## National Maple Syrup • DIGEST •





Vol. 3, No. 3

BAINBRIDGE, NEW YORK

October 1964

BULK RATE U. S. POSTAGE PAID BAINBRIDGE, N. Y. PERMIT NO. 12 On June 1, 1964 the LEADER EVAPORATOR CO. INC. of Burlington, Vermont purchased the property of the Geo. H. Soule Co. Inc. of St. Albans, Vermont.

At this time LEADER EVAPORATOR CO. INC. also acquired the manufacturing rights and inventory of the KING line of Maple sugaring equipment. Both the LEADER and KING lines of Maple utensils will be available with new and replacement items. The entire manufacturing operation is being moved to the larger quarters located at 25 Stowell Street in St. Albans, Vermont as rapidly as possible.

Due to this purchase and expansion LEADER EVAPORATOR CO. INC. is now the largest Maple sugar utensil manufacturer in the world with, we feel, the best facilities and labor force to serve your needs.

A cordial invitation is extended to Maple producers to stop and visit us when they are in the area.

We sincerely hope to be of service to all LEADER and KING customers as we have in the past seventy-six years.

LEADER EVAPORATOR CO. INC. - P. O. BOX 588 - ST. ALBANS, VT.

#### **COVER PICTURE**

This month we have a picture of Bob Coombs' central evaporator plant and salesroom at Jacksonville, Vermont.

For more information see article on page 4 of this issue.

# DIGEST ADVERTISING RATES Full Page \_\_\_\_\_\_\_\$220. One-Half Page \_\_\_\_\_\_\_120. One Column Inch \_\_\_\_\_\_\_9. Classified \_\_\_\_\_\_25¢ per word



#### DIRECTORY OF

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ADVERTISING DEADLINE

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for

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NOVEMBER 1st

#### LIN'S LOGIC

We are getting ready for the 200th anniversary of the incorporation of our town. It will be in July of 1965. In looking over the early Ashfield history, we find that those people back in the late 1700s and early 1800s had a lot of problems. Some of them seem a little unnecessary to us now. For instance, that early church that had opposing factions. They got so warmed up over their differences that Sunday found two choirs in the church with each singing a hymn at the same time; but different hymns. Still I wonder if we are not a bit guilty of the same thing.

But then as now, there were strong and resolute people. I call to mind Ephriam Williams. He lived in Easton, south of Boston. His father had secured a sawmill site for him just a mile and a half down the road from our farm. Ephriam started out from Easton with one other man and walked to Ashfield, 120 miles, carrying on their backs all the iron work they needed to start the sawmill. In 1775, he went back

to his old home, married and brought his bride by ox-cart to his new mill. His only sugar was maple and we have found at least two old stone arches on land he owned.

Twenty years later he was by far the richest man in town. He paid twice the real estate tax of any other person and wealth was then measured by land. In 1800, he built a very large house that is still a show place. Public spirited, he included in his plans two rooms with a sliding partition, so that meetings might be held there.

His mill has been long gone. Only tumbled stone work shows its place. The freshet of 1878 washed out part of the dam and the 12 foot dikes are all that is left.

Yes, strong men built our country and strong men and women must carry it on. As with Ephriam Williams, hard work and clear thinking can still be rewarding. We have so much more to do with than he did. Let's take advantage of it.

LIN LESURE

To Maple Producers of New York and other friends:

It is good to know you have friends in the industries you work with, and probably no group has been closer to to my interests than the Maple Producers of New York.

The way you signified your appreciation for my work after the fire which destroyed much of our home certainly leaves us at a loss to express ourselves. We do deeply appreciate your gift, part of which will be used to replace our living room fireplace.

You all will be in our minds as we enjoy it in the future.

Sincerely

Fred & Frances Winch Newfield, New York September 19, 1964

#### Editorial

There just doesn't seem to be any way to satisfy a woman!

I guess I was pretty lucky when I married by wife. Mary Lou doesn't nag at me like some wives do, and she is pretty understanding about all the "extra curricular activities" I am burdened with in connection with this Maple business. I have to attend maple schools - both my own and everyone else's - and there are Association meetings. Council meetings, about three weeks every year for the State Fair, the Maple tour and a lot of other things that keep popping up ever so often. Then, there are dozens of times, every year that people come to talk about oil burners or evaporators or tubing, and some just come to talk. But they're all good people who want to improve their own operation and they are potential customers, and she knows it's the customers

who help pay the bills.

But, like all women, she gets a little impatient at times. About two years ago, I started to build an addition on her kitchen for an office. I got the office all done and most of the kitchen, and already she wants me to finish it. With all I've got to do, it seems like that's a little unreasonable.

About five years ago. I rebuilt the living room and staircase. Of course, I haven't finished it yet, but a good job just can't be hurried, and then too, there are about three light fixtures that haven't worked for several years, the windows don't all have screens, and the cellar hasn't been cleaned since World War 2, but still she wants her kitchen finished.

