Maple Syrup Digest

VOL. 16A, NO. 1 FEBRUARY 2004

Maple Syrup Digest
PO Box 240
Canterbury, NH 03224

Return Service Requested

'Tis the Season

No, not that season, we're talking sugaring season!

Many of you are making last minute preparations for the sugaring season and we wanted to remind you of the improvements made to the line of Bacon Jugs. The new improved closure system is much easier to apply and creates a secure tamper evident seal, which consumers appreciate.

Let us know if you're interested in your own private label jugs or if one of our state, all state or season jugs will meet you needs.

THE BACON JUG COMPANY

The Bacon Jug Company
(a division of Gamber Container, Inc.)
46 N. Littleton Rd
Littleton, NH 03561
(603) 444-1050
(603)444-6659 fax
www.mclures.com
info@mclures.com

LEADER
EVAPORATOR CO.

Tap Into It!!!

25 Stowell Street - St. Albans, VT 05478 - 802-524-4966 - Fax: 527-0144

The REVOLUTION Welded Set of Pans

Reverse the Flow without changing sides.

Tig Welded 20ga. Bright S/S

NO MESSY PAN CHANGES

All S/S Fittings, and Valves

Made in the USA by the industries leader in quality, service, and customer satisfaction.

Leader Evaporator: Blazing the trail of the evaporator revolution!

www.LeaderEvaporator.com

MAPLE SYRUP DIGEST

Official publication of the NORTH AMERICAN MAPLE SYRUP COUNCIL

DIRECTORY

Published and Edited by:
ROY S. HUTCHINSON
P.O. BOX 240
CANTERBURY, NH 03224
Phone: 603-783-4468
Fax: 603-783-9953
Email: mapledigest@tds.net

Published four times a year
(Feb., June, Oct., Dec.)
Postage paid at:
Canterbury, NH 03224

FIELD EDITORS

Conn. . . . . . John Trumbull—**860-379-7312**
84 Maillet Lane, New Hartford, CT 06057

Indiana . . . .Steve Deatline—**765-874-2170**
7773 S 100 East, Lynn, IN 47355

Maine . . . . . Al Bolduc—**207-265-2600**
1100 Middle Rd., New Portland, ME 04961

Mass. . . . . . James Graves—**413-625-9066**
R.D. 1, Shelburne Falls MA 01370

Michigan . . . . .Cathi Bates—**231-845-6902**
2800 N. Peterson Rd., Ludington, MI 49431

Minnesota . . . . . Carl Vogt—612-425-3742
10304 94th Ave. No. Maple Grove, MN 55369

N.H. . . . .Barbara Lassonde—**603-224-2452**
79 Fisherville Road, Concord, NH 03303

N.S. . . . . . Maxwell Spicer—**902-392-2823**
Spencers Island, NS, Canada B0M 1S0

N.Y. . . . . Mrs. Marion Wells—**518-766-2375**
550 Hoags Crs. Road, Nassau, NY 12123

Ohio . . . . . Tom Hoffman—**330-659-3061**
P.O. Box 326, Bath, OH 44210

Ontario . . . . . Bill Robinson—**519-529-7857**
RR 2, Auburn, Ontario, Canada N0M 1E0

Pennsylvania . . . .Jim Tice—**570-549-5257**
427 Tice Road, Mainesburg, PA 16932

Wisconsin . . .Roland Jorns—**920-868-3161**
4518 Highway T, Egg Harbor, WI 54209

SUBSCRIPTION RATES

United States	1 year — $5.00
Canada, **US funds:**	1 year — $7.00

NORTH AMERICAN MAPLE SYRUP COUNCIL DIRECTORY OF OFFICERS

ROGER SAGE, President
4449 Sage Road, Warsaw, NY 14569
585-786-5684

ELIZABETH COLLINS, Vice President
969 Manvel Street, St. Paul, MN 55114
651-645-1598

JOE POLAK, Secretary-Treasurer
W 1450 Hwy. C, Merrill, WI 54452
715-536-7251

DIRECTORS

Raymond Kasulaitis 860-379-8787
69 Goose Green Rd., Barkhamsted, CT 06063
Chris Rahe. 812-986-2493
6735 Mudd Road, Poland, IN 47868
Robert S. Smith. 207-474-3380
24 Bennett Ave., Skowhegan, ME 04976
Tom McCrumm 413-628-3268
755 Watson-Spruce Cmr Rd., Ashfield MA 01330
Jean Maday 517-645-7305
570E. Main, Box 245, Potterville, MI 48876
Terry Stanley 320-943-2580
2981 No. Lake Miltona, Miltona, MN 56354
Roger St.-Amand 506-273-2179
500 California Sett Road,
California Sett., NB E7J 2N3
Hank Peterson. 603-432-8427
28 Peabody ROW, Londonderry, NH 03053
Avard Bentley 902-548-2973
12 Valley Rd.,Westchester, N.S. B0M 2A0
Dick Schorr 513-489-3184
12041 Snider Rd., Cincinnati, OH 45249
Bill Robinson 519-529-7857
RR2, South St., Auburn, Ont. N0M 1E0
Burton Kimball 814-739-2720
9691 Kimball Rd., Wattsburg, PA 16442
Luc Lussier 819-362-3241
2100 St. Laurent, Plessisville, Que. G6L 2Y8
Douglas Rose 802-259-3016
Rte. 100 N, Box 820, Ludlow VT 05149
Lyle Stockwell. 715-594-3632
N 3870 730th St., Ellsworth, WI 54011

DIGEST ADVERTISING RATES

2 Page Spread	$450.00
Full Page	240.00
1/2 Page Vert. or Horz.	135.00
Column Inch	19.00
Classified	70c per word

COPY DEADLINE: First of the month preceding date of issue

COVER: Robinson's Sugar House, Auburn, Ontario, Canada.

GREETINGS FROM YOUR PRESIDENT

After attending the various maple schools, it is time to go to the sugar bush and put to use all the new techniques we have learned. Having talked to people around the maple regions, the amount of snow seems to vary from none to three feet.

When the sugar bush and the processing equipment has been made ready for a new season, we need to think about being prepared for the various maple Sundays, weekends, and open houses. These are proving to be a tremendous promotional idea. It is the best way in the world to introduce people to maple. Once people learn about all the hard work that goes into making maple syrup and other maple products, they are more likely to buy. Our ultimate goals are to sell more maple and keep people coming back.

Do not forget to encourage your container suppliers to contribute to the N.A.M.S.C. research fund. The more funds we have available, the more research can be done to improve our quality and efficiency.

I wish you all a great maple season, hoping that quality and flavor are better than the unusual flavors that appeared last year.

Don't forget to mark your calendars for the NAMSC and IMSI meetings in addition to the New York Maple Tour at the Roaring Brook Ranch in Lake George, NY October 17-20, 2004. Phone 1-800-882-7665. E-mail: www.roaring brook ranch.com

Sincerely,

Roger C. Sage
sagemapl@rjcom.net

IMSI NEWS

by Larry Myott,
Executive Secretary

Larry Myott Returns

I wish to thank every one for the cards and phone calls after my health problem last October. There were many and came from a wide area, as many of you know I had a stroke in early October, just after returning from three weeks of intense maple marketing at the Big E in W. Springfield, Massachusetts. I am doing better now, but not up to snuff in any sense of the imagination. On January 30 I will be officially retired from UVM Extension. I am back to serving the IMSI as Executive Secretary, I expect to become much more active as my health improves.

