



MAPLE SYRUP

DIGEST



Vol. 21, No. 1

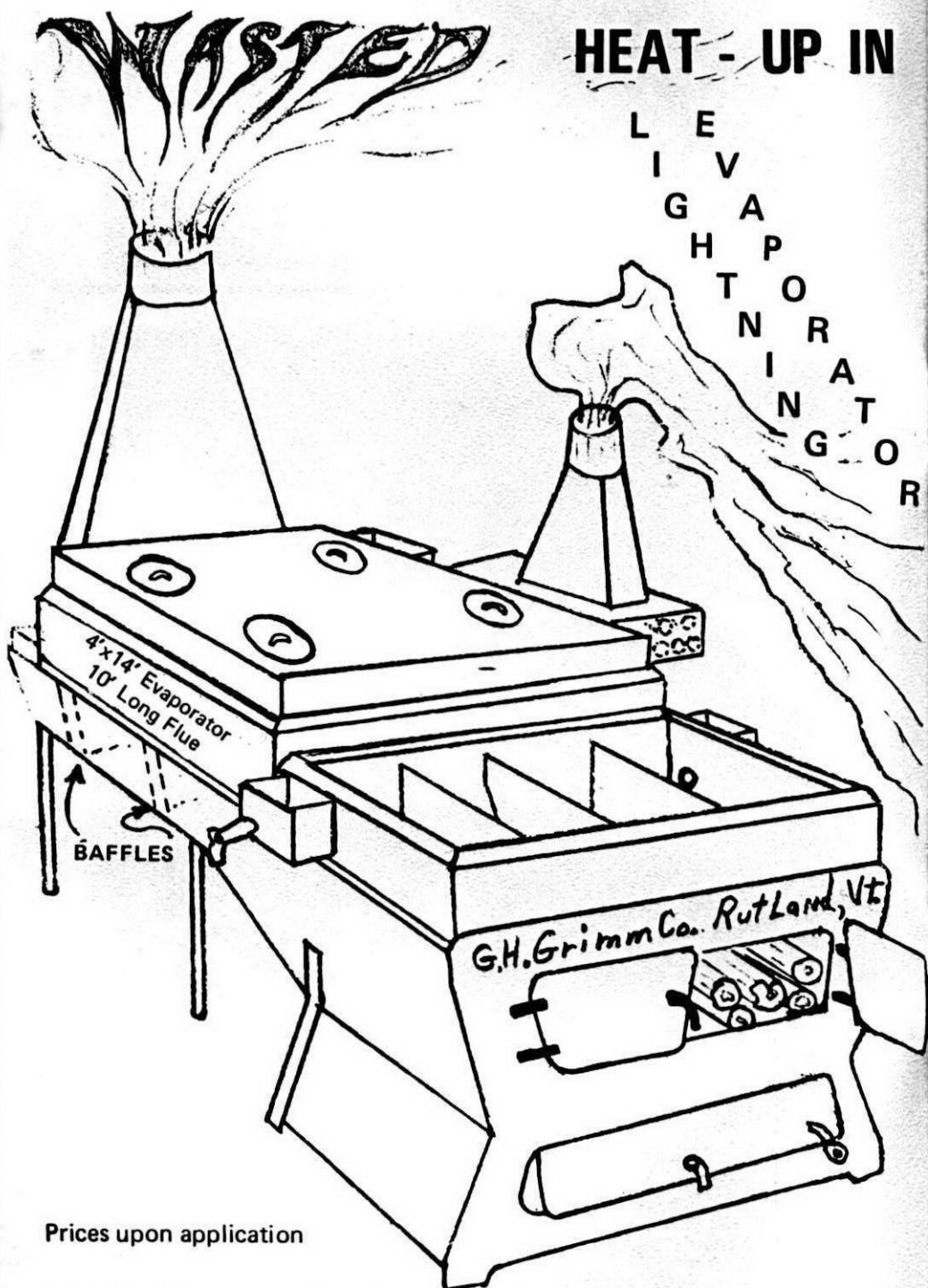
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Edited by . . . Lloyd Sipple
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NATIONAL MAPLE SYRUP DIGEST

Published by: Lloyd H. Sipple
R D #2
Bainbridge, N. Y.

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

Postage

Paid at Bainbridge, N. Y. 13733

Mailed outside our circulation
area for \$3.00 per Year.



Printed by:
YORK MAIL-PRINT, INC.
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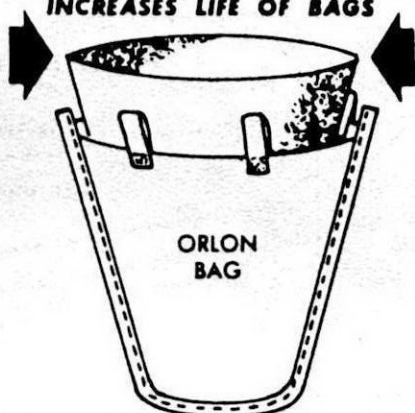
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Editorial

By golly, 1980 wasn't such a bad year after all. It wasn't a big crop but what syrup we did make last Spring was of exceptional quality. At least we didn't waste a lot of high priced fuel on low priced syrup.

The demand was good. From what I hear there isn't much syrup left. The retail price was good. It must have been because you can set that yourself. The bulk price wasn't all that bad either. After all, if the processor can't make a little profit, he won't be in business long.

The Digest had a good year, too. We ended up a little in the black again, thanks to your support and your associations help. Now it's the start of a new year and time to ask you for a contribution again. I'm not going to make a big issue of it because I know you'll all help out. The return envelope is in the center fold, as usual.

For our new readers, we still don't have a set fee. As a suggestion, we don't feel \$2.00 a year or \$5.00 for 3 years is asking too much, but anything will be appreciated. Whether you realize it or not, this is a real bargain. I've had to do some of the shopping this summer and I found out

there just isn't hardly anything you can buy for \$2.00.

We've a lot to look forward to in the maple business. There's so much being done in reverse osmosis, multiple effect and vapor compression evaporation, vacuum pans, preheaters and different types of fuels. If the Indians that used to throw hot stones in a hollowed out log full of sap could see some of these contraptions, they'd probably think white man has a clinker in his thinker.

Seriously, I'll just bet it won't be too long and someone's going to run on to a way to make syrup that will be both cheap and simple. It might even be fun, like when I used to make a little out in the back yard.

I can dream, can't I?