Now, she wants to go to the National Council meeting with me and that's going to put her further behind on her paper work. I guess I just don't understand women.

I guess everyone is in the same

boat — always have too much to do for the time to do it in. We have to decide which jobs are the most important and do them first. So — — — I had better get busy, because this issue of the "DIGEST" has got to go out on time, come hell or high water!!!

#### **EDITOR**

#### NOW IS THE TIME TO-

Appreciate the Fall Beauty
Build that new Sugar House
Compliment the Editor
Praise your Wife's cooking
Support Juniors football team
Tell your neighbor to vote
Teach Sis to drive the car
Install that new Evaporator
Get to know your Forester
Try and count your blessings
Read back issues of the Digest
Order your supplies earlier
Help plan your Maple Meetings
Build a stronger Maple Council
Write the Council President.

Sincerely, Adin Reynolds



#### HAVE YOU HEARD ?

Early last summer the Leader Evaporator Co. purchased the Geo. Soule Co. and Leader is moving into the Soule plant in St. Albans, Vermont. (see inside cover)

In August, the G. H. Grimm Co. purchased the Lightning Evaporator Co. Both Grimm and Lightning evaporators will be built in Rutland, Vermont. (see inside back cover)

Since there just isn't enough business in maple equipment to support so many separate manufacturers, these mergers should improve the situation and provide better service to the maple producers.

The National Maple Syrup Council will be in session by the time this issue is delivered. A full report of this meeting will appear in the next issue.

About a year ago, we received a report that a man in Oregon had made maple syrup from the sap of the "Big Leaf" or "Oregon" maple. We wrote to him and sent some copies of the Digest but have had no reply. Maybe we're tapping the wrong kind of trees.

We receive many letters from Digest readers. Some of them have suggestions, some have criticisms, and some just thank us for the Digest. But most all of them contain contributions. Have you sent yours yet?

#### MAPLE SUPPLIES

LAMB TUBING, FITTINGS
and FLOMOR PELLETS
ELECTRIC TAPPERS
and PUMPS
K. O. Proctor
Castleton, Vt.

#### THE NEW YORK MAPLE PRODUCERS TOUR August 24 - 25, 1964

The 18th annual New York Maple Producers Tour under the direction of Extension Forester Fred Winch, was a cooperative venture between New York, Vermont and Massachusetts. Six operators were visited, two in each of the three states. A record crowd of maple producers and their wives participated. At one point 165 cars were counted in the caravan.

The producers assembled at "Maple Acres", Clemons at South Bay of Lake Champlain, New York. Here, County Agent Les Nuffer introduced Kay

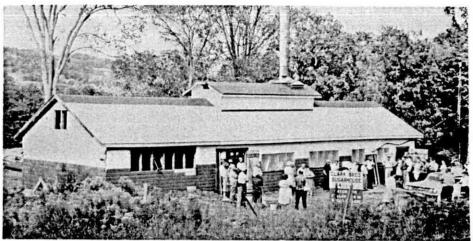


and Nelson Eggleston and sons who played host to the group. Tapping 3,000 on their own land, they produced 816 gallons of sirup using one wood-fired evaporator. Sap averaged 2.3% sugar. Many trees are tapped with tubing, running the sap to collecting tanks and pumping it automatically uphill to storage at sugar house. They frequently purchase both sap and sirup and have a unique minature sap house for their booth at fairs where they sell maple sirup and other maple products.



Converging on the farm of Mr. & Mrs. Everett Gould near Granville, New York, it was noted that Everett had torn down his roadside sugar house and was rebuilding it to accommodate three evaporators in series. Everett's display of home-made equipment was outstanding. Tubing is his man saver and to carry labor-saving further, he demonstrated ways of cleaning tubing, putting up tubing, taking it down, storing and pumps for emptying roadside tanks and truck tanks. As someone mentioned, "I wish I was an Everett Gould to develop such ideas." Everett taps 2,200 on his own land and rents 800, producing a total of 1,250 gallons of sirup this year. He produced 28 gallons of sirup per cord of wood.

Sheriff Ted Buckley, of Washington County, New York, and President of the New York Forest Owners Association, efficiently handled the traffic problems and discussed the aims of the Forest Owners Association. The group proceeded to Clark Brothers, Silverleaf Farm, at Wells, Vermont, where



1,200 taps are placed on their own land, renting about 2,000 more and purchasing sap from 1,500 producing 2,140 gallons of sirup. They paid as high as \$2.01 for sap per tap hole. Sap average 2.9% sugar. Clarks buy about 60 drums of sirup yearly and have a distinctive sales room and sales approach. Will says, visitors during the season are a large part of the buying public. He states that "New Yorkers just like to come up and watch us hillbillies make sirup." Five thousand people visited here during the five weekends he was open and making sirup. The group welcomed the refreshing sugar on the snow and fresh cider served by the Clark families.