At the Nova Scotia meeting it was announced that Steve Selby and I will be inducted into the American Maple Museum Hall of Fame, I don't feel old enough to be a museum piece. After the months of October, November and December, perhaps I am. Steve Selby is the founder and past president of Small Brothers, Inc. formerly manufacturers of maple equipment. This Quebec native is a past president of the IMSI who now lives in Swanton, Vermont operating several businesses. Congratulations Steve, I look forward to us becoming antiques in the museum, come May 15 in Croghan, NY. For more information on the American Maple Museum, call or write: (315) 346-1107, American Maple Museum, P.O. Box 81, Croghan, NY 13327.

Congrats to the Nova Scotia Volunteers, even though I missed the 2003 Nova Scotia annual meeting, I got the word that the Nova Scotia hosts were at their best. They certainly know how to make friends and family feel at home, Nova Scotia is a great place to visit, my wife Diane and I felt very bad that we could not attend this year.

Quebec Federation Adopts Maple Syrup Quota

In an effort to stifle the growing surplus in Quebec, the Federation of Quebec Maple Syrup Producers, on October 28, passed a resolution approving the new quota system for production. The proposal for the quota system had been on the table for many months and had recently been approved by the government agency that would regulate such a system, the Régie.

Producers had to choose two production years, including 2003, to establish their base production volume. So what does that mean to the upcoming production season. As far as I can tell it has meant little to no expansion in Quebec production. They had sold about 70% of their 2003 production, but 34 million pounds of previous years syrup is still in storage.

In the United States, the largest producing state, Vermont, has seen their surplus shrink to non-existent. By the end of the holiday shopping season, very little syrup was in storage and producers were looking to expand their production in 2004. In one small area of Franklin County, it is expected that production will expand by some 50,000 taps.

(For information on the IMSI, call or write Larry Myott, IMSI Executive Secretary, 5014 Route Seven, Ferrisburgh, VT 05456. Email: Larry.Myott@uvm.edu)

INDIANA NEWS

By Steve Deatline

Eighty-plus members of the Indiana Maple Syrup Association met at Fowler Park for their annual winter meeting on December 6, 2003. IMSA meetings are moved about the state from year to year, so that the same people don't have to travel a long way each year. This gives members an opportunity to see different sugarbushes each year. On Friday and Saturday evenings, several attendees took advantage of the Fowler Park Christmas Walk, which added to the holiday feeling of the meeting.

Early Saturday morning, attendees had the opportunity to visit Prairie Creek Park, where there is a somewhat-rustic sugarhouse and sugaring operation for educational purposes. Forestry consultant, Keith Ruble, discussed with those in attendance, the care and nurture of this particular sugarbush and also how some of these practices could be put to use in the commercial sugarbushes as well as hobby-sized operations.

Randy Heiligmann, OSU maple expert, shared with those in attendance, in detail, how Ohio met and dealt with the dark cloud of inspections and requirements which are now hanging over our heads. By looking at the Ohio experience, Indiana producers hope to be able to avoid some of the bad experiences and to make this a positive step for maple syrup production in Indiana. Randy spoke in the morning on the Ohio experience, answering questions as they came up; then held a question and answer session in the afternoon. There were many questions, as one would expect, because there has been, for the most part, no enforcement of regulations up to this point. However, the general attitude seemed to be one of co-operation with the authorities in trying to iron out regulations that will satisfy the Indiana Health Department without putting too much burden on the producers.

Two representatives of the Indiana Department of Health were in attendance, to observe and learn about maple production. They answered some questions but emphasized that they were there to listen and learn. Following Dr. Heiligmann's presentation, Chris Rahe, IMSA representative to the North American Maple Syrup Council meeting, showed slides and spoke about his trip. Carolyn Rahe also showed slides and discussed some of the interesting places they visited while in Nova Scotia.

There were five equipment dealers present; Maple Syrup Supplies Inc from Potterville, MI, Sugarbush Supplies from Mason MI, Maple Hollow from Merrill, WI, Henry Grape from Merrill, WI and Mike Ross from Rudyard, MI. Each of the dealers spoke about new products.

Two new directors were elected during the meeting: Lowell Williams from Bedford and Don Jewell from Otterbein. Officers for the next year are President, Garry Sink; Vice President, Chris Rahe; Secretary, Larry Yoder; Treasurer, Kenny Shipley and public relations, Steve Deatline. Next year's meeting will be in the Central district. Keith Ruble presented Dr. Randy Heiligmann with a maple-leaf bowl in appreciation of his service to Indiana maple producers over the years. Ruble made the bowl from wood which came from Joe Pollack's sugarbush.

North American Maple Syrup Council, Inc.
RESEARCH FUND

If we only had a penny for every syrup container filled…

A penny doesn't sound like much but as more of us contribute, the easier it will get to satisfy the ongoing need to fund maple research.

Regardless of whether we package only a few gallons or several thousand gallons of syrup a year, the future of the maple industry depends on continued research in every aspect of production, quality control, packaging and marketing.

Your voluntary donation of "a penny for every syrup container you fill" helps us provide seed money for research. The Council annually reviews research proposals and distributes funding to qualified universities and institutions for maple research projects that benefit everyone, industry wide, in the US and Canada.

Donations can be made through your plastic, glass or metal container suppliers or you may send your contributions direct to the NAMSC Research fund.

Every penny helps

Our thanks to everyone who actively support this important program and we invite those not yet participating, to contribute a "penny per container" to the future of maple.

For more information please contact:

Richard P. Norman, Chairman, 387 County Road, Woodstock, CT 06281
Phone 860 974-1235, Email: r.norman@snet.net
Michael A. Girard, Treasurer, 352 Firetown Road, Simsbury, CT 06070
Phone 860 658-5790, Email: mgirard@simscroft.com

The NAMSC-Research Fund is a non-profit, volunteer managed committee of the North American Maple Syrup Council, Inc. (2/04)

NEWS FROM CONNECTICUT

By John Trumbull

The annual meeting of the Connecticut Association was held on November 8, 2003. The University of Connecticut Extension Center in Haddam, CT hosted the meeting.

The minutes from last years annual meeting were read and accepted by the membership. These minutes reflected the long discussions that resulted in the Connecticut Producers Manual and the Ad Hoc Committee to develop the Connecticut Maple Syrup Act. The Treasurer's report was read and accepted. A very good note shows our financial position as very healthy. We have close to 200 paid members in our association.

The nominating committee presented a slate of officers for the upcoming year. A motion was made from the floor to nominate Ron Wenzel of Hebron as president. A paper ballot vote found Ron elected as the new President of MSPAC. Brian Atwood of New Hartford was elected Vice-President. Ken Sherrick from Middleton was elected Treasurer and Chuck Drake from Windsor was elected Secretary. Dave Rhinelander from Andover and Bill Proulx from Ashford were elected to the Board of Directors from the Eastern region and Ray Leonard from Canton and Kay Carol from Litchfield were elected to the Board from the Western Region.

Ron Wenzel gave a brief report on the National meeting held in Nova Scotia in October. Rich Norman reported on the Research Fund activity and gave more overview of the National meeting. A motion was made and accepted to keep the annual dues at $20.00 for all memberships.

