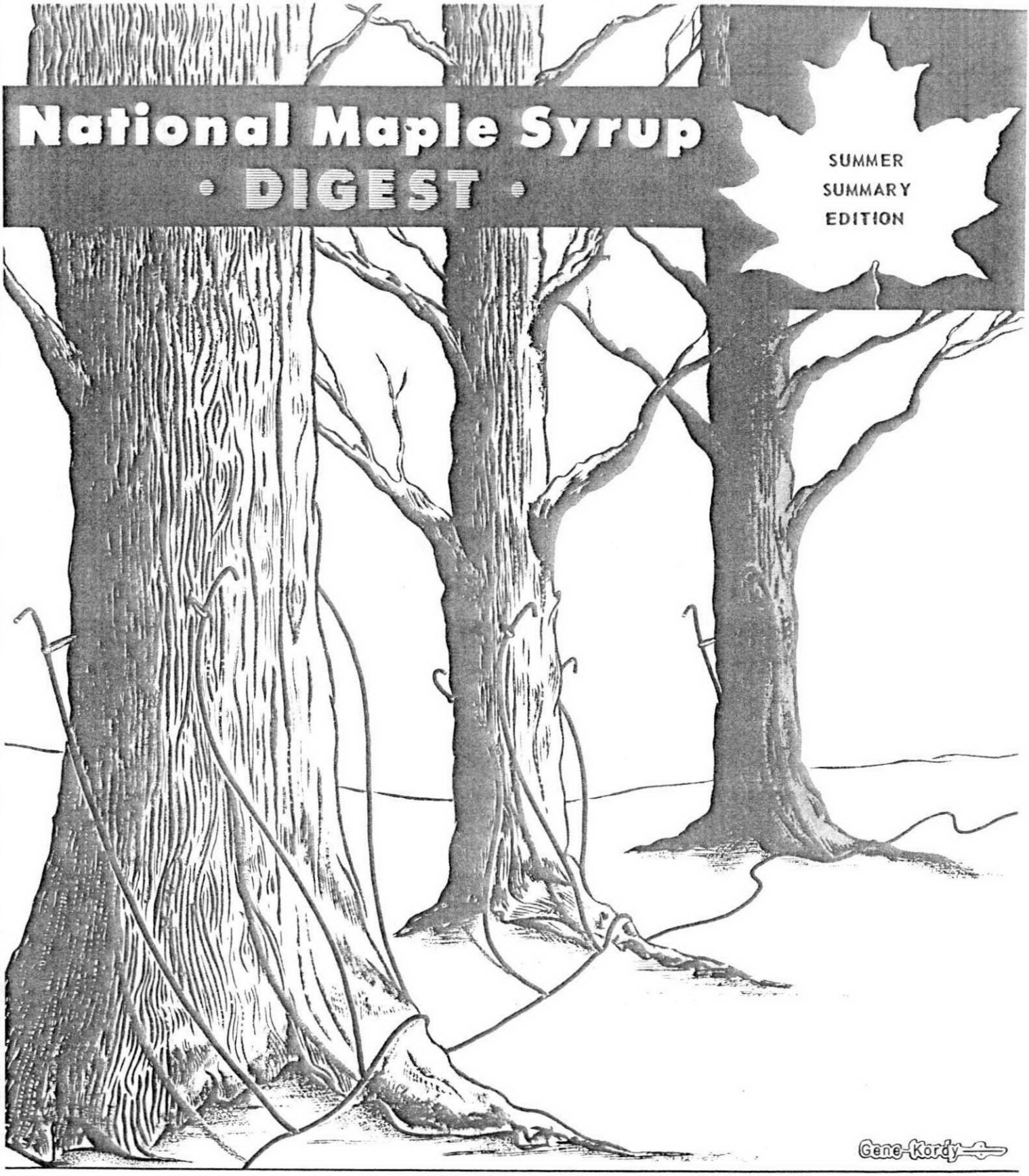
National Maple Syrup
• DIGEST •

SUMMER
SUMMARY
EDITION



Vol. I, No. 3 BAINBRIDGE, NEW YORK JULY 1962

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Drops in the Bucket

Central New York Association is growing this year! (We now have 100) – By the way, did you bring in a new member? The individual members of our state association are the "grass roots" supporting the National Maple Syrup Council. All maple producers should join their local association if the industry is to prosper.

Could it be that the New York figures are conservative? Some estimates put New York production at 600,000 gallons rather than at the 525,000 officially reported.

Central New York has most of the largest producers in the state; two report over 4200 gallons, one over 6,000. The producers making over 1,000 are now too numerous to count! Perhaps we've taken the fear out of being "big"?

One of the Vermont buyers mentioned this year that he "wrote out the largest check to an individual producer in New York" in his company's history. It went to a Central New York member.

Maple syrup has moved out well this year. Common complaints "I don't have enough to go through the summer." "I should have kept back a couple drums more of good syrup." "I can't make maple cream and sugar fast enough." "Who said there was a depression."

Maple Producers' tour will be held on July 31 and August 1, sponsored by the Allegany County Extension Service and the Western New York Maple Producers' Association. Are you coming?

Maple sap sales increased this year here. Many of us wonder what some of the central evaporator setups did in the midwest. Perhaps the "Digest" will have the story.

Some counties have sent out questionnaires on what was discussed in the Maple Schools. Have you returned yours yet?

Maple legislation for changes in the grading law was vetoed by Governor Rockefeller. Objections to the law were raised by the Dept. of Commerce since it required labeling maple syrup and cane sugar blends as "adulterated maple." Good points were the required grading as has previously been requested by your Association. If we are to be equal to Vermont in the eyes of the public, ***we must grade.***

Prof. Fred Winch

Pipelines, Pellets, Pumps

There seems to be the most controversial subjects in the maple industry; why, I don't know. Pipelines, or tubing systems as they are more commonly called, have been cussed and discussed. ever since they came into popular use some five or six years ago.

The tap hole pellet is the smallest piece of maple equipment ever made. Its development took six long years of hard work by Dr. Costilow and Prof. Robbins of Michigan State University under the supervision of Dr. Willits, but according to reports from the field, it stole the show the first year it was used.

Then there are the vacuum pumps, used pretty much experimentally so far, to suck the sap and gas out of pipelines where it wouldn't run out.