Yours,
Lloyd

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Women's Page

Editor, Mary Lou Sipple

Bran Muffins

In a bowl combine:

- 1 cup sour cream
- 1 cup maple syrup
- 2 eggs, slightly beaten

Sift together:

- 1 cup flour
- 1 tsp. baking soda

Stir in:

- 1 cup bran flakes
- 1/3 cup raisins
- 1/3 cup chopped nuts

Combine the liquid and dry ingredients lightly and spoon into oiled muffin tins. Bake 20 minutes at 400 degrees.

M. L. Sipple
Bainbridge, N. Y.

Pineapple-Date Salad

- 8 oz. pkg. cream cheese
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- 1 cup crushed pineapple (drained)
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Syrup Prices

At a recent meeting of the New York Maple Producers Association and the Farm Bureau Maple Marketing Cooperative the two boards agreed to recommend a retail price of \$22.00 a gallon for syrup, at the farm, in 1981. This is a 10% increase over last years price but with the inflation rate of 12% to 18%, depending on where you heard it, and the cost of labor, fuel and supplies, this increase is reasonable.

The bulk price is a different matter. They recommend a floor of \$1.05 for Fancy, .95 for Grade A, .80 for Grade B, and .70 for Grade C. This is the same price as last year, but it is hoped producers will raise the retail price enough to make it profitable for a

processor to handle the syrup and sell it wholesale as he must do.

At the above prices, a processor must get \$16.25 per gallon wholesale to break even. If the retailer marks it up one third, which is conservative, the price is crowding \$22.00 and no one has made a nickle. If the producers will help by doing a more realistic job of pricing their products, it will help to raise the bulk price.

Gordon Brookman, Pres., NYSMMPA

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SAP PRICES

Each year in the February issue, we publish a chart of the sap prices paid by one New York Producer for the past year and the proposed price to be paid in the coming season along with the respective retail and wholesale price of syrup in consumer packages.

Please remember, this chart is published to be used only as a guide and the Digest in no way intends that it should dictate the price paid for sap by any producer.

Year	1980	1981
Retail	20.00	22.00
Wholesale	15.00	16.50
Sap Brix	per. gal.	per. gal.
1.5	.032	.034
1.6	.046	.048
1.7	.060	.062
1.8	.073	.076
1.9	.086	.089
2.0	.096	.10
2.1	.106	.110
2.2	.114	.119
2.3	.122	.127
2.4	.13	.136
2.5	.137	.142
2.6	.145	.151
2.7	.152	.158
2.8	.16	.166
2.9	.166	.173
3.0	.173	.18
3.1	.181	.188
3.2	.188	.196
3.3	.198	.203
3.4	.202	.210
3.5	.218	.217
3.6	.216	.224
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3.8	.230	.239
3.9	.236	.246
4.0	.244	.254

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LETTERS:

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Dear Editor,

I'd like to hear from other producers who don't use the formaldehyde pellets. Has anyone else been keeping track of sap flow after re-flushing with chlorine solution at different temperatures? When seems to be the best time to ream tapholes? What other alternatives work and when? Would like to swap and compile some findings.

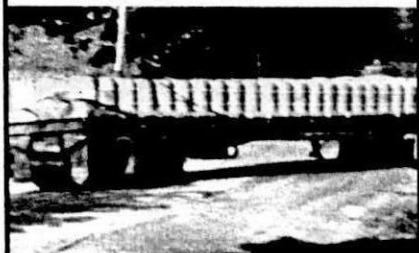
Here's an idea that might interest someone. I made \$72 worth (bulk price) of syrup this past Spring by using a finishing pan instead of just pouring onto the floor the last of the sap which couldn't be made into syrup in the front pan. From the late Skip Miller of Harrisville, N. Y. I got the idea of running water through the

evaporator after each run, to keep pan clean, but that meant a lot of sugar being lost. The system that we now like is, at end of boiling run, to draw off 40 gallons from our 6 x 13 and run this while hot through the filters, which saves that sugar too. The next day we fill the finishing pan (cap. 28 gal.) and let it all boil, checking it every half-hour with hydrometer, while doing other chores. By the end of the day we've used \$1.40 of propane and have four to seven gallons of syrup (usually a grade below what had just come from the evaporator).

It seems to me that our finishing pan (used, cost \$100) pays for itself many times over each year, in also keeping customers happy with syrup which is as close as we can get it to ideal weight, using hydrometer and thermometer. It seems like, unlike maple trees, maple syrup customers are not a renewable resource and need encouragement. While Mr. Log Cabin can throw in more chemical junk for ballast, pure maple needs more than an old-timey picture with fable of an Indian couple to keep my customers coming back.

Yours,
Warren Allen

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Maple Sap producers all over North America are learning they can save money, time and labor using a reverse osmosis (RO) machine to process maple sap.

Dave Marvin, a Johnson, Vermont maple sap producer and consultant currently operating his own 13,000 tap operation, readily attests to RO's advantages. Marvin installed a unit last year and saved about \$7,000 on fuel oil.

Built by Osmonics, Inc., the Osmo system dewateres sap by forcing water through semi-permeable membranes.

Although the final stages of production still require the use of an evaporator, RO removes the bulk (50 to 80 percent) of the water from sap, greatly shortening the process and reducing the amount of labor required.

Cutting down on evaporation time meant Marvin used two-thirds less oil than in previous years and doubled the amount of sap processed per hour. With an average feed rate of 1,000 gallons per hour through his RO machine, Marvin produced 330 gallons of concentrate per hour. He then finished the processing in his evaporator.

Saving time and money is very important to the maple sap producer. But so is retaining high quality maple syrup flavor and color. Do RO ma-

chines produce syrup that measures up? Marvin feels they do. "The syrup I made this year was very comparable to that of my neighbors, who used traditional evaporation methods in both color and flavor," he says.

Other experts agree. Dr. Paul Sendak, of the U.S. Forest Service, collected data on Marvin's machine. Although his tests are still in the preliminary stages, Sendak is encouraged by the results of the sap samples, and says Marvin's products are "as good as conventional maple."

Dr. Mariafranca Morselli, of the University of Vermont's Maple Research Laboratory, compared syrup made from Marvin's RO samples to syrup she boiled from his sap. After comparing the syrups' flavor, color and the volume of sap that produced equivalent amounts of syrup, Morselli says, "The syrup made from concentrate processed by the RO was comparable in quality to the syrup made from original Sap in the laboratory."

Marvin, one of the few consultants to the maple industry, advises organizations and producers from Wisconsin to Nova Scotia on installing pumping systems, designing sugar houses, selecting equipment, and determining the maple producing feasibility of particular sugarbushes and geographic areas.