The next order of business was a motion by Mike Girard of Simsbury to support the Connecticut Maple Act as it was written. This Act was published in our local newsletter and everyone had a chance to read it before the meeting.

Paul Hughes, the chair of the Ad Hoc Committee gave a presentation touching all aspects of the Act as its final draft was written. Much discussion followed, both pro and con. Feelings and opinions were discussed at length.

A vote on the motion to support the Connecticut Maple Syrup Act was defeated by the membership. The Board of Directors will keep the information for future reference. Paul Hughes and his committee were thanked for their time and effort by Ron Wenzel and the Board of Directors.

The last part of the meeting was a presentation by Jim Cameron, Vermont Department of Agriculture. He touched on all aspects of maple production, stressing cleanliness at every stop. Jim also demonstrated grading of syrup using the newest grading lists.

A HISTORY OF TAPS AND TREE SIZE

Brian Chabot
Cornell University

The current "traditional" tap hole number guidelines involve adding a tap for each 5 inch dbh above 10 inches dbh. "Conservative" guidelines involve placing one tap in trees 12 inch dbh and a second tap in trees more than 18 inches dbh. The reasons behind the traditional guidelines are not stated in the North American Maple Syrup Producers Manual, but the conservative guidelines are suggested when there is concern for tree health. The purpose of this article is discover where these guidelines came from and to re-establish the reasons why they exist.

The earliest publication I have found that has tapping guidelines is a 1928 publication from Cornell (Collingwood, Cope, and Rasmussen). I have not found guidelines in earlier publications, though I don't have access to all publication that may have been produced.

These guidelines read: "Trees less than 9 or 10 inches in diameter at breast height are not worth tapping. Such small trees do not have enough leaves to provide a satisfactory amount of sugar in the sap. Trees more than 12 inches in diameter at breast height may have two tap holes with as many buckets, and will yield more than twice as much sap as

when only one hole is made. To put a third hole in trees ranging up to 20 inches does not materially increase the yield. Trees larger than 20 inches in diameter can usually carry three buckets, and very large trees four buckets. To hang more buckets on each tree seldom produces enough extra sap to warrant the extra expenditure. Furthermore, each tap hole increases the possibility of decay. The practice of tapping the tree in two places close together in order to collect the sap from the two in one bucket is not recommended."

Crockett and Hitchcock (1930) give the following guideline for Vermont: "Usually the rule is one bucket to the tree, but on the large vigorous trees two are sometimes hung."

The "traditional" tap hole number guideline was introduced by Collingwood et al (1935) in a revision of their 1928 publication. The text from their publication is: "The general practice followed by many of the best sirup producers in the State is to be recommended as giving a maximum yield of sap from year to year without at the same time seriously limiting the health and vigor of the trees.

Trees 10 to 15 inches in diameter at breast height, 1 bucket.

Trees 16 to 20 inches in diameter at breast height, 2 buckets.

Trees 21 to 25 inches in diameter at breast height, 3 buckets.

Trees 26 inches and over in diameter at breast height, 4 buckets.

Additional buckets hung above the numbers indicated do not materially

increase the yield and at the same time the increased number of tap holes means a greater area of dead sap wood."

There is no research cited to support these guidelines. The guidelines appear to be arbitrary and intended to achieve a balance between sap yield and limiting damage to sap wood. Note the gaps between 15-16 inches, 20-21 inches, etc.

Winch and Morrow (1978) slightly modified the Collingwood and Cope guidelines by recommending tapping intervals from 10-16.9 inch dbh for 1 tap, 17-23.9 for two, and 24-29.9 for 3. This removed the gap noted above and moved the traditional guidelines in the direction of the conservative guidelines.

Guidelines in Murphey (1937) from Penn State are: "There is no doubt that a tree 10 inches in diameter at breast height will support one bucket, a 12-inch tree two buckets, a 14-inch tree three buckets and a 16-inch tree four buckets. A larger tree with a greater bark surface and perimeter will support more buckets, but it must be realized that these larger trees do not increase in diameter as rapidly as the smaller ones and hence do not produce a fresh layer of wood over the old tap holes nearly so soon as the smaller tree." Earlier in that section there are statements "Tapping may be carried out directly over old holes just as soon as the tree has added two or more inches of sapwood over them. In thrifty trees this growth may be attained within 10 years." There are no references to

research that supports any of these statements.

A 1932 publication (McIntyre), also from Penn State, describes a comprehensive series of experiments dealing with sap production in maples. No tapping guidelines were described. However, they surveyed tapping in one county in PA and found one tap used on trees between 10-16 inches, two taps 17-23 inches, three taps, 24-33 inches and 4 taps on trees 34-46 inches. Data from experiments on sap yield from increasing numbers of taps on trees of different diameters were provided. Sap yield from one tap increased as tree diameter increased. Sap yield also increased as the number of taps increased. The sap yield from increasing the number of taps was significant, but not directly proportional to the number of taps. McIntyre did not make note that the yield was not directly proportional to the number of taps, but the data show this and later research by Morrow and others found this also. McIntyre provided information on the internal damage caused by tapping and calculated the number of years required to tap completely around trees of different diameters using different numbers of taps each year. With larger number of taps even reasonably large trees could be girdled with taps in as little as 10-12 years. He didn't use this information to propose guidelines, but Murphey was listed as a reviewer of McIntyre (1932) so must have considered these results in the guidelines he described.

McIntyre 1932 is listed in the bibliography of Collingwood 1935 and likely played a role in the introduction of the revised Cornell guidelines. The Murphey paper has guidelines considerably less conservative than the 1935 Cornell guidelines, while the McIntyre paper shows that Pennsylvania producers were tapping more conservatively than any of these guidelines.

The "conservative guidelines" were introduced by Buzzell (1987). No formal research is cited to support these guidelines, though they were based on much experience and observation on the internal damage resulting from tapping (Buzzell, personal communication). Their introduction is not connected in the article to concerns for tree health. Buzzell was concerned with staining from tapping and reduction of usable surface area of the tree by previous tapping. He recommended calculating "usable circumference" by subtracting areas that had previously been tapped. He also implied that his guidelines were based on a minimum annual radial growth of 1/8 inch. If radial growth is less than 1/8 inch, he recommended using fewer taps per circumference. Buzzell's concern for usable circumference would reduce the tap number to below the current conservative guidelines.

So what started with concern about having enough trunk surface area to tap over an extended period was followed with concern about tap hole interaction and now includes concerns with tree health. I have found no research relating tapping to tree health. There also is no research supporting any particular guidelines.

With smaller spiles producing less staining, it would be useful to recalculate tapping guidelines following

McIntyre's and Buzzell's approach. Also, data on tree growth would be useful in calculating recovery periods for re-tapping the same area.

REFERENCES

Buzzell, G.L. 1987. Tapping guidelines. Maple Syrup Digest 27:12-18

Collingwood, G.A., J.A. Cope, and M.P. Rasumssen. 1928. The Production of Maple Sirup and Sugar in New York. Cornell Extension Bull. 167:1-

Collingwood, G.A. and J.A. Cope. 1935. Maple Sugar and Sirup. Cornell Extension Bulletin 397, Cornell University

Crockett, W.H. and J.A. Hitchcock. 1930. Vermont Maple Sugar and Syrup. Bull Vermont Dept. of Agric. 38, 45 pp.