Right now, I'd like to give my own summary on each of these items. A tubing system is a complicated thing. It is an intricate network of miles of tubing. So far, no one has perfected one system which works perfectly everywhere partially because there is so much difference in the terrain where maple trees grow. And, partially because of insufficient knowledge of the principles involved. Any tubing system needs one ingredient which must be supplied by the person installing it. That ingredient is common sense. A lot of producers, including myself, have found out if you give tubing a chance to work by installing it in such a way that it can work, the darned stuff will work. And, that goes for level land as well as hillsides.

The pellet is good. It saved the day for thousands of producers this year. It probably will be improved in years to come and may even be be replaced by some material that is more effective, but for the present, it looks as if you just couldn't go wrong by using it. It does the job it was designed to do and does it well.

As for the vacuum pumps, if the sap is to be transported over very long distances where the ground is perfectly level or a little up hill or maybe some rolling or up and down conditions exist, they will solve many problems. However, they are expensive and require much attention. In most applications they are just a cover-up for poorly installed tubing (overloading, insufficent venting, etc.). A good main line is an empty main line and should work regardless of what system is used to keep it empty.

I hope, by now I have you thoroughly confused; at least enough so you won't be too concerned with what I have written. But there is one thing I would like to say before I sign off.

I have received a few requests asking if the "Digest" could publish articles on merchandising maple products in future issues. We probably could, but I don't think maple needs merchandising. What it needs is better distribution. If the "Digest" can help producers make a better product by keeping them informed on modern methods and equipment, the product will sell itself if it is distributed so that the consumers can buy it. Do you realize that if the entire crop produced in the United States was distributed evenly, it would amount to only about one fluid ounce per person.

There is a possibility that the central evaporator plant could solve this problem by producing a large enough volume to pay the cost of extensive distribution. It's something to think about anyway.

The Editor

NOTICE: Advertising Deadline for November issue of the DIGEST is– **OCTOBER 10th**

Closing date for news is – **OCTOBER 25th**

Central New York Maple Producers' Association

The annual meeting of the Central New York Maple Producers' Association was called to order by President Emery Gast at Jack's Restaurant, Oneonta, N.Y., Tuesday, May 8, 1962 at 11:45 a.m. Those present were: President Emery Gast, DeRuyter; Vice President Philip Comings, Bainbridge; Secretary & Treasurer Marcia Gast, DeRuyter; Directors Lloydrick Butler, Andes; William Lawrence, Hunter; Edward Foote, Summit; State Directors, Charles Hager, Bainbridge; and J. Maxon Neal, N. Pitcher; County Agents, William Schumacher, W. Dale Brown and John Vanderwende; Extension Forester Fred E. Winch, Jr.; Murry Benjamin and Lloyd Sipple.

The morning session was conducted as a roll call with each one present being introduced and telling of their experience with tap hole pellets and anything they considered of interest to the maple industry. All who used the pellets were convinced that they definitely got more sap from taps where they were used.

The secretary's report showed 100 1962 members to date.

A motion was made, seconded and passed to raise the membership dues from $2.00 to $3.00 per year. Fifty cents to go to the National Association; one dollar to the State Association and one dollar and fifty cents to the Central Association.

Lloyd Sipple talked about the Maple Producers "Digest." Everyone felt it would be a worthwhile project and hoped to see it continue. The motion was made, seconded and carried for one hundred dollars to be designated for advertising in the "Digest" as seen fit by President Emery Gast.

Extension Bulletin No. 985, "Using Maple Sirup" was distributed. Any member wishing to have some of these to give out with syrup sales may purchase them by placing their order with Charles Hager. Fifteen thousand have been ordered.

Marcia Gast
Secretary

VERMONT MAPLE INDUSTRY COUNCIL

Mr. Lloyd Sipple, Pres. & Editor
National Maple Sirup Council
Bainbridge, New York

Dear Mr. Sipple:

Vol. I., No. I of National Maple Syrup Digest has come to our attention. It is noted that its mailing has included the membership lists of the maple producer's associations throughout the United States, and that such Association members automatically become members of the National Maple Syrup Council. We have been informed that the Vermont Maple Sugar Maker's Association, Inc. has paid the $25.00 annual fee, which establishes its connection with National Maple Council. The Vermont Maple Sugar Maker's Association, Inc. is represented on the Vermont Maple Industry Council, by its president and two other individuals selected by the Association at its annual meeting.

The Vermont Maple Industry Council welcomes the National Maple Syrup Council to the fields of promotion and improvements in the Maple Industry all along the line; better sugar bush management; better production and sanitation practices; better marketing and more intelligent promotion.

The Vermont Maple Industry Council has demonstrated many benefits that can come from such an organization. Our cooperation is yours to command.

An unfortunate statement which appears on page 4 of the "National Maple Syrup Digest," "Effect of closing down operations in Vermont due to unsanitary conditions," needs correction. A very recent survey, leads us to believe that such a statement, whatever its origin, has no truthful foundation. Sugaring operations have been inspected by agents of the Pure Food and Drug Administrations in Vermont and New York, but none have been shut down.

In this connection the Vermont Maple Industry Council has, for a year or more, supported and sponsored a Sanitation Committee which has been active and working closely in meetings with State and Federal Health and Sanitation authorities, and which has resulted in a publication, Vermont Extension Service Brieflet 1069, which has been distributed to Vermont maple producers outlining desirable and necessary practices.

Other activities of the Vermont Maple Industry Council since its organization in 1956 have included, (a) Vermont Maple Week, designated by proclamation of the Governor and supported by the several farm organizations and State Agricultural Agencies. By organizing and encouraging maple festivals, sugar on snow parties and contacts with the ski establishments, poster and Maple Queen contests, with the attendant newspaper and television publicity, favorable attention has been brought to maple products throughout New England. (b) Production of a 28-minute color film (The Miraculous Maple Tree), an authoritative documentary item, which can also be shown in black and white, and is now available from the Vermont Department of Development, Montpelier, Vt. Viewers to the number of 10,000 or more have already seen the film, and its bookings on Television have included showings in 10 different States. We feel that these efforts have a favorable effect upon the maple industry and are a help in the marketing procedures on a national basis.

We do not shrink from calling attention to the accomplishments of the Vermont Maple Sugar Maker's Association, Inc. which had its origin in 1891 and which has been constantly active ever since. Its grass roots inception and democratic construction have resulted in full representation of every producing area of the State by the nomination of directors from every district and their election in annual meetings. Its incorporation has enabled the handling of funds for promotion and sales of maple products at the Eastern States Exposition and other fairs. It has promoted contests in sugar bush management and works closely with the Extension Forestry Agents.