His consulting responsibilities require Marvin to keep up on the latest equipment in maple sap production. Last year, he bought his own RO machine because, "I didn't feel I could recommend the process without having some kind of experience with it myself."

Now several of Marvin's clients plan to install RO systems after noting his success with the machine.



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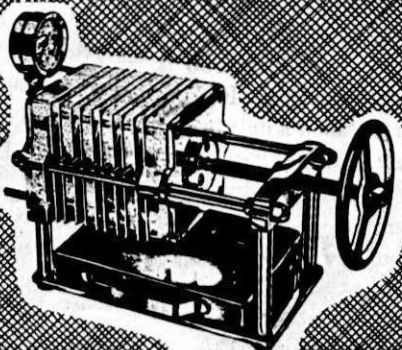
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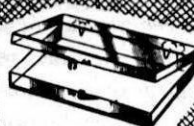


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Fuel oil is an important source of heat to fire maple syrup evaporators. Although many producers still use wood, many others, especially those with medium-and large-size maple operations, depend on oil.

The price of oil has increased dramatically in the 1970's—from \$0.18 per gallon in 1971 to \$0.50 in 1977 and \$1.00 during the 1980 maple season. The rapid increase in price has prompted producers to look for alternative fuels or ways to increase the efficiency of their oil-fired evaporators.

One possible method for increasing the efficiency of an oil-fired boiler is a commercially manufactured burner modification called the Vapormid! The principal behind the Vapormid system, as claimed by the manufacturer, is enhancement of the formation of hydroxide which acts as a catalyst for burning fuel oil. More complete combustion, increased flame temperature, cleaner burn, greater heat transfer, and lower stack temperature may result from its use. These benefits should result in increased thermal efficiency.

A study was designed to test the Vapormid on a standard oil-fired evaporator. Thermal efficiency was determined for the evaporator with and without the modification.

Methods:

A Lightning Standard (raised flue)

evaporator, measuring 5 x 14 ft., was the test unit located at the Uihlein-Cornell Sugarbush in Lake Placid, New York. The evaporator was installed on a cinder-block arch and is normally fired with a single oil burner at the rate of 12 gallons of fuel per hour (gph). The flue pan measured 5 x 10 ft. with a syrup pan that was 4 x 5 feet.

Information was collected during three 3-hour test runs before the 1979 sap season (February), three 3-hour runs after the season (April), and three 3-hour runs after the 1980 sap season (May). Water was boiled in the unit during all test runs.

The first series of test runs was designed to determine the efficiency of the evaporator as it is normally operated. Then the burner was set to fire at 11 gph because of possible increased boiling rates, and the Vapormid was installed and adjusted by the manufacturer at the start of the sap season and used about 100 hours during the season (Fig. 1). When the season ended, the pans were drained and cleaned and the second series of test runs was made to determine the efficiency of the modified evaporator. The Vapormid was removed for the 1980 sap season and after the season a third series of test runs was made to determine the efficiency of the evaporator fired at 11 gph.

Results:

The results of the tests are shown in Table 1. The average thermal efficiency at a firing rate of 11 gph, for the three tests without the Vapormid, was 65.75%; with the Vapormid it was 68.02%. The thermal efficiency of the evaporator fired at 12 gph without the Vapormid was 66.39%. The efficiency

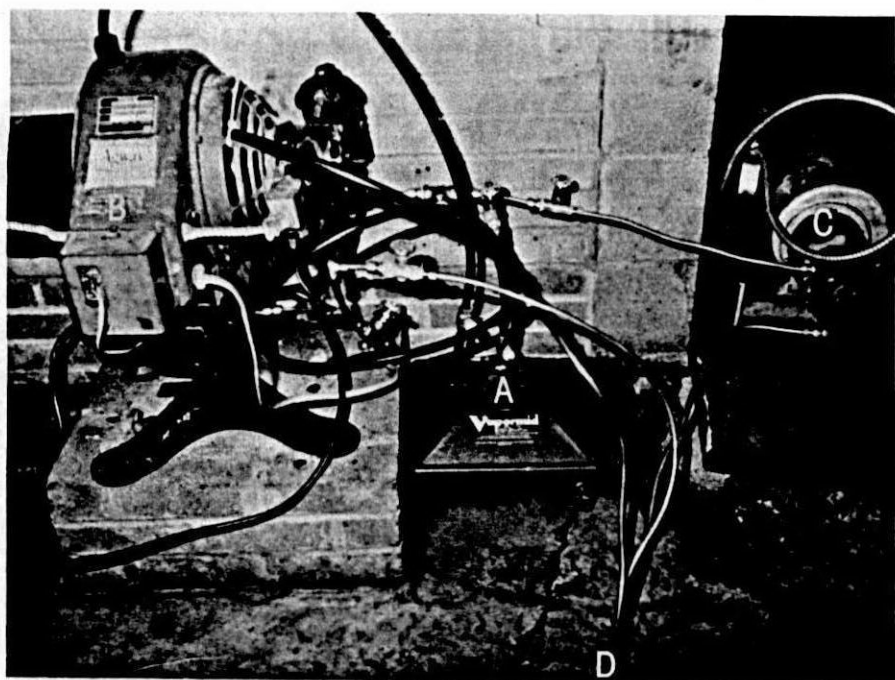


Figure 1. Photograph of Vapormid unit (A) installed on oil burner (B). Auxiliary oil pump (C) and piping (D) are part of the testing equipment to monitor oil consumption.

calculations were made after the evaporator reached steady-state operation, and each calculation is based on at least 1½ hours of continuous readings.

Table 2 shows the temperature data averaged over the three tests with and without the Vapormid. The results show an increase of 110°F in firebox temperatures and an increase of 99°F in baffle temperatures with the Vapormid. There was a decrease of 19°F in the stack temperature with the Vapormid. All temperature differences were statistically significant at the 0.1% level.

Discussion:

The Vapormid yielded increased firebox temperature, lower stack temperature, and an increase in thermal efficiency. At 65.75% efficiency, 11.22 pounds of water were removed per

pound of oil burned, and at 68.02% efficiency, 11.65 pounds of water were removed. Thus, increase in efficiency was 3.8% $[(11.65-11.22)/11.22] \times 100$.

What is this increase worth? With a 5 x 14' evaporator, 600 gallons of syrup could be processed in a season. If the sap averaged 2.5% sugar, 20,870 gallons of sap yield 600 gallons of syrup. This would require the evaporation of 168,960 pounds of water.