Murphey, F.T. 1937. The Maple Syrup Crop. Extension Circular 186, The Pennsylvania State College

McIntyre, A.C. 1932. The Maple Products Industry of Pennsylvania. Bulletin 280, School of Agriculture and Experiment Station, The Pennsylvania State College.

Morrow, R.R. 1963. Influence of number and depth of tap holes on maple sap flow. Bulletin 982, Cornell University Agricultural Experiment Station.

Koelling, M.R. and R.B. Heiligmann. 1996. North American Maple Syrup Producers Manual. Bulletin 856, Ohio State University Extension

Winch, F.E. Jr. and R. Morrow. 1978. Production of Maple Sirup and Other Maple Products. Cornell Univ. Info. Bull. 95

WE REAP THE HARVEST OF ALMOST-SPRING

By Sue Wunder

You rarely hear of the sap that got away — of that time-honored ritual (boiling sap down to syrup) gone awry. No; you're told that real maple syrup carries more than its weight in sweetness, much of it in the making.

It's work, but it's done out of doors with winter at your back and spring just beyond your fingertips. To watch that first drop of clear sweet water fall with a clarion ping into the pail is to believe in it all — trillium, bloodroot, redbuds in bloom, and the whole, leafy extravaganza of summer.

And it it's not quite warm enough to relax into the vision, there's the boiling fire to feed and hover over. As any enthusiast will tell you, turning sap to syrup is an idyllic way to spend a few days. To be honest, our spiles don't always tap utopia. We live on the southern edge of real maple syrup territory. The freezing nights and sunny days needed to get the sap rising don't come in a reliable pattern, but in fits and starts, punctuated by gray drizzles and balmy evenings. The trees hardly know what to do with themselves this time of year, so how are we to know when best to tap them?

One year it's late january, another it's a Valentine's chore. For the past five years it's been too warm to bother. This year we're at it later than ever. As quirky as our timing are our skills. After 10 years, we're still finessing our technique for collecting and condens-

ing 150 gallons of sap from a grove of sugar maples into a few gallons of syrup.

All of you in real mapling country know in your bones how to do things, but as I've said, we live on the fringes — both of climate and native expertise. We made the discovery early on that cows will drain a good thing when they taste it. Our dairy herd took quick fancy to the bovine-friendly buckets of sweet water hanging conveniently head high about the maple grove. After we fenced them out of the grove, they seemed to bear no grudge, but they unwittingly cost us another harvest one year, when we left the boiling to do the evening milking.

The fire was low, steady, and well-banked. We thought we had plenty of sap water in the big rectangular pan to prevent its burning clear away. Yet when we returned that night, flashlights bobbing hopefully, the liquid had all bubbled off, leaving a scorched black residue. At least we'd had syrup for a brief period, even if we weren't there to see it. And we did have a full tank of milk to show for the day.

Racoons have invaded our buckets; we've lost collected sap water to rains, to souring warm spells and to sloshing spills from the tank our horses pulled from tree to tree on a sleigh one snowy year. It's almost a miracle when weather and events combine in just the right way to reward our efforts with that amber liquid so widely prized and understandably pricey in stores. When we beat the odds and come up with quality syrup from our own back woodlot, it goes straight to our heads.

This year Charlie and I hovered over our first boiling all day long, leaving

only in turns to check the cows, fetch the mail, or collect and saw more wood to feed the fire. As some 60 gallons of sap water finally condensed to two, we jumped into action, donning thick gloves and pulling the pan out from the fire to rest on a stump we had planned for the pouring-off.

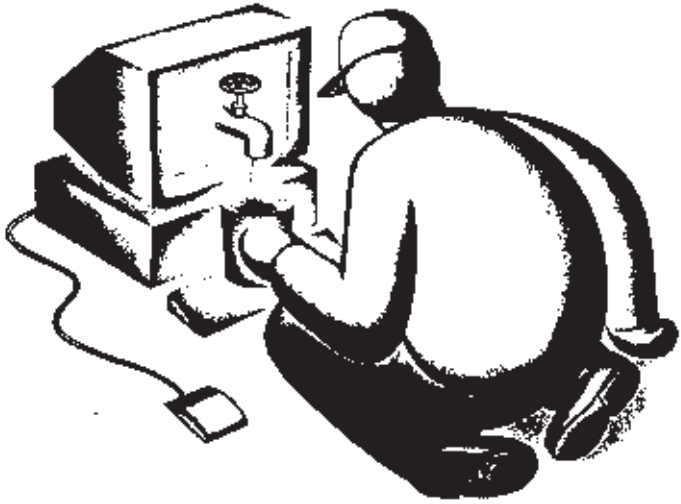
Charlie folded a piece of soft green felt over a sieve and opened the pans bottom spigot. The filter neatly caught the twigs and leaves that had drifted into the pan, as the most perfect syrup we'd ever made flowed into a two-gallon bucket. When it was half full we closed the spigot to pour what we had into Mason jars, feeling rather smug.

As the third jar filled, Charlie's eyes narrowed and his brow knitted. The viscosity was spot on, but the syrup had an unmistakably green cast to it. We eyed each other, then took a bead on that filter cloth. Grabbing a white T-shirt, we replaced the culpable green felt and reopened the spigot.

Our first few pints of syrup aren't our best, but we'd learned another caution and had paid excellent homage to St. Patrick. Tomorrow we have another 100 gallons to boil and perhaps a new lesson to learn. But today, as the sap dripped down the spiles, I wasn't thinking of failure.

The sandhill cranes warbled over head and bickering male cardinals flitted brightly about the grove. A tiny pine siskin put in a brief appearance on his way north. I feel near enough to spring to claim sweet success whatever happens tomorrow.

Tap into the Internet with Bascom Maple Farms!



Introducing www.BascomMaple.com

Purchase new & used maple equipment on our secure website

FEBRUARY SPECIALS

2' x 6' King oil fired insulated evaporator w/istainless pans, (lead free) stainless hood, preheater and oil burner	$2,900.00
2 1/2' x 8' King evaporator w/stainless pans	$2,900.00
2 1/2' x 8' Leader evaporator w/stainless pans	$2,800.00
3' x 8' Grimm evaporator w/stainless pans stainless hood, preheater and new stack	$3,900.00
40" x 10' New set of raised flue "Revolution" pans	$6,750.00
Airablo tubing washer machine w/5HP electric motor	$1,750.00
1050 Gallon galvanized round bottom storage tank (rusty)	$ 275.00
Universal Massport Major vacuum pump w/3HP electric motor	$ 650.00
10" Dominion & Grimm cast iron filter press	$1,200.00
Lapierre cylinder filter press	$ 700.00
Small Brothers 35 gal. gas bottler w/4 valves, adj. stand & shelf	$ 800.00
Springtech RO machine, 1000 GPH	$8,500.00

BASCOM MAPLE FARMS, INC.

56 SUGAR HOUSE RD., ALSTEAD, NH 03602

Tel. 603-835-6361 • Fax 603-835-2455

sales@BascomMaple.com

DATE SET FOR MAPLE HALL OF FAME INDUCTION CEREMONY

Another great day is planned for the opening of the North American Maple Museum in Croghan, New York. The event will take place the third Saturday on May 15, 2004.