The volume standardization of maple syrup cans of all sizes, and the introduction of the more attractive lithograph styles are directly traceable to efforts of the Association and its committees.

Because of the favorable influence of sugar makers in the General Assembly the proposals of the Association for grading laws and protective legislation had the wise counsel and intelligent treatment which has resulted in legal standards which fit the product and its marketing problems.

Please see that my name appears on your mailing roster.

Sincerely,

Fortis H. Abbott

Fortis H. Abbott, Chairman
20 West Street
Essex Junction, Vermont

EDITOR'S NOTE: The above letter was received too late to make the February issue. It was such an interesting letter and so well explained the stand taken by the Vermont Maple Industry Council in relationship to the National Maple Syrup Council that we decided it must be published.

The statement in the January DIGEST about sanitation in Vermont was a typographical error. It wasn't supposed to read that way and we apologize to the State of Vermont for making this mistake.

Hi Folks! Let's Talk! ...

To me, research in Maple is the most important part of the industry today. There is an ever intensifying effort to cut costs, save labor and improve production and quality while maintaining all past improvements.

I also maintain that an industry, such as ours, which makes an income from maple, or hopes to in the future, should take a place along side research and try to continually contribute to maple through practical experiments. Let's not entirely separate commercial and research interests.

What helps maple helps us all. Let's wake up to a few simple facts and in the same breath, let's forget that we have to agree with each other to progress. A peaceful mind is just about as productive as a fish hook with no bait on it.

The need for a more uniform high quality product across the maple belt is recognized as one of the pitfalls holding back maple progress. A new customer getting a substandard product does not buy again. It's exactly like when I buy butter and it doesn't taste like butter, then I don't use butter!

The well-directed and well-attended maple meetings across the maple belt are doing a great job. However, many states do not have any maple meetings and a large percentage of producers have never attended one. A general education and a meeting of the minds is a must. It is very easy to observe that a state's maple progress is directly related to the effectiveness of its meetings.

Prof. Fred Winch of Cornell University has wonderful attendance at his meetings and tours each year. Fred, in his position, and Dr. Willits in his different position, are, for my money, two of the best men in the maple field at present. These men, one in research; the other, in bringing the research quickly to the farmer, make a good team. Of course, Fred, like his predecessor the wonderful Josh Cope, has built a fine foundation. When the time comes for Fred to retire, I sincerely hope a position could be available that would use his talents for the good of the producers in the U.S.A., the same as Dr. Willits is head of all research.

Maple, in many cases, seems to be the one bright spot in many farmers' work, coming at the time of year it does, it seems to fit in with his program. It adds enough income to make his efforts seem a lot more worthwhile. It takes a lot to keep a farm going, to just break even and live, and extra income is needed. In many areas it is more noticeable each year to watch big dairy farmers cutting down on their herds and expanding their maple operations.

Maple Taphole Pellets

The newly released maple taphole pellet that has been in progress since 1954 and developed under Dr. Willits of Philadelphia; by Dr. Costilow and Prof. Robbins of Michigan State at East Lansing, Mich. is in my opinion the greatest single step in the maple industry in the past 50 years. The pellet was released by the U.S. Dept. of Food and Drug just before this past season, in time to get a large number out and I estimate that one out of every three tapholes in the maple belt had a pellet in it. By these numbers you can see the pellet had a wide general test and nothing speaks better for a product than results. Just about everyone feels that the pellet is a much needed item to insure a full flow of sap whenever the weather permits and to help stabilize the income of the industry. It has accomplished this need.

Some users contribute their entire sap flow to its use this season. In their case, their runs came late in the season and those tap holes that did not have the pellet did not run. Other maple producers that had an ideal season say that they could see no difference in the forepart and middle of the season, but with the pellet, the flow continued and in most cases the quality of the sap in the latter part of the season, was much better than they had ever before experienced.

In a few areas the weather failed to cooperate to create much of a sap flow and about all the pellet users could tell you is, that when the weather was right the tap holes seemed to flow well.

Dr. Costilow summed up the entire purpose, need and his expectation from both those that make and those that use the pellet.

1. The present pellets will very likely be improved.
2. Pellets should be inexpensive so that their cost will not effect the production cost.
3. Pellets should insure a full flow of sap, weather permitting, at any time during the season.

Drum Syrup Sales

All too often we do not appreciate or realize the importance of the bulk syrup buyers to the maple producer. They are insuring a market for maple syrup and are the very economic backbone of the industry. What would happen if suddenly they stopped buying syrup or spending large sums of money on advertising and general maple promotion? We have to admit that these big companies pay an adequate price resulting in a good profit to any average, efficient maple orchard operation!

Central Evaporator Plants

I feel that the greatest need in the maple industry for its general progress and to fill its unlimited, unexploited market is more central evaporator plants.

I base the following explosive, contradictory statements on my minimum of 40,000 miles driving per year in the maple belt during the last few years.

Many big evaporator plant operators are paying more for sap than they can afford to and still prosper.

(Continued on page 8)

SUMMARY OF A

A seminar meeting was held at the University of Vermont on June 27 and 28, to discuss research data on pipeline pellets and central evaporation. The day and a half meeting included one session on each subject. On June 27, in the morning session, A. R. C. Jones presented data from the Macdonald College (McGill University) experimental sugar bush for the seasons of 1959, 1960 and 1961. R. W. Morrow presented data from the Cornell experimental bush and Mary Lighthall discussed experiments from the University of Vermont Proctor Maple Research Farm. Following the papers there was a general discussion. Later the speakers summarized the session as follows:

Pipeline Summary

The flow of sap through tubing is affected in two ways:

1) The effect at the taphole.
2) Effect of the line on flow (i.e. transportation).

Tubing is at least as good or better than other sap collection systems to take sap from the tree presumably because of (1) quicker thawing of the taphole and (2) reduction in infection. The 18-inch drop or some other reasonable drop system best serves the purpose and seems to yield the most sap presumably because it prevents reabsorption. On occasions, under certain microclimatic conditions, lines dropped to the ground may exceed the yield from the intermediate drop system.