The evaporator at 65.75% efficiency would burn 15,059 pounds of oil, while at 68.02% efficiency it would burn 14,503 pounds. The difference in gallons is about 77, and at \$1.00 per gallon this would be a savings of \$77 in oil. The savings in labor is about 5 hours boiling time over the season, and at \$5.00 per hour the savings total

\$25. In addition, a minor income tax advantage would accrue because of the capital investment.

The question is: can we afford to make an investment of \$800 today--the price of a Vapormid for this evaporator--to save future expense in fuel oil and labor? By making some assumptions such as a 7-year life for the Vapormid, an interest rate of 10%, and an annual increase in the price of oil of 10% the increase efficiency of 3.8% is economically marginal at best. Improvements such as insulation of the arch and proper baffling in the firebox will yield increases in efficiency of about the same magnitude for considerably less money. For about

the same investment as a Vapormid, a sap preheater can be purchased which will increase thermal efficiency 15 to 17%.

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. Dept. of Agriculture, the Forest Service, or the New York State College of Agriculture and Life Sciences, Cornell University of any product or service to the exclusion of others that may be suitable.

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Table 1. Results of test runs with and without burner modification.

Test run	Approximate firing rate	Water off per hour	Oil burned per hour	Thermal efficiency
	GPH		Pounds	Percent
15 Feb 79	12	1013.7	88.5	66.86
16 Feb 79	12	1015.1	88.9	66.71
20 Feb 79	12	993.5	88.6	65.61
Averages without Vapormid	12	1007.4	88.7	66.39
Standard error				0.55
24 Apr 79	11	908.2	79.1	67.09
25 Apr 79	11	922.7	78.0	68.99
26 Apr 79	11	912.5	78.3	67.99
Averages with Vapormid	11	914.5	78.5	68.02
Standard error				0.55
5 May 80	11	892.6	79.3	65.60
5 May 80	11	879.0	79.8	65.07
6 May 80	11	902.0	79.0	66.57
Averages without Vapormid	11	891.2	79.4	65.75
Standard error				0.44

Table 2. Temperatures at three locations in the evaporator averaged over test runs with and without burner modification.

Burner Modification	Mean temperature (°F)		
	Firebox	First baffle	Stack
Without Vapormid (11 gph firing rate)	1,866	1,322	462
With Vapormid (11gph firing rate)	1,976	1,421	443

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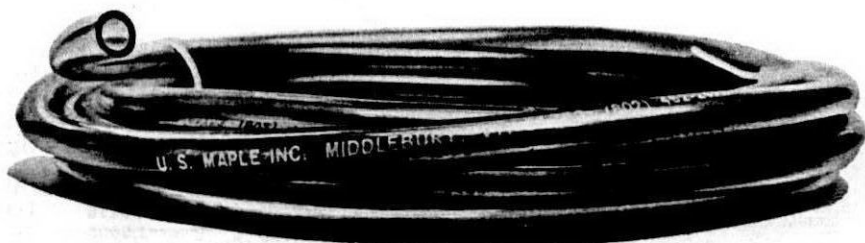
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Bleach Effect on Color and Flavor

Mary Lynn Whalen

Kelly L. Baggett

and

Mariafranca Morselli

Botany Dept., Vt. Agr. Exp. Station,
University of Vermont, Burlington, VT.
05405

It has been brought to our attention that some maple syrup producers clean their vacuum lines or flush the tap-holes with a sodium hypochlorite ($\text{NaClO} \cdot 5\text{H}_2\text{O}$) solution (bleach) diluted from 1:4 to 1:20. The common brand names for the bleach are, Clorox^R, Eau de Javelle^R, or Dazzle^R. Since proper industry practice is to thoroughly flush the tapholes and

pipelines, we undertook this research to assess how maple syrup is affected if the bleach is not completely removed from the sap.

No studies have been reported in the literature that assess the effect of sodium hypochlorite upon the sap, and the flavor and color of the resultant syrup. This paper reports the testing of this effect in a laboratory situation. Since atmospheric evaporation of sap to syrup takes place in a metal open pan evaporator, we boiled sap in stainless steel beakers, as well as glass beakers as the UVM Maple Research Laboratory has been doing since 1971 (1).

Materials and Methods

The sap used for this study was collected early in the sap season at the

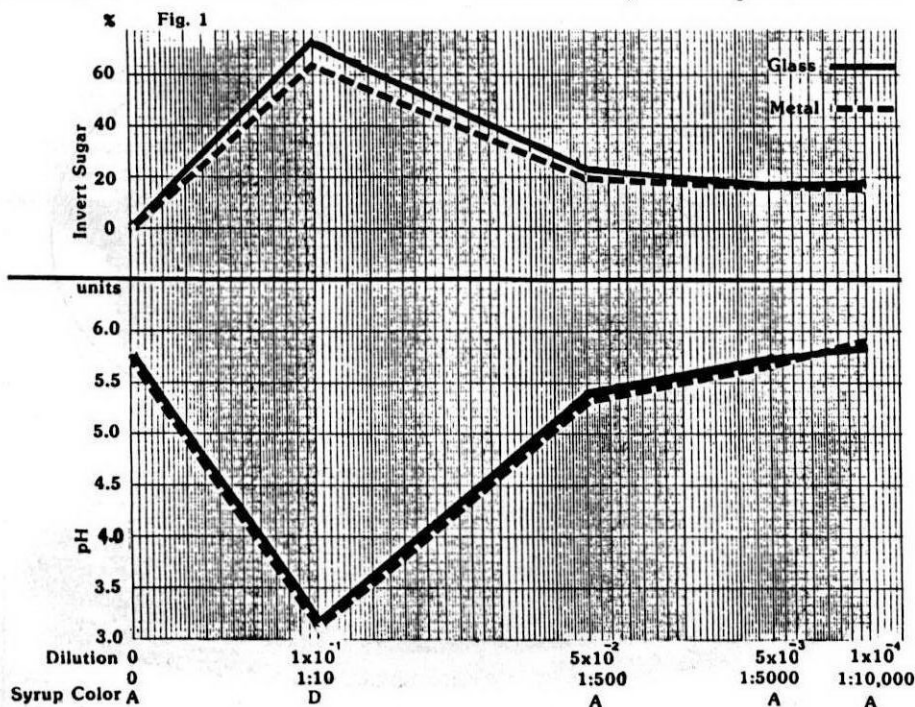


Figure 1. Invert sugar and pH values for the control and all bleach dilutions boiled in both glass and stainless steel beakers are plotted on semilogarithmic paper. Syrup grade is also included for reference.