As part of this opening ceremony will be the induction or two of our maple people who have worked tirelessly for the industry into the American Maple Hall of Fame. This year Larry Myott of Ferrisburg, Vermont and Steve Selby of Swanton, Vermont will be inducted. There will also be a great pancake breakfast, Maple Queen contest and the gathering of maple people from all over the US and Canada to make this an event not to be missed. You can also visit the wonderful, historical displays in the museum and enjoy the chicken barbeque at noon.

Russ Davenport,
Induction Committee Chairman

CULTURAL METHODS FOR ESTABLISHING SUGAR MAPLE IN FIELD PLANTINGS

Lewis J. Staats and Colin A. Campbell

ABSTRACT. A sugar maple plantation designed to examine specific cultural practices for efficient planting and enhancement of seedling survival and growth was established in 1997 at Cornell University's Uihlein Sugar Maple Research/Extension Field Station near Lake Placid, New York. For 6 growing seasons after planting, the performance of specific treatments including tree shelter designs, weed control mats, and combinations of treatments for seedling survival and growth were measured. Treatments that were installed in combination with weed control mats provided increased seedling survival and enhanced growth increment during the study period.

BACKGROUND

The planting of sugar maples (Acer saccharum Marsh.) has been noted for well over two hundred years and can be evidenced by large, stately sugar maples growing in rows along rural roadsides throughout New England (Yawney 1982). Roadside maples, resulting from a significant planting effort over one hundred years ago, remain a common sight in southern Ontario (Chapeskie 1995). The interest for establishing plantations of sugar maple on abandoned agricultural land, for replacement of sugar maples lost to highway right-of-way expansion, and to enhance stewardship of privately owned land has remained high among rural landowners and maple producers (Teel and Lassoie 1991; Krasny et al. 2001). The merits of planting sugar maple on a good growing site offer a potential for development of a grove of vigorous maples with the choice for an accessible location. Seedlings growing on a good site and properly maintained could reach a diameter of 10 in. (25.4 cm) in 20 to 25 years, much less than the time required for a similar diameter to be achieved in an unmanaged forest setting (Koelling and Heiligmann 1996).

However, the development of sugar maple plantings has met with mixed success and the maintenance required to encourage high seedling survival and desirable growth may be intensive (Chapeskie 1995). Although the species occurs on a variety of sites, the sites with fertile, moist, well-drained soils offer the most growth potential (Godman et al. 1990) and the most return of labor and investment. But even under very good site conditions, the risks of animal damage, environmental damage, and disease can be encountered. An analysis by Winch in 1937 concluded the most significant factors contributing to poor success of hardwood plantings were planting on sites not suitable for hardwoods, competition from field vegetation, and animal damage.

An application designed to increase seedling survival and performance was the introduction of the tree shelter. Developed in Great Britain in 1979 and now used throughout the United States, the use of tree shelters is intended to offer protection for seedlings combined with a potential for enhanced growth

(Robison 1991). Tree shelters are generally manufactured in cylindrical or square form about 4 to 6 in. (10.2 - 15.2 cm) in diameter and ranging from 2 to 5 ft (0.6 - 1.5 m) in height. The shelter is generally installed with plastic ties attached to a wood support or anchor stake driven into the ground. Tree shelters are designed to protect seedlings against damage from mice, rabbits, or other rodents during the early years of establishment, and against feeding and mechanical damage from deer or grazing animals if applied in pasture settings. In addition, other benefits for seedlings stated by distributors for the design and use of tree shelters are reduced moisture stress, increased carbon dioxide levels within the shelter, and reduced drying and mechanical damage caused by wind. Tree shelters are currently available in various designs including seamed and seamless, solid, perforated, and mesh texture. To reduce the competition of field vegetation in the root zones of seedlings, weed mats can be installed in combination with tree shelter applications. Weed mats are generally about 3 ft (0.9 m) square manufactured of black plastic material with a hole or slot in the center for the seedling and held in place at each corner of the mat by metal staples inserted in the ground.

THE STUDY SITE

The study took place at the Cornell University, Uihlein Sugar Maple Research/Extension Field Station (USMFS) near Lake Placid, New York. The

specific study site consists of Berkshire sandy loam moderately stony with a southeasterly aspect and slope of about 4 percent at an elevation of about 1980 ft (604 m). The site consists of abandoned agricultural land selected in large part because of its similarity to sites available and preferred by landowners and maple producers for establishing sugar maple plantings. Tree species on the site consisted of scattered small diameter pin cherry (Prunus pensylvanica), black cherry (Prunus serotina), and red spruce (Picea rubens) along with coarse grasses (Poaceae) and blueberries (Vaccinium corymbosum). The presence of several wildlife species that offered potential feeding or browsing on sugar maple (Acer saccharum) seedlings included white-tailed deer (Odocoileus virginianus), snowshoe hare (Lepus americanus), and field mice (Peromyscus leucopus) .

METHODS

Site preparation during the fall of 1996 included removal of shrubs and small trees including stumps followed with surface preparation with tractor and harrow, and removal of surface stones.

In preparation for the study, sugar maple seedlings (a bulk collection of seed derived from clonal orchard selections) were propagated in the USMFS greenhouse for two years in 3 in. (7.6 cm) diameter by 9 in. (22.9 cm) long containers. Seedlings averaged 14.5 inches (36.8 cm) in height at the time of planting in May 1997.

The experimental design consisted of randomized complete block design with 6 tree row plots (multiple-tree contiguous) of 9 treatments in 4 replications (54 seedlings per replication x 4 replications for 216 seedlings total). Seedlings were planted at a spacing of 6.6 ft (2 m) within rows with 8.2 ft (2.5 m) between rows. Treatments (Figure 1) were comprised of solid tree shelters 4 ft (1.2 m) in height, "hybrid" tree shelters 4 ft (1.2 m) in height (half solid material consistent with 4 ft (1.2 m) tree shelters with upper half of plastic mesh), tree mats[1]consisting of black porous fabric 3 ft (0.9 m) square for control of weed competition, fertilizer (10-10-10 granular) applied in a 3 ft (0.9 m) diameter circle around the seedling the first year of the study at the rate of 4 oz (280 ml), combinations of each, and a control. The materials for treatments were installed at the time of planting following the manufacturer's installation guidelines. For the control (a seedling without the effects of shelters, mats, etc. to serve as a comparison against seedlings established with study materials) and in treatments where no commercial tree shelter was used, a cylinder of ½ inch (1.3 cm) wire mesh 8 in. (20.3 cm) in diameter by 4 ft (1.2 m) in height was placed for protection against risk of damage or loss of seedlings by wildlife feeding and/or browsing for the duration of the study.

At the time of establishment in 1997 and following each growing season for 6 consecutive years, height of the seedlings in the study was measured to the nearest 0.5 cm to determine annual growth increment. Also noted at the time

[1]Vispore tree mats and tree shelters were obtained from Treessentials Company. No endorsement of product by Cornell University is intended or implied.

FIGURE 1. Cultural study with applied treatments.

of annual measurements was seedling mortality, presence of dieback on seedlings, material failure of treatments (tree shelter or weed mat breakdown or damage), and insect and/or wildlife presence and/or damage.