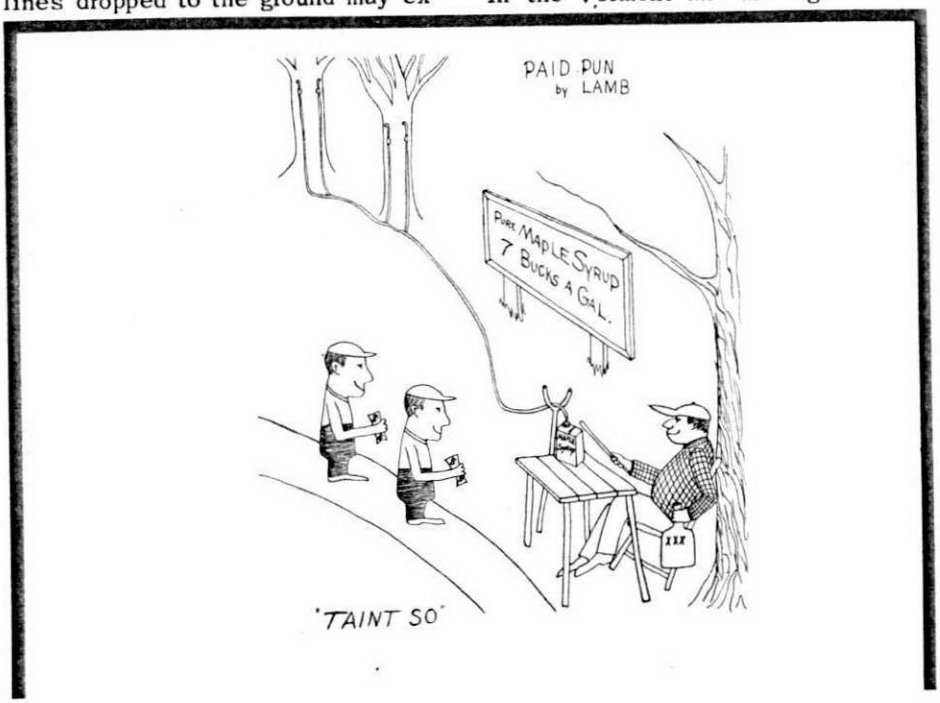
Secondly, with regard to the transportation of sap in the line, any obstruction such as a gas lock or ice plug in the line will reduce flow. Use of a perfectly graded gravity or a vacuum system apparently yields equal and maximum flows (providing the line is not overloaded). On other lines on flat or uneven ground and in weeping flows even in hillsides, yields may be reduced. The venting question still remains partly unanswered. Little research has been reported on the quality of sap obtained from the various sap collection systems.

Finally we are all agreed that pipeline is a very useful tool that requires local adaptation and intelligent use, and the potentialities of pipeline are not yet fully exploited.

In the afternoon session on the effects of pellets, Prof. Morrow, Prof. Graham Jones, Mrs. Lighthall and Prof. Costilow presented research data on the effects of taphole "sterilizers" on sap production. Prof. Costilow reviewed the development of the paraformaldehyde pellets. In the Thursday morning session, Prof. Costilow summarized the information presented the previous afternoon. In his view there was an increase in yield due to the use of the paraformaldehyde pellets shown in the Vermont and Michigan data. He discussed the influence of microorganisms on the amount and quality of the sap. Their growth depends on many factors; for example in a cold season they may not grow and and the disinfectants may not have any effect, but in a warm season the microorganisms stop sap flow and "dry up" the tapholes. He also pointed out that paraformaldehyde pellets could be improved and that further research might produce compounds that would be more desirable as disinfectants. Observation based on relatively few tapholes at Cornell and at Vermont for the 1961 season indicates some damage around the taphole due to the pellet. Prof. Robbins from Michigan State found no effect on the vigor and growth of the trees treated with paraformaldehyde pellets.

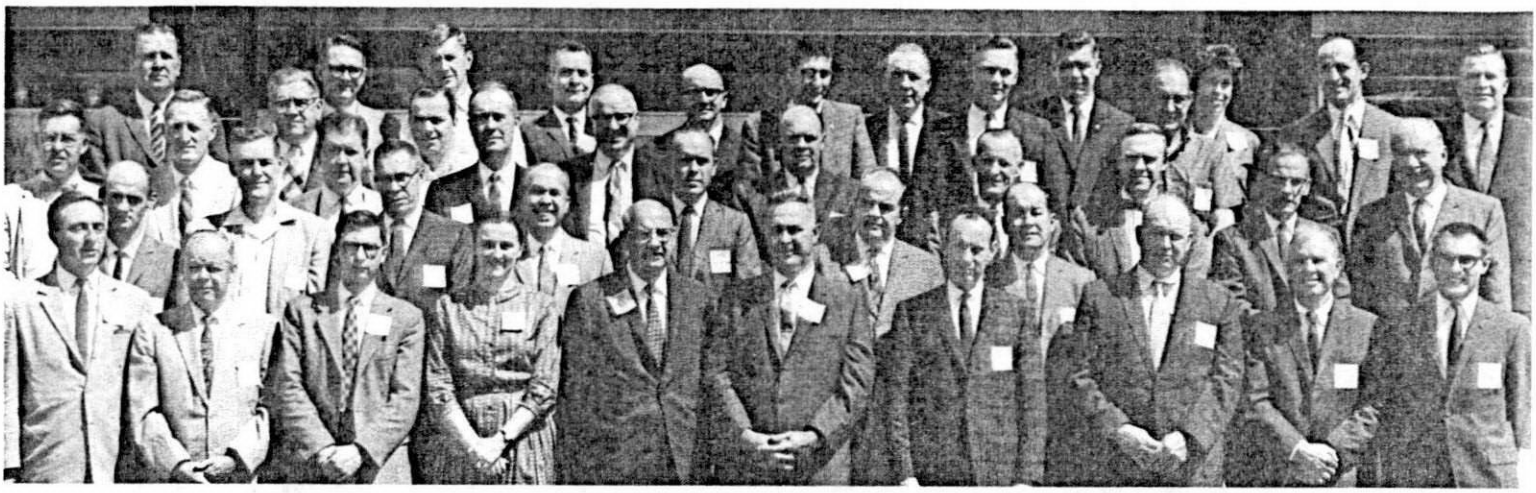
The economic feasibility of a central evaporation plant was ably discussed by Dr. Jerome Pasto of Penn State. He gave the data on costs for three sizes of plant, and found that after all costs were considered, a farmer could sell sap to such a plant at a profitable figure. Fred Webster of U.V.M. presented some preliminary findings from eight Vermont operators who buy sap. In addition to these formal talks many entered into the discussion and offered their experiences and opinions. Based on these comments, it must be concluded that there is much interest in central evaporation and the extension of maple operations through the use of pipelines.