Fig. 2

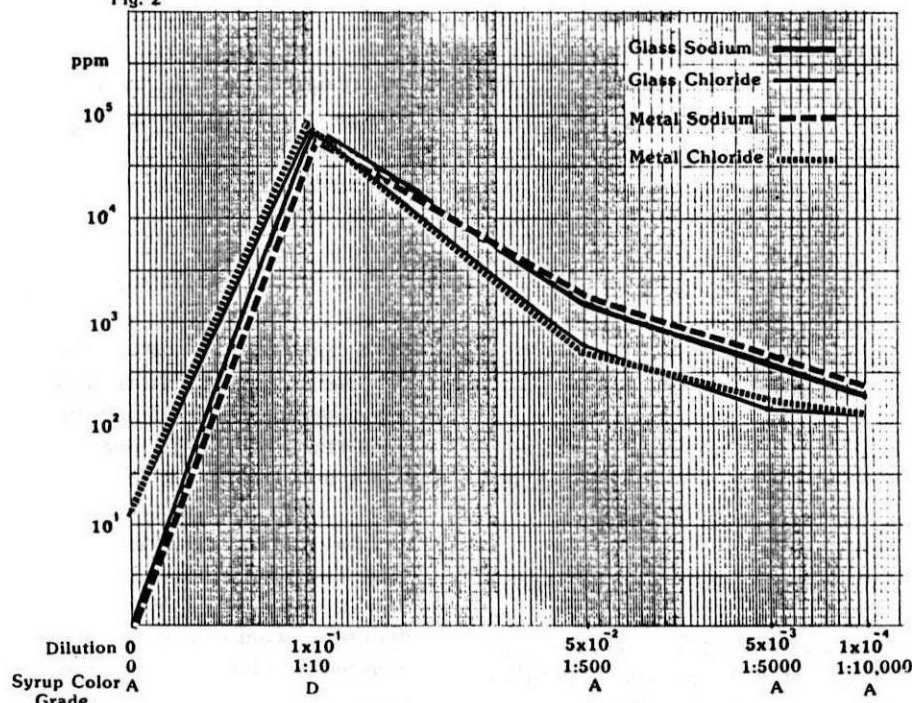


Figure 2. Average parts per million (PPM) sodium and chloride values for the control and all bleach dilutions boiled in both glass and stainless steel beakers are plotted on semilogarithmic paper. Syrup grade is included for reference.

Proctor Maple Research Farm, Underhill, Vt., and stored frozen at an average of -26°C (-15°F). It was not aseptically collected but was stored in sterilized one gallon plastic containers.

Seven containers of sap were removed from the freezer and allowed to thaw for 3 days in a temperature

controlled cold room at 6°C (43°F). Thawed sap was mixed in a large sterile glass bottle. Sap samples were poured into appropriately labeled beakers, to which the bleach was added. The amount of bleach added was based upon the calculated final volume required for dilution (Table 1).

Table 1. Calculated final concentration of bleach ^a in maple sap prior to boiling.

Final concentration of bleach in sap	Volume sap used (ml)	Volume undiluted bleach (ml)	
Undiluted	2000	0	
1:10 (or 1×10^{-1})	1800	200	
1:500 (or 5×10^{-2})	1996	4	
	Volume sap used (ml)	Volume of 1:500 dilution of bleach to sap (ml)	Equal to undiluted bleach (ml)
1:5000 (or 5×10^{-3})	1800	200	0.4
1:10,000 (or 1×10^{-4})	1900	100	0.01

^aThe bleach used was Clorox^R, a 5% sodium hypochlorite solution.

Any bleach smell associated with the sap was noted.

Sap samples were atmospherically boiled to completion (66.5° Brix) over hot plates in glass and in stainless steel beakers immediately after addition of the bleach. Processed syrups were immediately hotpacked into 1 oz. glass bottles, inverted to sterilize the air space and stored (2) upright in the dark at 6°C (43°F) to cool and allow the suspended "sugar sand" to precipitate. If this did not occur, the syrup was then centrifuged at 2000 rpm for 20 minutes. Syrups were color graded as soon as the "sugar sand" had precipitated.

The pH of the syrup was taken using an Orion 701A digital pH meter with a gel filled (Orion 9115) combination probe. Values were read to the thousandth of a unit and then rounded to the nearest hundredth unit.

The invert sugar level was obtained by using a modified invert sugar procedure (3) standardized against inverted sucrose. The composition of the bleach indicated that analytical measurement of sodium and chloride ions should be performed. The Regulatory Services (Morrill Hall, University of Vermont, Burlington, VT. 05405) analyzed the syrup samples in duplicate by means of atomic absorption with a Perkin Elmer 503.

The flavor of the syrup was determined with a blind test after the sugar sand had precipitated. This was done by agreement of three individuals who were not aware of the possible presence of a bleach flavor. They were asked to write whether the flavor was good and characteristic of the grade, and if the syrup had an off flavor.

They were instructed to mention if there was anything distinctive about the off flavor detected. This agreement process is used extensively within the flavor industry.*

*Communication with Dr. H. Yabloner, Hercules Industries.

Results and Discussion

Differences between the original sap and the saps with bleach were noted. The control sap was clear and colorless while the 1:10 dilution had a faint yellow color. This tended to disappear as the bleach content decreased. The 1:5000 and 1:10,000 diluted saps had no color difference from the controls. The smell of bleach that was noticeable in the 1:10, 1:500 and 1:5000 dilutions was absent at the 1:10,000 dilution. A chlorine gas was produced during the boiling process, even for the 1:10,000 diluted sap, as evidenced by the smell in the laboratory.

There was no difference between the syrups boiled in the glass or metal beakers for all the parameters we measured.

Figure 1 shows that the syrup pH values dropped drastically for both 1:10 dilutions. This acidity could possibly account for the increased syrup invert sugar level due to hydrolysis of the sap sucrose which results in a very dark (Grade D) syrup. This pH effect is not seen at any of the other bleach to sap dilutions which produced a medium amber (Grade A) syrup.

Control sap boiled in glass and stainless steel produced a good flavored maple syrup. Both the 1:10 and 1:500 diluted saps yielded a salty flavored syrup due to the presence of sodium chloride which resulted from the boiling of the bleach and sap. The

syrup concentrations of sodium and chloride are shown in Figure 2. Syrups produced from the 1:5000 and 1:10,000 diluted saps have an undefinable off flavor that was not recognized as salty, nor as a "bleach" flavor.