After this stop the convoy proceeded through the Green Mountain National Forest to Mt. Snow where the group spent the night, had a filling smorgasbord and heard Ray Foulds, Extension Forester of Vermont, describe the changes taking place in Vermont agriculture and maple production and Clyde Underwood of the Eastern Utilization Lab described new research that can make the job of the maple producer easier in the future. He held out great hope for ultraviolet light as a controller of bacteria and yeasts. The impact of the Mt. Snow development on resources of an area were discussed and illustrated.

The next morning, Robert and Shirley Coombs and family of Coombs Beaver Brook Sugar House, Wilmington, were hosts at their sales room and The "candy factory" at Jacksonville. At the sales room "the largest in Vermont," (see cover picture) the Coombs process sap from 9,000 rented taps and buy sap from 11,000 more, producing 5,500 gallons of sirup in 1964. Three oil evaporators are used with 3.64 gallons of oil needed per gallon of sirup. Sap averaged 2.4% for the season. The group was impressed with the excellent sales area and the factory, especially the delightful maple nut fudge the Coombs family had on hand to sample. Bob was besieged with questions and did his best to answer. Fred Winch, general chairman of the Tour, kept urging people to move through and consequently we were on schedule as we congregated on Massachusetts Route 2 at the Cooperlane Sugar House owned and operated by Helen and Edgar Gould and family.



#### WE'VE GOT A ONE TRACK MIND !!

Everything we do has some connection with the Maple Industry.

Setting up oil fired, multiple evaporator units is right down our alley.

But we don't have time to do everything -

SO . . . .

We recommend AGWAY for oil burner installation and service.

They have trained experts for this type of work, they use our own system of installation, and they cover most of the area east of Ohio.

This brings together our twelve years experience firing with oil and AGWAY'S engineering know-how.

IF YOU'RE IN A JAM . . .



J. L. SIPPLE & SON

Bainbridge, N.Y.

967-5851

Maybe we can find someone who can answer your questions.

#### - - CAUTION - -

Before you buy an evaporator better look at a LIGHTNING. They have many advantages for both oil firing and multiple installations.



Tap-Hole Pellets 500 for \$5.00 200 for \$2,25

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For Bucket and Tank Collection
3 H.P. Gas Engine
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Many Satisfied Users
LESURE FARM
Ashfield, Mass

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Smada Farms, Greene, N.Y.

Lamb's tubing, Filters, Rubber Molds, and all other syrup making supplies. Mail orders appreciated.

A few years ago, in West Virginia, a farmer had a sugar bush located on a steep hillside. In fact, it was so steep he had to use some sallast to hold the sled down going up the hill to gather sap. He used about four 100 lb. bsgs of cane sugar because they would stay piled on the sled. Of course, when he came down the hill with the tank full of sap, he certainly didn't need all that extra weight so he never brought the bags of sugar back with him.

Now it seems to me that's an awful waste of sugar, but he always made a whale of a crop of maple syrup!

Many producers have sent us a Dollar or more to show their appreciation. Have you sent yours?

OUR

ADDRESS

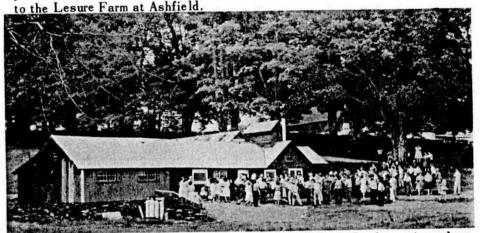
IS

SIMPLE

The Maple Syrup Digest, Bainbridge, New York

Here the Goulds tap 3,500 of their own trees and purchase sap from 5,000 taps making 3,200 gallons of sirup on two wood-fired evaporators (yield 25 gallons of sirup per cord of wood). Edgar demonstrated his wood handling equipment, his filling arrangement and canning processes. A wood splitter was demonstrated and Mrs. Gould had a very interested group of producers wives visiting her gift shop and restaurant operated in conjunction with the sugar house. Edgar was justifiably proud of his design and execution of an "old fashioned" sugar atmosphere and sales areas.

Mrs. Gould "hoped for everything to be perfect for the tour." It certainly was for the barbecue put on by the local 4-H group went perfectly, the demonstration by Edgar of his working border collies was the highlight of the tour and the excellent sales ideas impressed all of us. The local police helped in directing traffic back onto Route 2 and the tour proceeded



Here Vera and Lin Lesure along with son, Bob, had a busy time showing tubing setups, tank truck pickups of sap, an automated series of evaporators. The sales area where light lunches are sold attracted a good deal of attention. Lin and Bob tap 2,000 on their own land, rent 2,500 and purchase sap from 1,000 taps. This year they made 2,000 gallons of sirup from sap averaging 2.1% sugar. Besides sirup, they produce sugars and cream and must purchase sirup to keep up to demand. The Lesure's have many interesting items which attract customers. The "museum" showing old items from the maple industry attracts many while the sale of Christmas trees and a future potential sale of blueberries in season also attracts a great many people.