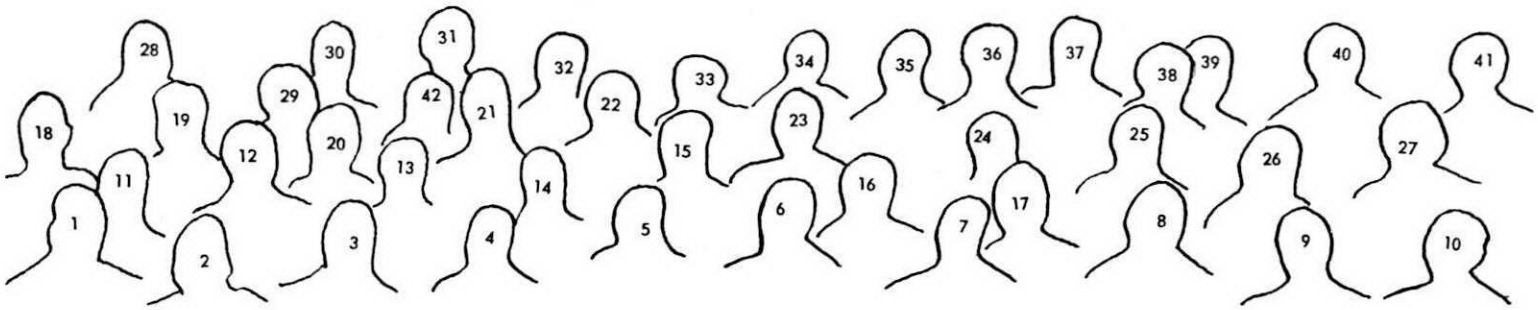
The meeting was sponsored by the Botany Department of the University of Vermont. Its purpose was to bring together the people actively engaged in research to discuss their results and to have the state extension foresters present to take part in the discussion. The manufacturers of pipelines and pellets were also included so that they might benefit from the discussions of the research work that has been done. To further this purpose the General Foods Corporation and Penick & Ford Ltd. paid the expenses of the participants. Thomas E. Dowe, Director of the Vermont Agricultural Experiment Station, acted as moderator throughout the meetings. The luncheon on Wednesday was sponsored by the Vicksburg Chemical Company.



APLE SEMINAR

University of Vermont
June 27-28, 1962





1. John Harley, Penick & Ford, N.Y.C.; 2. J. Clyde Underwood, U.S.D.A., Phila.; 3. Graham Jones, Macdonald Coll., Quebec, Canada; 4. Mary Lighthall, Univ. of Vt.; 5. C.O. Willits, U.S.D.A., Phila.; 6. R.N. Costilow, Mich. State Univ. Extension Service; 7. T.A. Peterson, Univ. of Wisc.; 8. Ture Johnson, Ohio Forest Service, Burton, Ohio; 9. James Martin, Univ. of Vt.; 10. Sanford Witherell, Univ. of Vt.; 11. Lloyd Sipple, National Maple Digest; 12. Fred Webster, Univ. of Vt.; 13. Morris Sills, U.S.D.A., Phila.; 14. Jerome Pasto, Penn State Univ.; 15. William Cowen, Extension Service, Ohio State Univ.; 16. Howard Taylor, Vicksburg Chemical, Newark, N.J.; 17. John Buist, Minnesota Mining & Mfg. Co. of Canada, Ontario; 18. Fred Winch, Extension Service, Cornell Univ.; 19. A.R.C. Jones, Extension Service, Macdonald Coll., Canada; 20. Lester Bell, Extension Service, Mich. State Univ.; 21. Marvin Smith, Extension Service, Univ. of Minn.; 22. Roy Gavin, Minnesota Mining & Mfg. Co.; 23. Mr. Rappleye, Minnesota Mining & Mfg. Co.; 24. Roch Delisle, Dept. of Forestry, Quebec City; 25. E.P. Farrand, Extension Service, Penn State University; 26. Jacques Tardif, Dept. of Agricul., Quebec City; 27. Robert Todd, Minnesota Mining & Mfg. Co., Ltd. of Canada; 28. George Wailliers, Quebec Dept. of Agricul., Quebec City; 29. Al Snow, N.E. Forest Experiment Station, Vt.; 30. Edgar Stinson, U.S.D.A., Phila.; 31. Robert Morrow, Cornell Univ.; 32. Thomas Dowe, Univ. of Vt.; 33. Fred Laing, Univ. of Vt.; 34. Gene Stifter, Minnesota Mining & Mfg. Co., St. Paul, Minn.; 35. Lester St. Peter, United Maple, Vt.; 36. Robert Whitenack, Minnesota Mining & Mfg. Co., St. Paul, Minn.; 37. Mr. Szymujko, Extension Service, Univ. of N.H.; 38. Robert Lamb, A.C. Lamb & Sons, N.Y.; 39. Jane Wark, Univ. of Vt.; 40. Harry Sawyer, Univ. of Vt.; 41. J. Pomerleau, Dept. of Agricul., Quebec City; 42. James Minogue, General Foods Corp.

SUGAR SAND RESEARCH – June 1962

John Hacskaylo, D. Robert Davis, and James Gallander
Ohio Agricultural Experiment Station, Wooster, Ohio

A research program has been in progress at the Ohio Agricultural Experiment Station since 1959 to evaluate some environmental and chemical factors that affect sugar sand formation during the production of maple syrup. This work is being supported by the U.S.D.A. through the Eastern Regional Research Laboratory at Philadelphia.

One of the main objectives is to study and evaluate the effects of the relative exposure (north, south, east and west): relative elevation (high or low); and relative soil texture (light or heavy) of the sugar bush location on the amount of sugar sand formed during the first, middle, and last run over a period of three seasons. Another objective is to chemically and physically analyze the sugar sand formed at each of these locations to determine its composition and relate this to the environmental factors.

The data collected during the 1959 and 1960 seasons indicate (1) that there is a higher amount of sugar sand deposited from the sap of sugar bushes located on the northern slopes and sugar sand formation is lowest on the southern slopes; (2) there is not significant difference in the amount of sugar sand deposited from sugar bushes located on relatively light or heavy textured soils; (3) sugar bushes on relatively high elevations produce more sugar than those at lower elevations; (4) as the season progresses there is a significant increase in the amount of sugar sand formed, and (5) as the amount of sugar sand formed increases, the percentage of calcium and malic acid in the sugar sand also increases.