A potential syrup flavor problem arises if the concentration of bleach remains too high in the sap. It is difficult to calculate the volume of sap or water required to flush tapholes or pipelines due to the difference in rate or volume of flow observed in the field. Since we found a noticeable flavor effect even at the 1:10,000 dilution, if bleach is used it must be very thoroughly flushed out, as recommended by proper maple industry practice.

One way to accomplish this is to use bleach only on or prior to days of expected high volume flows. Also we recommend that the first sap coming through the lines after cleaning and flushing be discarded. This would minimize syrup color and flavor changes.

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1. Laing, F. M., J. W. Marvin, M. F. Morselli, D. W. Racusen, E. L. Arnold, and E. G. Malcolm. 1971, Effect of high vacuum pumping on volume yields and composition of maple sap. Vt. Agr. Exp. Sta. Res. Rep. MP 65.
2. Morselli, M. F. and P. E. Sendak. 1980. Maple syrup containers: Effect of storage on the stability of three table grades. Res. Rep. 6, July. Agr. Exp. Sta., University of Vermont, Burlington.
3. Morselli, M. F. and M. L. Whalen. 1980. Invert sugar analysis of maple sap and syrup. Maple Syrup Dig. 20 (1) : 21-22.

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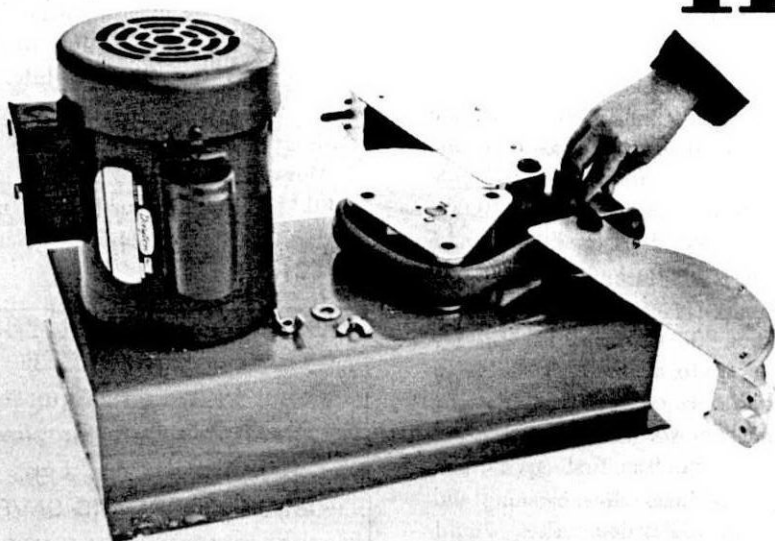
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American Maple Museum

The American Maple Museum directors would like to remind all maple producers that it is time to submit nominations for the Hall of Fame. Each year two persons are selected that have been leaders in the maple industry. Induction will take place during the Lewis County Maple Festival held at our new building at Croghan, N. Y., on May 16th & 17th.

All nominations must include a resume and may be made by individuals or associations. Associations should include a list of names of all people who are voting as a group. Send your nominations to the American Maple Museum, Box 299, Croghan, N. Y., 13327, to arrive by April 20, 1981.

The Museum directors would also

like to remind all associations in New York State to consider having a candidate for State Maple Queen. We will include the queen contest at our maple festival in May if there is enough interest. Please let us know by April 20.

Everything has been moved to the new building in Croghan. Work is proceeding well on a new heating system, kitchen and dining room. Over-all plans are done with emphases on education. We would like to remind all producers that we can still use financial support as well as equipment and items for the museum.

We would like to invite everyone to visit the museum this year and to tell your friends and neighbors about it.

Hugh Worden

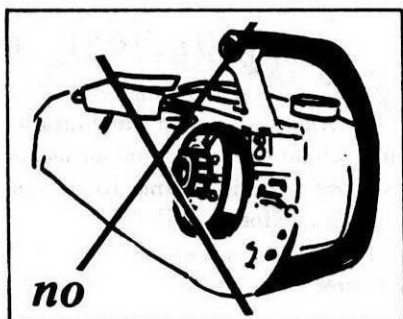
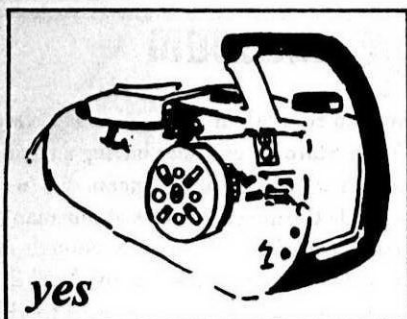
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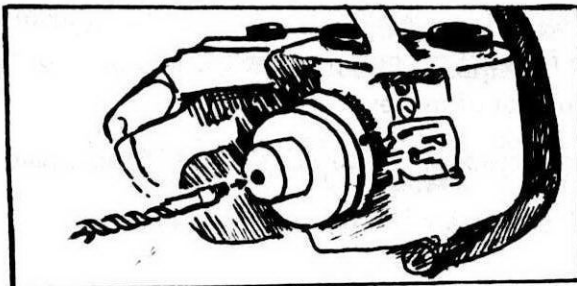
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Michigan Maple Syrup Association

The Michigan Maple Syrup Association is a growing organization. We work with M.S.U. Extension personnel suggesting ideas, problems or interests that can be included in program planning. Some of these are included in the program for the Winter Maple Meet.

This past year we have become a member of the International Maple Syrup Institute. Members are then authorized to use the IMSI Logo. It can be obtained as a self-adhesive sticker for a cost of \$7.50/2500.

Members of MMSA get a paid subscription to the Maple Digest. MMSA helps support the Digest when it operates in the red.

The Association has initiated a jug sales program. The commission from these sales has made MMSA financially solvent.

A history of Michigan Maple has been printed. A number of these are given with each MMSA membership. Maple cookbooks are available to members for a small printing fee. A metal sign is made available to identify your sugarhouse as a MMSA member.

MMSA works with extension in planning a Fall tour. We can visit maple operations we don't get to see in the Spring.

The Directors of MMSA plan to keep the association moving onward and upward. Organizations can be

only as good as its members. When you want something done that you believe would benefit you and fellow members, let it be known, but first, join the MMSA this Winter.