The tour attracted many from outside the three state area. There were cars from Michigan, Ohio, Pennsylvania, New Hampshire, Maine, and the Province of Quebec. Comments heard indicated that there was great satisfaction in the subjects covered and the developments seen. Especially good comments were heard on the opportunity to see how many people market their products and how each of these producers have emphasized the year-round opportunities in the maple business.

The success of this tour is actually a tribute to Fred Winch who has brought it a long way in 18 years from the first tour involving only two cars and a handful of people. The tours have had a pronounced effect on the production and sales facilities of those producers attending. You might call it a case of "keeping up with the Joneses" or a little friendly competition among the producers to attract the customer's dollar. In either case, these tours are largely responsible for the improved sugarhouses seen today instead of "getting along" year after year in the same old shack in the woods.



The new sales room built by the Reynolds' last year.

#### MAPLE SYRUP PROMOTION IN WISCONSIN

Contrary to the trend in most other states, production of maple syrup is increasing in Wisconsin. This state has climbed from seventh in 1954 to third or fourth for the past few years.

Part of this increase is due to the fact that production of maple syrup is relatively new in Wisconsin, and they are not tied down with the old system of "this is the way we've always done it." However, much credit must go to Reynolds Sugar Bush, and their two

central evaporating plants that make them the largest maple syrup producers in the world.

But when production increases, someone has to find a market for the product. Adin Reynolds and his two sons, Lynn and Juan, have played an important part in promoting Wisconsin syrup with an annual Maple Festival. This is not a new idea. Other places, like Ohio, have excellent records for their festivals (see Maple Syrup Digest, Jan. 1962).

The Wisconsin Festival was started by Reynolds Sugar Bush with four neighbors helping out. Recently 56 people were employed to handle the 4000 to 6000 visitors. Although this started as an individual affair, they now invite the co-operation of others. There are many other attractions - a syrup judging contest to which other producers are invited to submit entries, food demonstrations involving recipes using maple syrup, equipment displays, and exhibits by local merchants. There is entertainment supplied by the TV station and local talent. There are noted personalities as speakers; the Governor of the State has been a visitor and a feature attraction is the Wisconsin Dairy Queen in "Alice in Dairyland." There was even an antique auto show through the courtesy of Bob Huxtable, the Michigan equipment dealer.

The main attraction is the Pancake Feed - via the production line system. The griddle is 2' wide and 44' long divided into 2 sections. A 36' power driven conveyor runs between the griddles. There are 2 power batter mixers and 4 power batter dispensers which travel on rails above the griddles. Since they use a potato batter, they also need a potato grinder to help in preparing the batter. The eating tent is 120' long and contains 4 full length tables. They can feed 15 people a minute with this set-up.



Air view of Reynolds Sugar Bush during Wisconsin Maple Festival. Photo by Leland Schuler, Burton, Ohio

#### NEWSLETTER

#### by Dr. Willits

#### Maple the Preferred Sirup

How often we are asked. "Do American families still serve food using sirup?" "Has maple sirup (blends or pure) been replaced by other table sirups and what sirup is preferred today?" These questions and many others have been answered in "A consumer Study on Table Syrup" conducted during the fall of 1962 by the Home Makers Guild of America for Owens-Illinois. This recently released report is based upon a survey of a panel of 1000 consultants scattered over the entire U. S. The survey showed that 97% of the consultants serve either pancakes, waffles, or French toast which are eaten with sirup and that more than 50% of the families serve these at least weekly. Eighteen types of sirups were included in the survey but only the data for those of frequencies of 14% or more are reported here. Of the consultants

having sirup in their homes at the time of the survey, 59.6% had maple blends, 51.1% light corn, 32% dark corn, 24.1% buttered sirup and 14% pure maple. Those sirups most frequently purchased were: Maple blend 52%, light corn 12.3%, dark corn 10.8%, pure Maple 8.8%, buttered sirup 7.8%, and cane-flavored sirup ("Mapleine" etc.) 2.9%. The most preferred sirups were: Maple blends 39.8%, pure Maple 17.6%, light corn 13.8%, dark corn 11.5%. The preferred sirup flavors were: pure Maple 67.8%, Maple blend 49.5%, light corn 15.5% and dark corn 42.1%. The replies to "What sirup would you prefer if only one were available" gave Maple blend 39.8%, pure Maple 28.4%, light corn 13.8% and dark corn 11.5%; all other sirups were 9.5% or less.

The frequency with which Maple



blends were purchased and used geographically were: East 56.6%, South 42.8%, Midwest 52.1%, and Farwest 64%. Thus the same pattern exists as in 1953 when it was reported by Hugh Conklin, General Foods Corporation, at the 2nd Maple Industry Conference (1953) that the largest sales of Log Cabin (Maple Blend) were in California and Texas.

These data indicate that the market for maple sirup, especially cane and maple blends, has not been lost to the less expensive table sirups and that pure maple flavor is still the preferred flavor.