The results obtained to date are based on the 1960 and 1961 seasons. The 1960 season was poor for sap production. The 1961 season was short but very good and the data will be included in a later report.

Let's Talk! (Continued)

All across the area, more of these people are expanding their own maple sap collecting set ups as well as buying amounts of sap which may equal their own production. When I ask them why they don't cut down their own collections of sap and buy more, the answer is simple and straight: "We can't afford to, we can produce sap much more cheaply than we can buy sap at what we are paying."

I can't help but wonder if things in this case aren't just a little out of line. I think we have room for many more central evaporator plants, but I cannot see where there will be adequate expansion of these plants until there is a greater incentive for those that will build and run them. Of course in other areas, the price of sap is better balanced and both parties are happy.

Maple Tubing

Through the years, a lot has been found out about collecting maple sap through plastic tubing. I feel at this time, that the basic fundamentals have been mastered. As a result of the cooperation of the entire maple industry, we can stand on our feet, favorably, against any other method. The basic problems at present are:

1. Make all of our tubing installations work better.
2. Strive to attain a simpler, and easier method of installation and fundamentals essential for beginners to get top results.
3. Last, but not least, we must ***never*** cease our practical field experiments. The suggestions that came out of the field this past season have caused us to enter into our largest test program for next season. They are basic, down to earth, sound ideas which should lead to a simpler and more efficient system.

Through the years our customers have come to the general conclusion that all 5/16 tubing works best. For this reason we are offering a change-over program. We will take back any ***Lamb*** ¼" tubing and ¼" fittings and supply the 5/16" setup at a reasonable figure. If you have any ***Lamb*** ¼" tubing and you wish to exchange it, let us hear from you.

Well, if you have read this far, thanks a lot. I'm in Canada at my little fishing camp. The shadows will soon be lengthening and the bass should be hitting around the dead logs and water lily pads. There is nothing better than a skinned bass cooked over an open fire, sizzling in two inches of bacon grease in a cast iron fry pan. Besides, I just can't remember how I got here or what I try to do to make a livin'. There are all kinds of trees around this little camp, and it's a swell day. It's a little late in the season for much Whipporwill music, but some are still calling at dusk.

This is just one guy's opinion, and to keep the "heat off the National Council," I'm paying for the space to print it!

Bob Lamb

MAPLE AIDS IN BETTER LAND USE PROGRAM

C. O. WILLITS
Eastern Regional Research Laboratory*
Philadelphia 18, Pa.

The maple sap-syrup crop in Maine, New Hampshire, Vermont, New York, Massachusetts, Pennsylvania, Ohio, Michigan, Wisconsin, Minnesota and Maryland, is providing a substantial source of income to supplement those derived from other farm crops and dairying. Often it produces the largest source of farm income with per acre grosses of $50-250. This income is obtained during a very short period (4-6 weeks) from uncultivated, unfertilized, natural stands of forest or wood lot trees.

To realize the income from these trees in the past, has required a capital investment that is sizable in terms of the farm operation found in maple areas. This investment included the costs of spouts, buckets, covers, tapping tools, sap collecting and haulage tanks, roadways in the woods, storage tanks, an evaporator, evaporator house, filters and numerous miscellaneous items. For a 1,000 bucket operation this amounted to $8-10,000. In addition, each farmer had to be well versed in the technology of syrup making. On farms with adequate stands of trees, these two factors, as well as the large and fluctuating labor requirement for sap handling, have been responsible for the fact that only 1 out of 20 tappable trees have been utilized for syrup production.

The Central Sap Evaporator Plant

During the past few years substantial advances have been made in the maple industry; the establishment of central sap evaporator plants being the outstanding development. These plants can vary in capacity and an average-sized one, serving a community of 15 to 20 maple producers within a radius of 15-20 miles, would require a capital investment of approximately $20,000. This is no more than that required for 3 or 4 evaporators and houses when installed on the individual farms.

The relatively low-cost central plants will provide year-round employment for one or two families, especially if used to make confections and other products. It will also provide temporary employment for several others during the sap season and other rush periods during the year—all at good wages. A recent study conducted at The Pennsylvania State University by J.K. Pasto, Professor, Rural Economics, showed that the central sap evaporator plant is economically sound

(Continued on page 10)

*Eastern Utilization Research and Development Division, Agricultural Research Service, U.S. Dept. of Agriculture

EXCERPTS FROM BULLETIN NUMBER THIRTEEN — Fortis H. Abbott

New Council Member

Most recently elected member to the Council is Lester C. Brown of Williston. Lester is manager of the Leader Evaporator Company of Burlington. He replaces Alton Lynde, whose death was mentioned in Bulletin Number Twelve. He represents the Equipment Manufacturers on the Council.

Roadside Sign – V.M.S.M.A.

Through the efforts of Clyde Bryant, a sign for use of members of the Association is finally available. Made of strong metal, and lithographed on both sides with an enlarged reproduction of the Association Can, the sign can be hung in front of sugar makers' homes. Its cost is only $7.50, rather than the $8.50 that had been expected. It is hoped that this will be a symbol of quality Vermont syrup, and that no low grade syrup will be sold where it is displayed.

It is hoped that in the future similar, but larger signs, placed at entrances to the state, will call the tourists' attention to such sources of good syrup.

Those using the sign agree that, if in the future they go out of the maple business the sign will be returned to the Association.

New Officers – V.M.S.M.A.

An almost complete new slate of officers was elected by the Vermont Maple Sugar Makers Association at its annual meeting in Barre on February 13. Elected as President was Eric Nye of Georgia (RFD 3, Milton), The new Vice President is Howard Foster of Salisbury. Other officers are: Mrs. Kimball (Margaret) Igleheart, Greensboro, Secretary-Treas.; and Kimball Igleheart, Leon Edgerton, Clair Lovell Jr., Merton Pike, and John Smith, members of the Executive Committee.

Eric Nye will join the Council at its next meeting as Association President. Other delegates to the Council from the Association are Kimball Igleheart of Greensboro and E. Frank Branon of Fairfield.