Ontario Maple Meeting

The 14th Annual Meeting of the Ontario Maple Syrup Producers Association, held at the University of Guelph, was honoured by the attendance of Governor-General Edward Schreyer and his wife Lillie. In company with Mr. & Mrs. John Weber, Mrs. Doug Robinson and other members, they worked in a tour of the Guelph-Elmira area, during the afternoon, and afterwards attended the Annual Banquet and Dance.

In his remarks, His Excellency related that, last spring, 90 maple trees at Rideau Hall were tapped. During the Sap season, guests included a top official of Saudi Arabia, who marvelled at the experience of seeing sugar sap running profusely, without the necessity of annual planting, also that Canada's resources included thirty-five percent of the world's fresh water supply. In his country, water sells for more than three times the price of oil. A gift of a gallon of maple syrup to take home to Saudi Arabia was, of course, highly prized.

An invitation was extended for the Eastern Ontario Producers Group to be guests of their Excellencies at Rideau Hall.

MAPLE MARKETING

As I went deer hunting this Fall, I saw more small game than I have seen in years. Squirrels, grouse, rabbits, fox, deer, etc. have managed to survive in our changing society. So will maple producers if they adapt to the changing environment and recognize that they, too, may be on an "endangered" species list.

Roaming the six mile ridge behind my home, I observed that out of the seven maple operations that made syrup in the thirties, the only one operating was mine. Most sugar shacks are completely decayed except for an old wall or stone arch. What is the reason for this?

Is it because of economics? In the thirties it took 8 hours of labor to buy a gallon of syrup. Today it only takes 4 hours to buy a gallon of syrup. Are we getting enough for our product?

Is it because of the mechanical revolution? Somehow, in the change from horses to tractors, no one has been able to invent a tractor that would perform anywhere near as good as a pair of horses in a sugar bush. Even if we could afford a crawler or a big log skidder, they would leave deep ruts, scars on trees and roots, and take a skilled operator. Is maple tubing the answer? There was a gap between then and now. Many of the sugar bushes have been sold off for timber. Now we have to tap younger, smaller trees.

Is the decrease in production due to the decrease in demand? Is the decrease in demand due to television advertising of other foods that compete with maple for the consumer food dollar? Here is where I.M.S.I. can help us if we help them. This is why I am



concerned enough about the maple industry to go to work for them.

Do any of you know how much money is spent promoting competitive substitutes: non-fat, low calorie, non-energetic foods? It is way higher than anything we could dream of spending to promote pure maple. Why not promote Pure Maple Products as a high energy, easily digested, good tasting, non-fat food that is good for you?

There has been so much promotion of non-fat, low calorie, sure fire diets that it poses this question? Is what we eat having an effect on how many people are out of work? Could it be that our modern diets don't give us enough energy to want to find work, or do a good job when we do find it?

I.M.S.I. is trying to do a good job of promoting pure maple. If any group of people is interested and would like to have me meet with them and talk about maple, please let me know. I would be glad to come to discuss the wonderful opportunity Pure Maple has as an industry and food.

Gordon Brookman
Executive Director

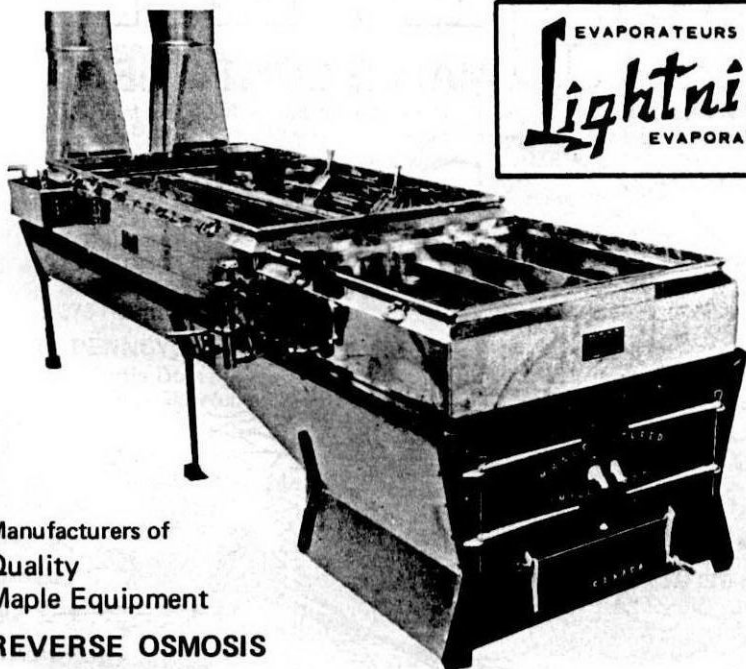
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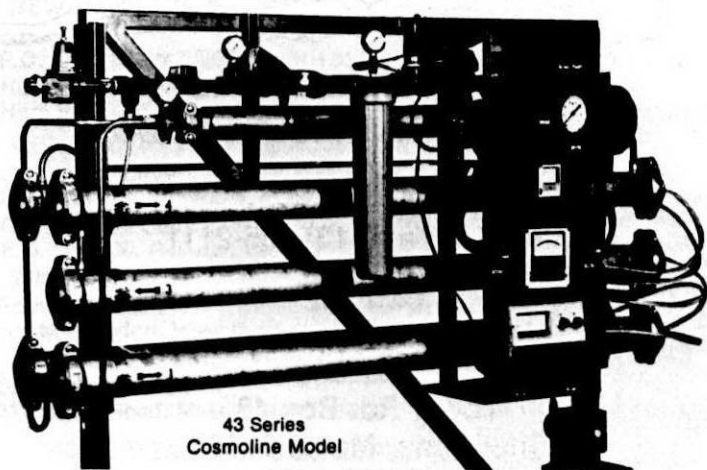


