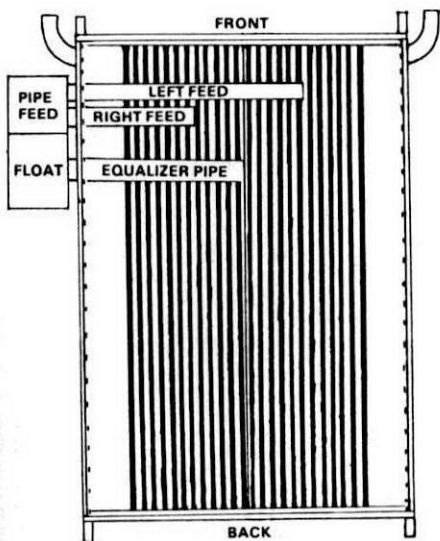
the Springtech R.O. Machine



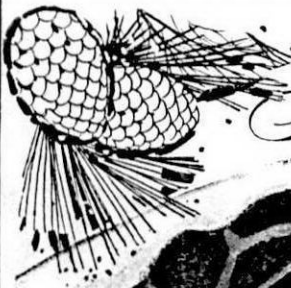
VERMONT EVAPORATOR



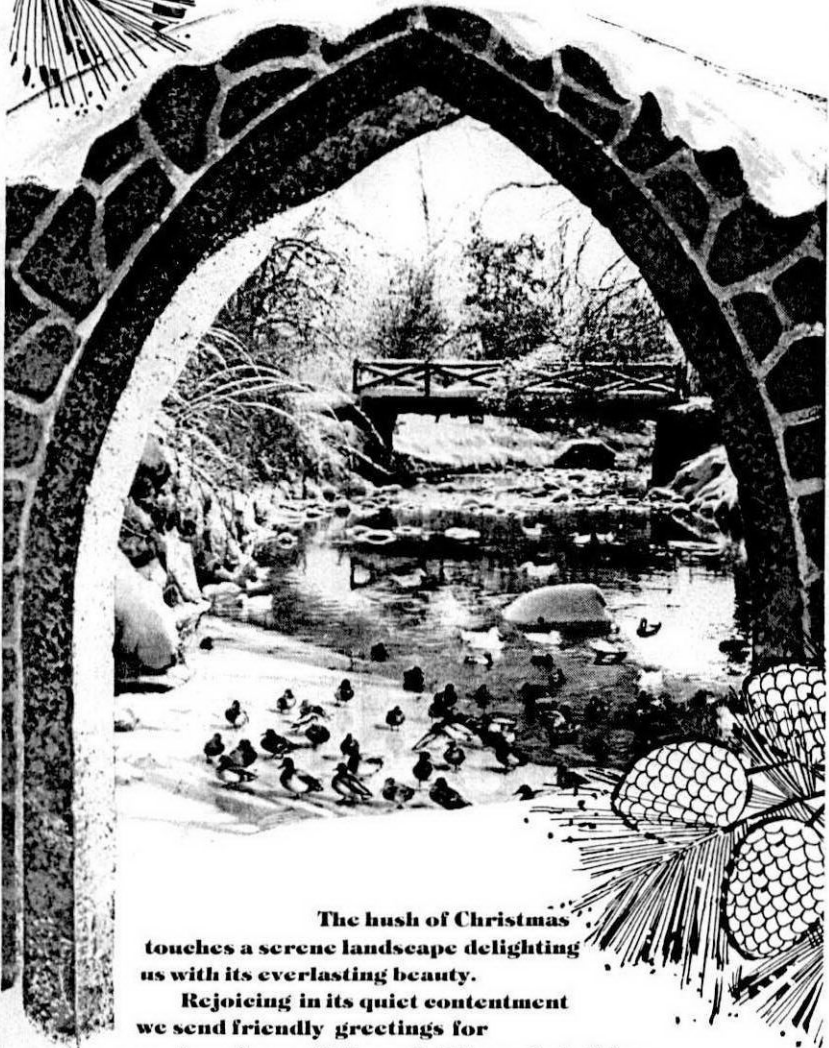
LEADER EVAPORATOR



Incorporated with every new King Evaporator is our new regulating system. This system makes changing sides much easier. The flow of sap is reversed by moving the plug in the regulator to the opposite pipe. This will eliminate any danger of being burnt by hot steam.



Peace on Earth...



**The hush of Christmas
touches a serene landscape delighting
us with its everlasting beauty.
Rejoicing in its quiet contentment
we send friendly greetings for
your happiness all through this magic holiday.**

Bob & Florence Lamb