Plans for maple activities at the Girl Scout Jamboree at Button Bay in July were coordinated by Betty Davis of the maple market promotion project. These include:

1. Construction of a sugar house at the Village Green of the encampment. This will be used as an information booth and as a place to demonstrate maple equipment and methods.
2. Pure syrup for one breakfast. Individual sugar makers and packers have donated about 250 gallons of syrup for this breakfast from all counties thru the V.M.S.M.A. Robert Coombs will package it in the 24-oz. bottles which will be placed on the tables at Button Bay.
3. Log Cabin (15% blend) syrup for one or more breakfasts. Donated by General Foods Corporation.
4. Maple candy in the form of the Girl Scout "Trefoil" badge to be sold at the commissary by the Girl Scouts. Provided by United Maple Products, Inc.
5. Pure maple syrup to be sold at the commissary by the Girl Scouts. Provided by United Maple Products, Inc.
6. General Foods Corp. will make a movie of the entire Jamboree for showing on television nationally.
7. Betty Davis will assist Girl Scout groups with preparing and giving demonstrations having to do with the maple industry.

Maple Queen

Jean Howrigan of Fairfield completed a very successful year as Vermont Maple Queen on February 13, the occasion of the Annual Meeting of the Vermont Maple Sugar Makers Association. At this time a new maple queen was chosen by a panel of judges consisting of Elmer Towne, Commissioner of Agriculture; Thomas Dowe, Director of the Vermont Agricultural Experiment Station; Paul Winters of the Vermont Department of Development; and Ann della Chiesa of the Burlington Free Press. The new queen is J. Carol Brown of Wilmington, a sophomore at the University of Vermont (Liberal Arts). Carol was chosen from among 13 candidates. Runners-up were Helen Thurber of Lilac Ridge Farm, Ames Hill Road. Brattleboro; and Elma Jean Chapman of South Wallingford.

Carol has seen service as receptionist at the Coombs sugar house at the juncture of Routes 8 and 9 in Wilmington. She has also won the title of Miss Vermont Agriculture. She will be a very able representative of the Vermont maple industry during 1962.

Maple Sanitation

The Committee on Maple Sanitation reported on its activities at the January meeting of the Council. Chairman Phil Bisbee stated that:

1. The Committee had met with Mr. Nevis Cook of the Food and Drug Administration office in Boston. He had outlined the problems which needed to be solved. The Committee had agreed to take necessary action.

2. A Publications Committee had been appointed, with Ray Foulds as Chairman, Betty Davis, and Comador Jaques of Huntington. The Committee prepared a leaflet, which was published by the Vermont Extension Service at U.V.M. as Extension Brieflet No. 1069. The title was "Vermont Maple Syrup. Let's Make It Better."

3. The new Brieflet was sent to all sugar makers through the offices of the County Agents. It was also given out and discussed at most of of the County Maple Meetings held in January. It was also available at the Vermont Farm Show. Additional copies are available from the Bulletins Office at Morrill Hall, U.V.M., Burlington.

4. A copy of the new brieflet was sent to Mr. Cook. He replied that it set forth the suggestions which were needed.

Commissioner Towne suggested that a Vermont maple sanitation law might be desirable. There are milk sanitation laws but nothing on maple. This matter was referred to the Council's Legislative Committee, of which E. Frank Branon of Fairfield is Chairman. Other members are C.

(Continued on page 11)

MAPLE & LAND USE (Cont'd)

both for plant management and for the sap supplier.

Factors which have made possible the development of central evaporator plants and which, in turn, encourage the increased use of maple trees, are improved methods of sap harvesting, transportation, sanitation in the woods and evaporator house, and improved methods of sap processing. New instruments and automatic devices insure quality control of the finished product.

Sap Producing Farms

In providing a market for sap the central plants have made sap a salable commodity for the first time and have brought about a separation of sap production from sap processing.

Currently 40-60% of our domestic production is sold as pure maple products—syrup and confections. These are sold directly from the farm to the consumer. The remainder and imports are being used to produce maple-cane blended table syrups which represent 25% of our domestic table syrups and are competitive with other syrups.

The introduction and development of plastic tubing for the collection of sap at the taphole, and its transportation by gravity to the storage tanks, has made the production of maple sap feasible on all types of terrain, including very steep hillsides. The cost of the tubing per taphole is about $1.05, which is approximately the same as that required for the older bucket type equipment. However, the use of the tubing has many added economic features such as elimination of (a) expensive roadways in the bush, (b) all of the hand labor of sap collection which accounted for 40% of the labor of syrup making, (c) haulage equipment in the woods, and (d) almost insurmountable hardships of sap collection in woods with 2-plus feet of snow. In addition, use of tubing enables production of more sap of higher quality because it affords an aseptic closed system.

Another and even more important development in sap production is the germicidal pellets for use in tapholes to prevent the premature drying of tapholes and thereby extend the production of high quality sap-syrup. These, and other research advancements, have now made it possible for a farmer to operate a large 1,000-5,000 tree sap farm without additional help. Incomes that are now derived from sap production vary from $.50 to $1.90 per taphole with an average close to $1.00. Per acre incomes of $50.00 to $150.00 are common.

In many instances, in those areas where dairy farms are also sap producing farms, maple produces the necessary additional incomes to keep the farms solvent. This occurs in all maple states including Wisconsin and Michigan.

In other areas, many of the farmers depend on part-time jobs which have all but disappeared, and the farms are being abandoned because of their low productivity. In numerous instances 50% of the farms have been lost in the past 10 years. Fortunately, in such areas as West Virginia, Southern Indiana, and Central New York these farms have abundant stands of maple trees of tappable size. The utilization of these maple trees in depressed areas could do much toward their redevelopment.

Unfortunately, the farmers often lack even the small capital to establish the central plants for sap evaporation, as well as that needed to equip their farm woods with tubing, and to purchase storage and hauling tanks necessary for the production of sap. Therefore, it will require that necessary capital, though small, be made available. In addition, an extensive educational program must be conducted to acquaint these farmers with the necessary knowledge of sap handling and processing.

FIFTH MAPLE INDUSTRY CONFERENCE

United States Department of Agriculture
Agricultural Research Service
Eastern Utilization Research and Development Division
600 East Mermaid Lane
Philadelphia 18, Pennsylvania

October 23 and 14, 1962

MONDAY, OCTOBER 22 – The National Maple Syrup Council will meet at the Eastern Regional Research Laboratory.

TUESDAY, OCTOBER 23 – **Welcome** – P.A. Wells, Director, Eastern Utilization Research and Development Division.

Introductory Remarks – C.O. Willits, Head, Maple Investigations, Eastern Utilization Research and Development Division.