RESULTS AND DISCUSSION

Survival

Survival after one growing season was nearly 100 percent (mortality of 2 seedlings) for the entire study. After 6 growing seasons, overall survival was 74 percent (mortality 56 seedlings). Seedling survival by treatment is presented in Table 1.

Table 1. Seedling survival by treatment/year.

Percent survival of sugar maple seedlings by treatments						
Treatment	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Tree shelter	100	100	100	88	54	42
Hybrid shelter	100	100	92	75	50	42
Weed mat	100	100	100	100	100	96
Fertilizer	100	100	96	96	92	88
Tree shelter x mat	100	100	100	100	83	67
Tree shelter x mat x fert	100	100	100	96	79	75
Hybrid shelter x mat	100	100	100	100	92	83
Hybrid shelter x mat x fert	100	96	92	92	88	83
Control	92	92	92	92	92	92

Evidence of Dieback

The occurrence of dieback of terminal shoots, branches, and twigs observed at the time of annual measurements was recorded. The incidence of dieback or loss of annual shoot growth as a result of dieback was taken into consideration for determining annual seasonal growth.

Growth

Seedlings averaged 14.5 in. (36.8 cm) in height overall at plantation establishment in 1997. After 6 growing seasons, surviving seedlings averaged 51.6

in. (131.1 cm) in height for the entire study. The mean growth overall for those seedlings surviving after six growing seasons was 35.9 in. (91.3 cm). The differences in the average growth of seedlings by prescribed treatments over the six growing seasons are clearly illustrated in Figure 2. Seedling growth in treatments with a weed mat (a mat alone or in combination with other treatments) is well above the average growth for the total plantation. The greatest seedling growth for the six-year period was achieved with the tree shelter x mat x fertilizer combination followed by the hybrid shelter x mat, hybrid shelter x mat x fertilizer, mat, and tree shelter x mat. Likewise, in those treatments where no weed mat was installed mean seedling growth for the six growing seasons following planting was comparable, 23.2 - 26.8 in. (58.8 - 68.0 cm) and below the average overall growth for the plantation of 35.9 in. (91.3 cm).

Materials and Maintenance

Cultural treatments at the planting site were examined at the time of each annual measurement and following periods of high wind or major weather events. Tree shelter support stakes required reseating (two to five per year) and a minimum replacement of stakes (less than five annually) was necessary after 3 years. Reattachment of tree shelters to stakes was minimal but did occur (less than two annually). Weed mats were found to start breaking down after three years in the field. This consisted of ripping near the stapled corners, and a minimal number of weed mats were found damaged as though

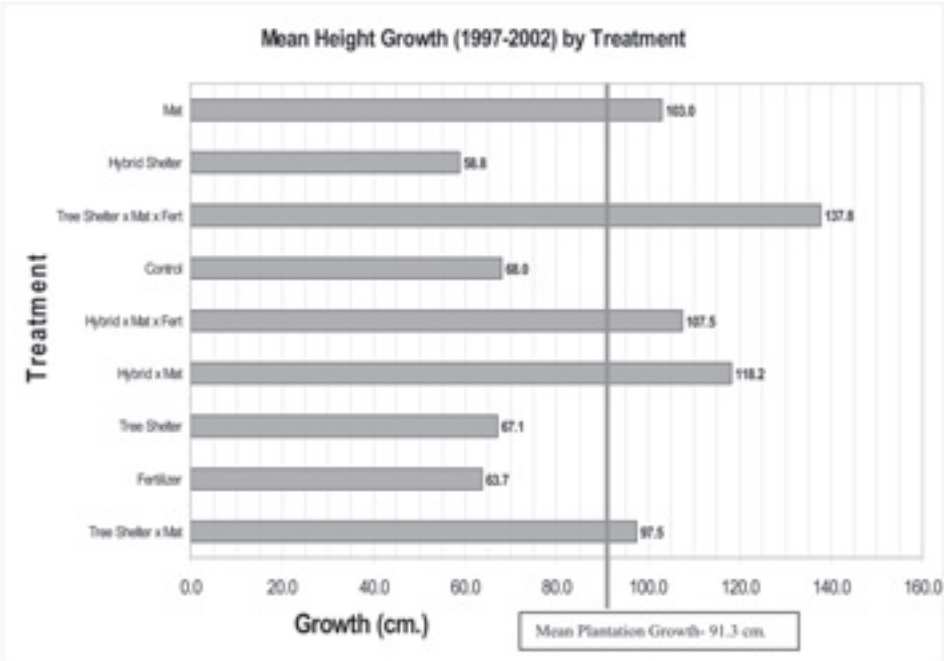


FIGURE 2. Mean seedling growth by cultural treatments for six growing seasons.

they were scratched by the claws of an animal. Based on evidence on the site, it was suspected that foxes or coyotes present in the area may have damaged the weed mat while in pursuit of mice possibly present under the mat material although no mouse damage to seedlings was noted. Resetting of staples in undamaged segments of the weed mats provided continued use and benefit of the weed mats. No mowing or weed control other than that provided by treatments took place in the plantation area during the study period.

Fertilizer was applied in specified treatments the first year of the study. In that the fertilizer treatment was in combination with other treatments and additional applications would require disturbance of treatments in place such as weed mats, no further applications were made.

Insect and Animal Damage

The presence of white-tailed deer was evident on the study site but minimal feeding activity was noted throughout the study site. Insect presence and subsequent feeding was noted during the study period but no significant feeding or foliar damage was found on seedlings. Although evidence of snowshoe hare and field mice was observed in the study area, no stem basal damage on study seedlings occurred during the six-year period.

Management Implications

Our experiences during the duration of this study agree with recommendations by tree shelter distributors that planting sites should be checked annually at a minimum to maintain the performance and benefits of tree shelters and associated materials. High wind may cause tree shelters to become tilted or removed away from seedlings. Anchor stakes may become loosened in the soil, broken, or damaged and may require replacement or reseating. Weed mats, if damaged at stapled anchor points, can continue to be serviceable by resetting the staples to an undamaged area of the mat.

After two growing seasons, stem dieback was noted during the annual examination and measurement (less than 10 percent of seedlings) throughout the plantation in treatments with the use of tree shelters. The dieback occurred predominately on seedlings that had not achieved a height beyond that of the tree shelter. After seedlings grew beyond the height of the shelter, stem dieback was insignificant and annual shoot growth increased substantially. Similar experiences by Rye[2] suggest stem dieback in sugar maple may occur as a result of more favorable growing conditions developed within the tree shelter environment encouraging growth to continue later in the normal growing season. Because the increased stem growth continues to grow later in the growing season within the shelter, the tender growth is subject to damage from early fall frosts unlike the stem growth that has undergone hardening late in the growing season on seedlings without a shelter. Obviously, the cause and effect of stem dieback within the tree shelter is subject to the variables of climate during the growing season, such as rainfall, temperatures, and severity

[2]Personal communication A. Rye, USDA Forest Service, NEFES, Burlington, Vermont, 2002.

of early autumn frosts. Furthermore, site quality, size and vigor of seedlings, and growing conditions, individually or combined may influence seedling survival and rate of growth.