## MAPLE SAP DELIVERED TO A CENTRAL EVAPORATOR PLANT-A PROGRESS REPORT

by J. C. Kissinger\*, Lloyd Sipple\*\* and C. O. Willits\*

There is essentially no information available in the literature on the microbial population of maple sap at the time it is delivered to the evaporator house. With the increased interest shown in central evaporator plants and the expansion in numbers of these facilities throughout the maple area, it is of extreme importance that this be known. Since it is well recognized that the quality of maple sirup is dependent upon the extent of fermentation which the sap has undergone and that the magnitude of microbial contamination in the sap at the time of delivery has a pronounced effect on the length of time the sap can be safely stored, the following study was undertaken.

This consisted of a preliminary survey of the effects of various methods of sap collection on the microbial population of sap at the time it is delivered to the central evaporator plant and observation of microbial growth in sap during storage and the effects of such growth on the quality of the sirup produced.

#### EXPERIMENTAL

The maple sap used in these studies was that delivered to a central evaporator plant by the different patrons and represented sap produced under conditions normal to commercial sap production. These included seven suppliers who collected sap in open buckets with covers; two suppliers who collected sap by means of the closed plastic sap by means of the closed plastic tubing systems; and nine suppliers who used a combination of both systems. In all cases, the sap was transferred to hauling tanks in which it was delivered to the plant. SAP SAMPLES

Producers delivery tanks:- Samples of sap were obtained from these tanks immediately upon arrival at the plant and information was obtained relative to the approximate age 8 of the sap.

Evaporator feed tank:- A sample was taken from this tank every 24 hours during the survey period.

The samples were taken aseptically in sterile bottles for microbiological studies. Bacteria colony counts were made on all samples Tryptone-glucose Extract using agar (Difco). (Mention of commercial products does not imply their endorsement by the U.S. Department of Agriculture over similar products not mentioned.) Yeast counts were made on the evaporator feed tank samples using Sabouraud Dextrose Agar (Difco). All plates for yeast and bacteria counts were incubated at evaporator house room temperature (85°-87°F) for 48 hours prior to counting with a Quebec Colony Counter.

All samples were examined for degrees Brix (% sugar) using a Lafayette hand refractometer and the pH of each sap sample was measured using Accutint indicator paper. Sap temperature was recorded at the time of sample.

#### RESULTS AND DISCUSSION

The study was made late in the sap flow season so that it occurred during a period when there was a pronounced rise in daytime temperatures. This permitted the correlation of increased sap temperatures to microbial growth and to the resulting sirup quality. During the period of this study there were sap flows on each of three successive days. The volumes of sap delivered by different suppliers, during this period, exceeded the daily production capacity of the plant so that some of the sap had to be held in storage for as long as 72 hours before it could be processed. During the three days of sap flow, the patrons collected and delivered sap once in each 24 hour period. The average age of the sap from the time it left the tree until delivery at the plant was 18 hours. Average temperatures of the sap in the patrons' tanks at time of delivery each of three days were 38° 46° and 51°F, respectively. The Brix of the sap averaged 2.5° and the pH 6.4. The bacterial populations of sap obtained by the different collection methods are shown in Figure 1. Unfortunately, there was no delivery of sap collected by the tubing system during the sampling period on the first day. However, a comparison of bacteria counts made on sap collected from closed plastic tubing systems on the second and third days indicated that it would have been extremely low. Since the tubing is essentially emptied each day, there was little carry-over of contamination from day to day. The increase in bacteria count in tubing-gathered sap for the second and the third day, even though small could be accounted for in part by the increase in sap temperature and more particularly from contamination from sap left in hauling tanks from the preceding day.

The highest bacteria counts were those in sap collected with buckets. On the first day, the bacteria count in this material averaged 26 x 103 colonies per ml. On the second day, as the average sap temperature rose from 38°F to 46°F, the bacteria count multiplied 6 fold to 160 x 103 colonies per ml. and on the third day, when average sap temperature rose 5°F to 51°F, the bacteria count increased 12 fold to  $320 \times 10^3$ per ml. Temperature increase is not the complete explanation for this large increase in bacterial population. It is well known that during a period when sap flows on successive days, it is a common practice among producers not to empty all buckets and other equipment completely or to sanitize the equipment each day. Hence, a very small amount of the sap collected on the third day was in the buckets, gathering pails or hauling tank 48 to 72 hours. This long "incubation" of bacteria in even a small amount of sapacted as inoculum and accounted for a good part of the very high bacterial populations of the sap delivered on the second and third days.

The sap collected by a combination of the two methods (buckets and tubing) had bacteria counts almost as high as those for sap collected only in buckets.

These results are reasonable, since this sap was exposed to the same conditions of contamination and long storage as was the sap collected in buckets, except for the dilution by the much less contaminated sap collected in the closed tubing systems.