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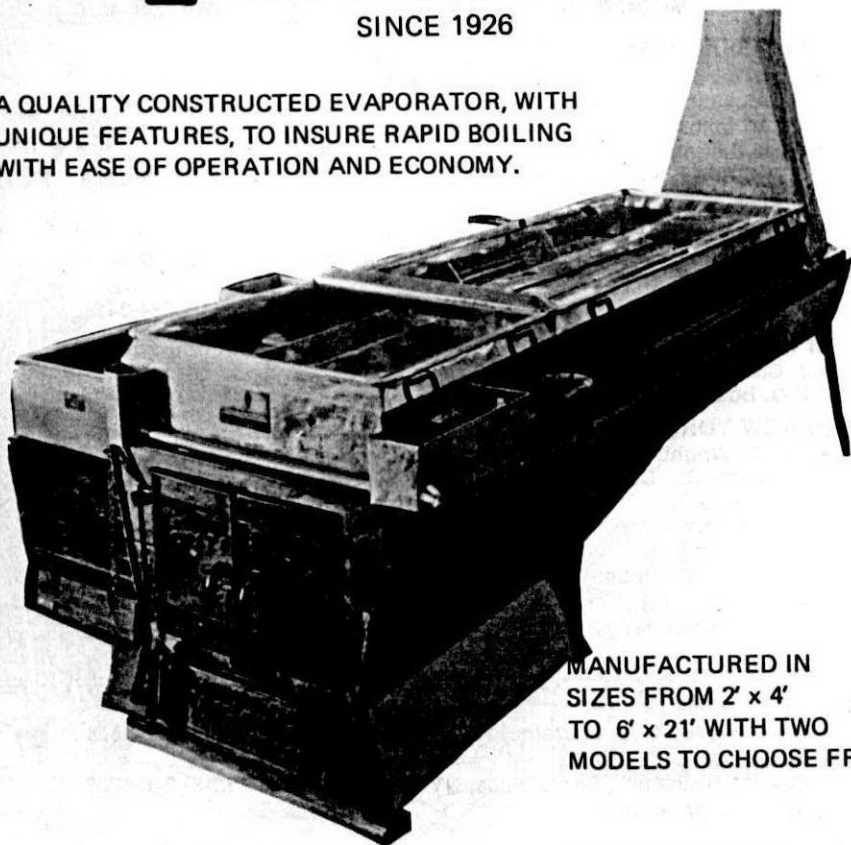
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
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LATE BUT IMPORTANT

Hawkestone, Ontario

Dear Syrup Producers:

With this issue of the Digest, the festive season is over and Maple Schools will be completed. It is hoped that you were able to attend at least one in your area.

With the season now just a few weeks away, a check on equipment and supplies would have been completed. Because of that anticipated bumper crop this season, we will need to be well organized.

Setting the price for maple syrup at your sugar camps may be the hardest job you do, and also the most important. It can not be done in a minute or two or while working at something else. It should be done at the desk or kitchen table where your costs can be listed on one side and what you need to get a reasonable return on the other.

The first thing you notice is that everything you purchase has gone up in price. So your maple products have to increase, too. You, as producers, are the backbone of the industry because if you don't produce maple syrup, we will have no need for evaporator, tubing, container manufacturers or any other maple suppliers. Packers also need your product to stay in business. This is why it is so important that you take the time to price your product right.

As we farmers are notorious for undervaluing our time and our products, let's make a true return for our work. It is important, too, to remember the importance of the retail customers who come to your sales counter. This is where the top dollar is made so it is important that you give them the very best product you can, along with the best service.

The 1981 annual meeting of the council is starting to get organized. It will be held at Orillia, Ontario, about 75 miles north of Toronto. The reason for mentioning this so early is that the directors and the committee want your help to prepare your meeting. Any producer that is doing a good job or has a new system or tested technique in cleaning, storing, leaving tubing and mainline in the bush, evaporation by wood, oil, R.O. or vapor compression, please feel at ease to present such information. A presentation need only be short and help can be supplied to get it ready. Slides are excellent but not compulsory. Just contact me or any other director or your extension staff. We are looking forward to hearing from you.

Ronald N. Shaw

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 big deal we had in the North Country." So I sez I would.

In the year of the Blue Snow, it got so cold when it came time for tapping the drill took out shavings of ice. Had to import special drills for drilling frozen timber. A slight tap on the spile would split the tree 3 ft. above and below the hole. It was so cold the snow was like sand, it just polished the runners of the go-devil. The horses were sharp shod, which made them walk as if on stilts. The mercury froze in the thermometer.

When somethin gets cold it shrinks, right? Right. Well, all the trees were reduced to half size. When it began to thaw they expanded. The pressures

Classified

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MAPLE INDUSTRY CONSULTANT — Layout and installation of vacuum tubing systems a specialty. Also, feasibility studies and sugarhouse design. References. Available for work anywhere in the maple region. **DAVID R. MARVIN Johnson,** VT. 05656. 802-635-7483.

built up inside those trees was something terrific. That's when it hit the fan.

The pressures started popping spiles. They flew with a flat trajectory. It was dangerous to be in the woods. Some of them penetrated sugar trees and started dripping, even though in back wards. We lost most of our spiles so we quit. From then on we never tapped frozen trees because it was too dangerous.

Archie

LES JONES' "Do It Yourself" Instructions available. For convenience buy your burner locally; use "Do It Yourself" DETAILED instructions for easy and CORRECT installation. **MRS. LES JONES,** Holcombe, WI 54745.

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Devon Lane Farm Supply Inc., Daniel Shays Hwy., Belchertown, MA. 01007	(413) 323-6607
Highland Sugarbush, Watson/Spruce, Rd., Ashfield, MA.01330	(413) 628-3268
Massachusetts Maple Producers, Shelburne Falls, MA 01370	(413) 625-2866
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Clark Brothers, Wells, VT. 05774	(802) 325-3203
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Leader Evaporator Co., St. Albans, VT. 05478	(802) 524-4966
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Vermont Sugar House, Exit 3, 1-89, So. Royalton, VT. 05068	(802) 763-8809
Justus 'Dutch' Asthalter, Neversink, NY, PO Parksville, 12768	(914) 292-8569
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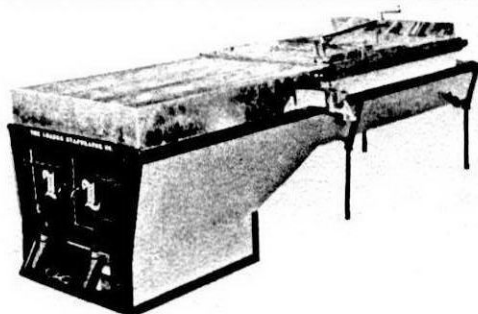
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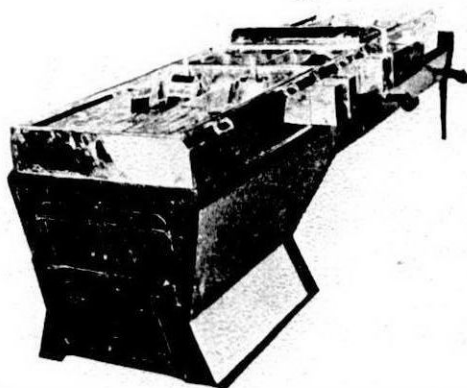
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