During the duration of this study, tree shelters accomplished their protection role for sugar maple seedlings from potential damage from wildlife, mainly crown feeding by white-tailed deer and basal damage by field mice and snowshoe hare during winter under deep snow cover common to the study site region. It should be noted, however, deer population in the region during the study period was reported as 2.6 to 3.4 deer per square mile[3], which is much below deer populations in other regions where sugar maple plantations are established. A wild grass common to the area, quack grass (Agropyron repens), was easily recognized as a potential competitor with the sugar maple seedlings because of its prominent rhizome but was completely controlled in the sugar maple seedling root zone with the use of the weed mat. Control of weed competition is very important during the initial planting phase and for the first few growing seasons for developing sugar maple seedling root systems (Godman et al. 1990).

In addition, reduced precipitation amounts in the area during the study period may have had an impact on survival during dry periods, especially during the early segment of the growing season when moisture is critical to initiate and sustain plant growth. Seedling survival for nearly all of the treatments was dramatically reduced during the 2001 growing season (Table 1) and coincides with limited precipitation during a critical time in the growing season. When drought occurs during summer when trees are storing carbohydrates, the health and vigor of trees can be reduced ((Koelling and Heiligmann 1996). For April and May of 2001, precipitation recorded at a nearby weather station[4] measured 0.63 and 2.57 in. (1.60 and 3.95 cm), respectively, substantially below the five-year average (1998-2002) of 2.63 and 3.47 in. (6.68 and 8.81 cm) for the months of April and May. Available soil moisture for the 2001 growing season may have been even more impacted as precipitation for the area totaled 21.91 in. (55.65 cm) from January through August well below 26.43 in. (67.13 cm), the five year average for the eight-month period. Supplemental watering of seedlings was not a design for this study and would have been difficult to perform at the remote planting site. In the early years of sugar maple plantations established by landowners, however, supplemental watering on a weekly basis is suggested during drought periods (Coons 1987).

The results of this study suggest the use of tree shelters (both solid and upper half ventilated termed "hybrid shelter") combined with the use of a weed mat provided higher sugar maple seedling survival and yielded greater height growth for six growing seasons following initial planting. The difference in growth increment for seedlings in treatments with the weed mat installed,

---

[3]Personal communication R. Inslerman, NYSDEC, Raybrook, NY, 2003; 2001 NYS 20-Yr. Deer Book.

[4]Annual Precipitation Summary-National Climatic Data Center, Station: Lake Placid, NY.

average of 44.4 in. (112.8 cm), compared to growth increment for the control, 26.8 in. (68 cm), illustrates the substantial benefits for use of the weed mat. The study indicates the minimal additional investment of weed mats placed with tree shelters is insignificant compared to the benefits the mats provide for controlling herbaceous vegetation to allow seedlings to compete for moisture and nutrients. Along with healthy seedling stock and proper planting site, the use of tree shelters with weed mats not only offers seedling protection but also can increase survival and enhance seedling growth during the early years of open field planting establishment of sugar maple (Figure 2).

ACKNOWLEDGEMENTS

Funding from Cornell University-College of Agriculture and Life Sciences and the North American Maple Syrup Council for support of this research is greatly appreciated. The authors wish to recognize consultation for study design contributed by Todd Dawson, Roman Pausch, and Marianne Krasny. We would also like to thank Christopher Moquin and Jennifer Keefer for support of study establishment and field measurements. We are grateful to Brian Chabot for review of manuscript.

LITERATURE CITED

Chapeskie, D. 1995. Maple orchards in Ontario. In: Proceedings 36th annual meeting North American Maple Syrup Council Conference. Kingston, Ontario. Oct 23-24. pp. 23-26.

Coons, C.F. 1987. Sugar Bush Management for Maple Syrup Producers. For. Resources Branch. Ontario Ministry of Nat. Resources. 48p.

Godman, R.M., H.W. Yawney, and C.H. Tubbs.1990. Acer saccharum Marsh. In: Silvics of North America Vol. 2. Hardwoods. USDA For. Serv. Ag Handbook 654. pp. 78-91.

Krasny, M.E., L.J. Staats, P.J. Smallidge, and C.E. Winship. 2001. The sugar maple story; collaborative research extension agents and growers. Jour. of For. 99:26-32.

Koelling, M.E. and R.B. Heiligmann. 1996. Maple Syrup Producers Manual. Ohio State U. Extension Bulletin 856. 178p.

Robison, T. 1991. The effects of tree-shelters on survival and growth of black walnut: First year results. Applying Research in Forestry. Missouri Dept. of Conservation. Report #1.

Teel, W.S. and J.P. Lassoie. 1991. Woodland management and agroforestry potential among dairy farmers in Lewis County, New York. The Forestry Chronicle, Vol. 67, 3:236-242.

Winch, F.E., Jr. 1937. The establishment, survival, and early development of broadleaved plantations in New York State. M.F. Thesis, Cornell Univ., Ithaca, NY.

Yawney, H.W. 1982. Planting sugar maple. In: Sugar maple research: sap production, processing, and marketing of maple syrup. USDA For. Serv. Gen. Tech. Rep. NE-72 p. 25-37.

2004
SAP PRICES

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

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

Remember these prices are for sap delivered to the sugarhouse.

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

sugar	$/gal.	sugar	$/gal.
1.50	.106	3.60	.411
1.60	.124	3.70	.426
1.70	.143	3.80	.440
1.80	.160	3.90	.453
1.90	.175	4.00	.468
2.00	.190	4.10	.481
2.10	.203	4.20	.495
2.20	.218	4.30	.509
2.30	.232	4.40	.522
2.40	.245	4.50	.537
2.50	.260	4.60	.550
2.60	.273	4.70	.564
2.70	.287	4.80	.579
2.80	.301	4.90	.592
2.90	.315	5.00	.606
3.00	.329	5.10	.619
3.10	.342	5,20	.634
3.20	.356	5.30	.648
3.30	.371	5.40	.661
3.40	.384	5.50	.675
3.50	.398		

14th ANNUAL HEBRON MAPLE FESTIVAL
March 13 & 14, 2004
10:00 A.M. - 4:00 P.M.

Connecticut's only Maple Festival presents a family weekend of maple related activities in Hebron. Enjoy self-tours to six maple sugar houses, see how maple is made, how to use and enjoy it.

There is much more, so you must plan to come and experience a weekend of Maple Good Times with mom, dad, friends, grandparents, aunt & uncles and off the children.

SOMETHING FOR EVERYONE

Schedule of events and locations may be obtained at most Hebron businesses or visit webpage:

www.hebron maplefest.com

or E-mail: ccyr1@juno.com

Hebron, Connecticut, Route 66 & 85
BLIZZARD DATE
March 20th and 21st

RECIPES

MAPLE-BASIL MUSTARD

1/3 cup yellow mustard seeds
2 tablespoons mustard powder
1/2 cup water
1/3 cup apple cider vinegar
1/3 cup maple syrup
3/4 teaspoon salt
1 teaspoon dried basil

Put the mustard seeds, mustard powder and water is a blender and process for 30 to 60 seconds, until the mixture takes on a thick, grainy texture. Scrape into a bowl and let sit, uncovered, for 2 or more hours: this helps release some of the bitter components.

After several hours, return the mixture to the blender along with the remaining ingredients and process until slightly smooth, yet still somewhat grainy. Scrape into a double boiler and cook over simmering water for about 10 minutes, stirring often. Scrape into a bowl and let cool. Taste. It may need a touch of maple, salt, or vinegar. Pack into a jar with a lid, then refrigerate; it will last indefinitely.