The sample of sap drawn from the evaporator feed tank on the first day represented sap stored for a maximum of three hours and was a composite of the sap delivered to the plant by the different patrons. The sample drawn from the feed tank on the second day represented sap which had an average storage time of 24 hours. The sample taken on the third day represented sap, some of which had been in stand-by storage over 48 hours. Stand-by storage was required because deliveries of sap had begun to exceed the plant's production capacity late on the first day of operation.

The feed tank samples were analyzed for both bacterial and yeast populations. The pH and degrees Brix values remained the same as when delivered namely 6.4 and 2.5°.

The effect of storage on bacterial and yeast populations of sap and the effect of these factors on sirup quality are shown in Figure 2. As would be expected, the bacteria colony count of the first day (3 hours storage after the sap was delivered to the plant) was low and in the same range as the counts on the delivered sap and the yeast count was even lower (1). The sample

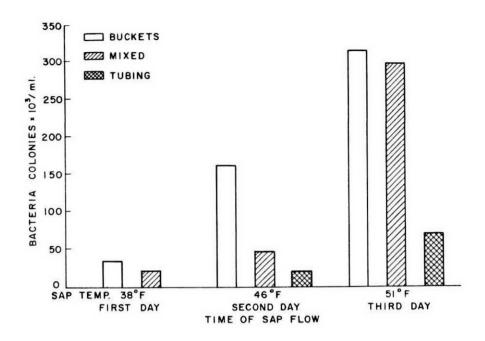


Fig. 1. Comparison of contamination level and temperature of maple sap with sap collection method.

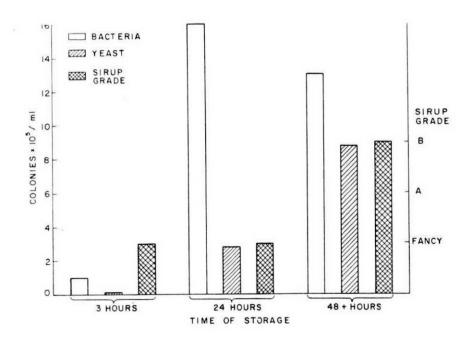


Fig. 2. The effect of microbial population and storage age of raw sap on maple sirup quality.

taken 24 hours later showed a pronounced 14-fold increase in bacteria count with an even greater (28-fold) increase in yeast count. The sample taken on the third day showed a slight decrease in bacteria count, but the yeast count increased 3-fold over that of the previous day and 87-fold over that of the first day.

The sirup made from the sap stored in the evaporator feed tank for only 3 hours (first day) was very light in color and of fancy grade. Fancy grade sirup continued to be made on through the second day from sap stored 24 hours even though the bacteria count increased 14 fold. The sirup made on the third day from sap stored in excess of 48 hours showed a pronounced increase in its color which lowered the grade level to U. S. grade B (New York number 2). Since the bacteria colony count had been slightly diminished from that of the second day, it is doubtful therefore if this darkening was caused by bacterial activity. However, the very large increase in yeast population, between the second and third day, no doubt could be the cause of increased darkening of the sirup. This is compatable with recent laboratory observations (2) which showed that the normal sap bacteria do not attack sucrose, the natural sap sugar, to yield invert sugar which is essential to color formation, whereas it is a well established fact that yeasts do.

This preliminary study strongly indicates that yeasts and not bacteria are involved in the production of dark colored sirup; further the populations of all micro-organisms, including yeast, increase logarithmically with incubation (storage) time.

This study shows that sap, when delivered to the evaporator, cannot be stored for more than 24 hours without danger of producing a dark, low grade sirup, unless the sap is sterilized prior to storage. Therefore, both the evaporator plant manager and the sap producers should (a) observe all sanitary precautions to prevent microbial growth

in the sap (3), (b) hold the sap in storage buckets and tanks for the shortest possible time, preferably not more than 18-24 hours and (c) sanitize all equipment at frequent intervals when the air temperatures are 60°F and above.

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- \*Eastern Utilization Research and Development Division Agricultural Research Service United States Department of Agriculture 600 East Mermaid Lane Philadelphia, Pennsylvania, 19118

\*\*J. L. Sipple and Son, Bainbridge, New York Staple paper items and many printed specialties, including napkins, tape bags of all kinds, candy boxes.

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MAPLE SAP, PLASTIC TUBE GATHERING SYSTEM

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LOWER COST

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### You Just Can't Afford To ChopWood!"

says Roy C. Temple,

Spragueville, N.Y., Maple Producer.

Changing over to oil has enabled Roy Temple to fuel his evaporator for under 43¢ per gallon of syrup. (Based on a price of 15¢ per gallon of oil.)

When figuring his former cash outlay for coal, plus the value of wood used, plus the extra labor demanded for the wood-coal system. Mr. Temple is mighty pleased with his new oil-fired system.

AGWAY PETROLEUM SERVICE (formerly GLF):

- planned the oil burner system
- installed the outfit
- · arranged for fuel storage tanks
- delivered the fuel oil
- provided standby service (but never needed)

of AGWAY PETROLEUM men, Mr. Temple said: "they couldn't have been more co-operative."

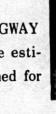
With oil, Mr. Temple enjoys automatic firing, uniformity of heat and rapid boiling.

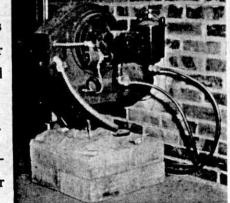
The AGWAY-installed burner is fired with twin six-gallon per hour nozzles. The pan is 5' by 13' and has a cover to remove steam.

AGWAY nearby Call vour PETROLEUM plant for a free estimate for an oil burner planned for your evaporator.

AGWAY PETROLEUM SERVICE

(formerly GLF) Ithaca, New York







#### NOTICE TO EMPLOYEES

Due to poor management by the sales department, namely, sales exceeding production, the management of this establishment wishes to inaugurate a new labor policy. Specifically, it shall consist of the following:

In addition to the customary allowances for late arrivals, coffee breaks, noon hours, rest periods and early departures, we will now have a short work period which will have a duration of only 15 minutes per day for the first week and will in no way interfere with the normal activities of the individual employee, but can be performed at any time convenient to the employees.

The management feels that this system will impose no hardships on the employees and will stimulate production enough to partially pay the salaries of the employees. Furthermore, it now becomes necessary to more strictly enforce a company rule which has been in effect for some time - In the future, all employees found in a prone position and not moving for three or more hours, will be assumed dead and immediately removed from the payroll.

The Management

MAPLE PRODUCTS SELL

BEST IN GLASS

We carry a complete line for syrup-cream-sugar. Send for price list.

M. R. CARY CORPORATION

219 Washington Square **GPO Box 818** Syracuse 8, N.Y.

BURDICK'S SYRUP SUPPLIES Route 21 Andover, New York

Vermont Evaporators Lamb Tubing Complete Line of Supplies



DO YOU KNOW?

1½ Tbs. maple syrup gives 10% of the daily amount of iron needed by a physically active man.

Maple syrup is 64% carbohydrates as compared to 100% in granulated sugar.

Maple syrup may be substituted in recipes for granulated sugar by decreasing the amount of liquid ¼ cup and adding 1/8 tsp. or less of soda.

Maple taffy pulls provide unique entertainment for the teenagers.

Baked beans have a darker, richer color and extra good flavor when baked with maple syrup.

Maple syrup retains its full flavor by freezing; and is delicious when served over ice cream.

Fancy Grade maple syrup is too delicate for cooking. Grade A or Grade B impart more flavor.

Maple syrup improves the flavor of ginger ale or your favorite drink.

Maple syrup which has fermented will not grain to make a sugar cake because of the change in the invert sugar.

Keep opened cans of maple syrup refrigerated.

Sugar-on-snow may be served as a treat year-round. (Finely ground ice or a slab of ice made in an ice cube tray may be used to cool the sugar in the summer time.

MAPLE DIVINITY FUDGE by Mrs. John Bonvouloir, RFD #1 Orwell, Vermont

3 cups maple syrup 2/3 cup white corn syrup 2 egg whites 1 tsp. baking powder

I cup chopped walnuts
Stir together the maple syrup, white com syrup, and boil until it forms a hard ball in cold water or reads hard ball on candy thermometer. Pour over stiffly beaten egg whites, beating constantly. For the last of the cooling use large spoon. When stiffening in texture, stir in baking powder and nutmeats and stir until thick enough to set.

By Betty Davis Department of Agriculture Montpelier, Vermont

MAPLE BREAD
3 cups graham flour
1 cup white flour
1 teaspoon salt
1 heaping teaspoon soda
1 cup sweet milk
1 cup sour milk
1 cup Real maple syrup

1 cup nuts (chopped fine)

HAM LOAF by Mrs. Howard S. Reynolds
Lyndonville, Vermont
2 lbs. ground ham (Daisy roll may be

2 lbs. ground ham (Daisy roll may be used)

1 lb. ground fresh pork

1 cup bread crumbs

1 cup milk

2 eggs beaten

Mix above ingredients thoroughly and bake in covered roaster in 350° ovenabout one hour basting at least four times with the following mixture:

% cup maple syrup 1 tsp. mustard dry

1 tsp. ground cloves ½ cup water ½ cup vinegar ¼ cup brown sugar Garnish with parsley. Delicious cold

Mix all ingredients. Place in two well greased bread pans and bake in 350° oven for 45-60 minutes. After bread is cooled it may be frosted with a cream cheese frosting made by mixing a three-ounce package of cream cheese with one tablespoon of cream, ¼ teaspoon salt and 1 tablespoon maple syrup. The top may be garnished with nuts.

MAPLE YAMS IN ORANGE CUPS by Mrs. Mabel Piette, Richmond, Vermont

Cut 6 large oranges in half; squeeze juice, save shells, remove membrane and discard.