Yield: About 1 1/2 cups

SOFT ALMOND COOKIES

1/3 cup unsalted butter, at room temperature
3 ounces cream cheese, at room temperature
3/4 cup maple syrup, at room temperature
1 egg
1 teaspoon almond extract
2 teaspoons finely grated lemon zest
2 cups almond meal
1 1/2 cups unbleached or all-purpose flour
1/2 teaspoon salt
1 teaspoon baking powder

Preheat the oven to 350 degrees F. Using an electric mixer, cream the butter and cream cheese. Continue to beat, adding the maple syrup in a slow drizzle. Next, beat in the egg, almond extract, and lemon zest.

Toss together the remaining ingredients, then add them to the creamed mixture, stirring just until everything is blended. Spoon tablespoonful of dough onto a lightly greased baking sheet, leaving just a little room between them. Bake, only one sheet at a time, for about 15 minutes, until the bottoms are golden and the tops just slightly resistant to finder pressure. Transfer the baked cookies to a rack to cool.

Yield: About 3 dozen

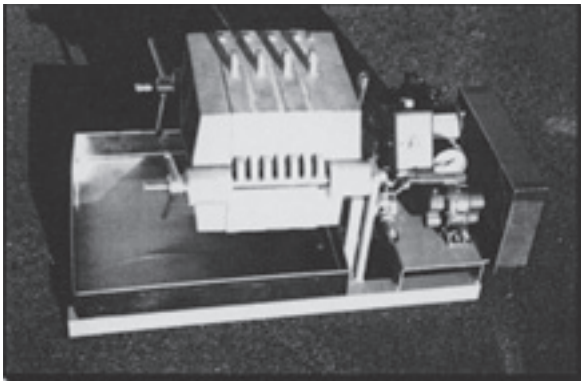
PRESSURE FILTER

From "Wes Fab"

Cost Effective Filter Press for the Medium Sized Producer

10" Short Stack Filter Press with Electric Motor Driven Pump

- Built for the Medium Sized Producer but designed to Expand.
- Uses standard 10" filter papers.
- Comes with the standard 10" filter press electric motor, gear pump, drip pan, & stand, so you can add more plates & frames as your production grows.
- Compact stand, lightweight aluminum plates & frames.
- Same high quality as our larger models.



Contact Us for your Special Filtering Requirements
or for the name of your local dealer

WES FAB
Wayne "Wes" E. Schoepke, Jr.
P.O. Box 95, Wausau, Wisconsin 54402-0095
(715) 241-0045

COMING EVENTS

NORTHWEST PA MAPLE ASSOCIATION
1st Annual Maple Tour and Taste Weekend
March 13th and 14th, 2004
10:00 a.m. to 4 p.m.
For more information contact:
www.northwestpamapleassociation.org or Laura Dengler (814) 763-4503

14th ANNUAL HEBRON MAPLE FESTIVAL
March 13 & 14, 2004
For more information contact:
www.hebronmaplefest.com or E-mail: ccyr1@juno.com

MAPLE SYRUP FESTIVAL
March 13-14, 2004
Warkworth, Ontario, Canada
For more information contact:
Alice Potter Tel: (705) 924-2057 Fax: (705) 924-1673

NORTH AMERICAN MAPLE MUSEUM
May 15, 2004
Croghan, New York
New York State Queen Contest and Induction for Maple Hall of Fame

---

ONTARIO MAPLE PRODUCERS
SUMMER TOUR AND ANNUAL MEETING
July 22-24, 2004
Hosted by the Renfrew Local of the OMPA
For more information contact:
Dave Chapeskie, Agroforestry Specialist, Kempville
(613) 258-8302, Email: dave.chapeskie@omaf.gov.on.ca

VERMONT MAPLERAMA 2004
July 29, 30 & 31
Windham County, VT with headquarters at Mount Snow, VT
For more information contact:
UVM Extension (802)-888-4972

NAMSI/IMSI ANNUAL MEETING
October 17-20, 2004
Roaring Brook Ranch, Lake George, NY
For more information contact:
David Campbell (518) 854-7669, Email: maplelnd@sover.net
also: www.newyorkmaple.com

CLASSIFIED

FOR SALE: 4' x 12' Grimm wood fired raised flue with stainless steel pans, aluminum hood and pre-heater. 2' x 4'finishing pan on propane, filter tank. Two 600 gal. stainless storage tanks. wood bunks. Can be seen in operation this spring. Central New York. *(607) 547-2732*

FOR SALE: Leader 3' x 10' Inferno air-tight arch with blower, stack, valves and welded stainless steel pans. Used 5 seasons. Excellent condition. Priced to sell. *(518) 893-7832*.

FOR SALE: 6' x 10' King Flue Pan, good condition, $250. 7 1/2 bbl. King gathering tank, $125. Grimm 7 1/2 bbl. gathering tank, $125. New 4,000 gal. Poly tank, $750. 6' Vermont arch front & doors. EC. $100. *(315) 376-3654* or *(315) 771-6814.*

FOR SALE: 4' x 14' Leader Special complete, w/ss front pan, tin back pan, ss stack. Priced to Sell. *(603) 783-4468.*

FOR SALE: 5' X 7' Grimm tin flue pan, $800.00, 5' x 3' Waterloo syrup pan, $400.00, 5' x 2' Stainless steam hood, $400.00, Leader 30 gallon canner (tin) $100.00, 3' x 12' set stainless steel pans, $2000.00, Stainless steel bulk tanks, 150-700 gal. $1/gal., 275 gal. plastic cage tanks, $60.00, Several used firebricks, $.50 ea., Large woodchip burner, $1000.00. Paul's Sugar House, Williamsburg, MA *(413) 268-3544*.

SUBSCRIPTION FORM

THE MAJORITY OF THE STATE ASSOCIATIONS INCLUDE THE MAPLE SYRUP DIGEST WITH YOUR DUES PAYMENT. PLEASE CHECK WITH YOUR ASSOCIATION TO SEE IF YOU WILL AUTOMATICALLY RECEIVE THE DIGEST WHEN YOU PAY YOUR DUES.

I would like to subscribe to the MAPLE SYRUP DIGEST

USA ( ) 1 Year $5.00

CANADA ( ) 1 Year $7.00

PLEASE REMIT IN US FUNDS

This is a: ( ) new ( ) renewal subscription

Name _____

Address _____

_____

Make checks payable to Maple Syrup Digest and Mail to:

MAPLE SYRUP DIGEST
PO BOX 240, CANTERBURY, NH 03224
(603) 783-4468

BE SURE TO SEND US YOUR CHANGE OF ADDRESS
THE POST OFFICE WILL NOT FORWARD BULK MAIL!

DEADLINE FOR NEXT ISSUE

MAY 1, 2004

IF YOUR MAILING LABEL READS

SDO3

Subscription ends Dec. 03

THIS IS YOUR LAST PAID ISSUE

Please renew your subscription

sugarhill®

CONTAINERS

Contact us for the Sugarhill dealer in your area.

Available in standard and metric sizes

P.O. Box 490 • 262 Millers Falls Road
Turners Fall, MA 01376
Phone: 413/863-2222
Fax: 413/863-3774

"The Plastic Bottle People"