Cook 6 medium sweet potatoes until tender — peel.

Beat in 3 thsp. butter ½ cup orange juice, ½ cup maple syrup, 1 tsp. salt
Dash of pepper

Pile lightly in orange shells. The shells may be scalloped. Set in shallow pan and lightly brown in moderate oven (325°F.) for 15-20 minutes. Serves 12. Remark: Nice served with turkey or ham. MAPLE PARFAIT
2 teaspoon gelatine
4 tablespoons cold water
2 eggs separated
½ cup Real maple syrup
¼ teaspoon salt
½ pint cream

1 teaspoon vanilla

Soak gelatine in cold water and heat in top of double boiler until dissolved. Add egg yolks and beat until light, then add maple syrup. Cook until thick, stirring constantly. Cool and add salt, stiffly beaten egg whites, whipped cream and vanilla. Mix and freeze. Serves 6.



Complete

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INCLUDING New Cream and Sugar Machines, Colored Pottery, Printed Tape, Candy and Sugar Boxes in 7 sizes, Autumn Leaf lithographed cans. Ma-Pel tap hole pellets.

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Sample stickers on request.

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USED EQUIPMENT FOR SALE:

3x12 Vermont, good condition

5x14 Vermont, with steam hoods excellent condition

4x12 Lightning pans, fair condition 2,500 used buckets

Call on us for new and used equipment. Write for new, free catalog. All supplies for syrup makers. Smada Farms, Greene N.Y., Tel. 607-656-8112 days, 4058 nights and weekends. Distributor of Lightning and Grimm syrup equipment.

FOR SALE: 3 steam jacket kettles suitable for finishing syrup, seamless inside. 1) stainless steel, pedestal mounted, 34" diameter, 27" deep, with cover and drain. Excellent condition.

2) aluminum on 3 legs, with cover drain, 39" diameter, 18" deep. Good condition.

aluminum for crane mounting.
 deep, 30" diameter. Fair condition.

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## GRIMM

THE LIGHTNING EVAPORATOR

& LIGHTNING

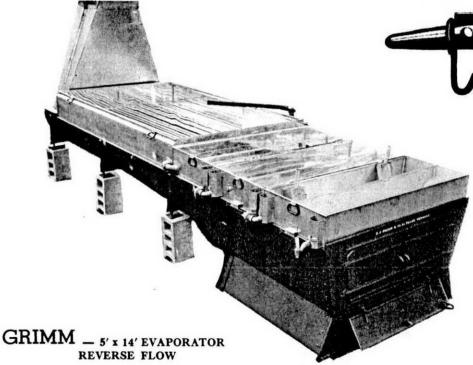
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FILTER TANKS
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THERMOMETERS
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G. H. GRIMM Co. Inc. Box N-110 Rutland, Vt.



Some people don't appreciate the work it always takes
To make a little syrup just to sweeten buckwheat cakes;
But folks who've had the "fun" of making syrup will agree,
That what you make it out of is a long, long way from free.

Now tapping trees, just ain't no fun, no matter what you say;
And now days lugging sap is not considered child's play.

Most men just haven't got a lot of help that they can hire
To gather sap, and split the wood it takes to keep the fire.

So everybody's figurin' ways to save a little time
When sap's a runnin' faster than a jet about to climb:
And that's where LAMB'S equipment fits this picture to a tee,
'Cause when it comes to work, he's just as lazy as can be.

He spends the whole darned year a sittin' in his rocking chair,
A figuring ways to save you folks a minute here and there:
And when it's time to tap your trees, and you've no time to spare,
He's got the whole thing figured out so you won't have a care.

Just put a FLOMOR pellet into every hole you bore, So you can be assured that they will run a whole lot more; And when you see that tubing system work, you'll tip your cap, 'Cause it makes things so easy, even Mom can gather sap.

Now Lamb's ELECTRIC TAPPER is as slick as melted butter;
To get the darned thing started once, you sure don't have to putter
With carburetors, points and plugs, and maybe cuss words too;
Just plug her in and she's all set to go to work for you.

And pumps - now there's no way to tell how many jobs they'll do;
We haven't got just one, we've got all shapes and sizes, too;
And if there's some one certain thing that you can't find yourself,
Just let us know - we've probably got it hid up on a shelf.

Now when we think we got a certain problem all but licked,
We'll sure start worrying for fear we'll get our behind kicked
Because we slipped up on some little detail here or there
That's causing you a heap of grief, but don't think we don't care.

We'd rather have our eye teeth pulled than cause you folks some pain From worrying because you never seem to show a gain; If you've got something eating you, there's only one good rule - -Just set right down and write to that old cuss in Liverpool.

Now this here poetry is only writ to make things rhyme,
And when you read it, you'll agree, it's just a waste of time;
But maybe somehow it will give you folks a laugh or two,
In any case, in closing, here's my best regards to you.

A. C. LAMB & SONS · Liverpool, N. Y.