An Economic Appraisal of the Central Plant for Sap Evaporation – Prof. J.K. Pasto, Pennsylvania State University.

A Model Central Evaporator Plant – R. P. Mears, Plant Manager, General Foods Corporation, Evart, Michigan.

Twelve Years of Extension Work with Maple Sirup Producers – F.E. Winch, Jr. Extension Forester, Cornell University.

The National Maple Council – L.H. Sipple, Bainbridge, New York

Wisconsin's Maple Industry and Its Growth – Adin Reynolds, Aniwa, Wisc. and T.A. Peterson, Extension Forester University of Wisconsin.

Panel Discussion – Sanitizing Pellets for Tapholes – R.N. Costilow and P.W. Robbins, Michigan State University.

WEDNESDAY, OCTOBER 24–Fall Tapping of Maple Trees – N.E. Beabes, Hooversville, Pennsylvania

Factors Affecting Sugar Sand Formation – J. Hacskaylo, Professor, Department of Forestry, Ohio Agricultural Experiment Station.

The Maple Research Program at the University of Vermont – J.W. Marvin, Head, Department of Botany, University of Vermont.

The Maple Research Program at Macdonald College – A.R.C. Jones, Macdonald College of McGill University, Province of Quebec, Canada.

Concentration of Sap by Freezing – E. E. Stinson, Eastern Utilization Research and Development Division.

Maple Tree Diseases – M.E. Fowler, U.S. Forest Service, Upper Darby, Pennsylvania and D.R. Houston, Plant Pathologist, U.S. Forest Service, New Haven, Connecticut.

Microbiology of Maple Sap – A.E. Wasserman, Eastern Utilization Research and Development Division.

Laboratory Exhibits

Chairmen of Program are: Tuesday a.m.– L.H. Sipple; Tuesday p.m. – T.A. Peterson; Wednesday a.m. – J. W. Marvin; Wednesday p.m. – F.E. Winch, Jr.

Well Folks, The MAPLE SYRUP DIGEST Is Broke!

As you will notice, we have sold practically no advertising for this issue. We went ahead and published it anyway, because we felt it must be continued and we have enough faith in the maple industry to stick our neck out a little further.

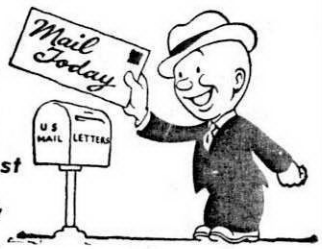
In the last issue, there was a little item hidden in the editorial asking for donations. We received many, some for considerable amounts. A lot of people must like the Digest enough to feel it's worth a dollar to keep it going.

Bob Lamb has offered to pay the entire cost if necessary, to keep the Digest in business. I can see no reason to take advantage of the guy though, just because his heart is in the right place.

If you think the Digest will help you, why don't you help the Digest?

Send your dollars to:

The Maple Syrup Digest
Bainbridge, New York



AN EXPLANATION

Why Lamb has so much to do with The MAPLE SYRUP DIGEST.

No. 1—We believe in Maple.

No. 2—We believe that the Maple Industry, to prosper, must have an organization such as the National Maple Syrup Council.

No. 3—We believe that the Maple Industry must have a common voice to unite its people; a link between research and production.

No. 4—We believe that as a unit we can prosper and our voice can be heard sufficiently to gain recognition whenever needed.

No. 5—We believe there is no other means, as reasonable or direct, to contact maple producers through advertising, and in a very short time all maple equipment suppliers and manufacturers will recognize this fact and apply for space in the DIGEST.

Many local dealers are planning to place ads in the DIGEST. Even though they cover only a small area, there is no cheaper way to contact their local customers.

The Editor, Lloyd Sipple, receives no pay for the work he has done on the DIGEST. Neither has he received much cooperation in compiling the material which it contains. The least we can do is help him pay the bills. ***Bob Lamb***

CLASSIFIED

LIGHTNING EVAPORATOR and Syrup Equipment, New – Used. Let us prove Lightning is the fastest evaporator sold. READ ADAMS, Greene, N.Y.

FIRE WITH OIL: Clean–safe–economical. Also cuts labor costs. 12 years experience in evaporator oil firing. LES JONES, Holcombe, Wisconsin

FOR SALE: Stainless Steel Sap Holding Tanks, 1000 to 1500 gallons, rectangular–self draining.
M.R. THIBAUDEAU, Luxemburg, Wisc.

FOR SALE: Stainless steel and glass-lined Storage Tanks for sap and syrup, with stereo lamps, any capacity. Also boilers and preheaters. Reduce your evaporating time by 1/3 without box tube heaters. TINKER SALES, INC., Box 32, Elmwood Sta., Syracuse, N.Y.

Advertising and News Articles for January issue of DIGEST must be received by November 20th.

RECENT PUBLICATIONS ON MAPLE PRODUCTS

BY

EASTERN UTILIZATION RESEARCH AND DEVELOPMENT DIVISION
U.S. Department of Agriculture
600 East Mermaid Lane
Philadelphia 18, Pa.

An Analysis of the Open-Pan Maple-Sirup Evaporator. Strolle, Eugene O.; Roderick K. Eskew and Joseph B. Claffey. U.S. Dept. Agr. Circ. ARS 73-14 (October 1956)

Scale in Maple-Sirup Evaporators...How to Remove It. Underwood, J.C. and C. O. Willits. Agric. Inf. Bulletin No. 203 (1959)

Maple Sirup. XIII. Sterilizing Effect of Sunlight on Maple Sap in Transparent Tubes. Frank, H.A. and C.O. Willits Appl. Microbiol. 8, 141-145 (1960)

Determination of Malic Acid in Maple Sirup. Willits, C.O. J. Assoc. Offic. Agr. Chemists 43, 642-4 (1960)

Measuring the Sugar in Maple Sap and Sirup. Willits, C.O., H.A. Frank, and J.C. Underwood. U.S. Dept. Agr. Circ. ARS 73-28 (August 1960)

Maple Sirup. XIV. Ultraviolet Irradiation Effects on the Growth of Some Bacteria and Yeasts. Schneider, I.S., H.A. Frank and C.O. Willits. Food Research 25, 654-62 (1960)

Next issue we will publish additional publications available.

EXCERPTS FROM V.M.S.M.A.

(Continued)

Arthur Parker of Danville and Frank Rees of Burlington.

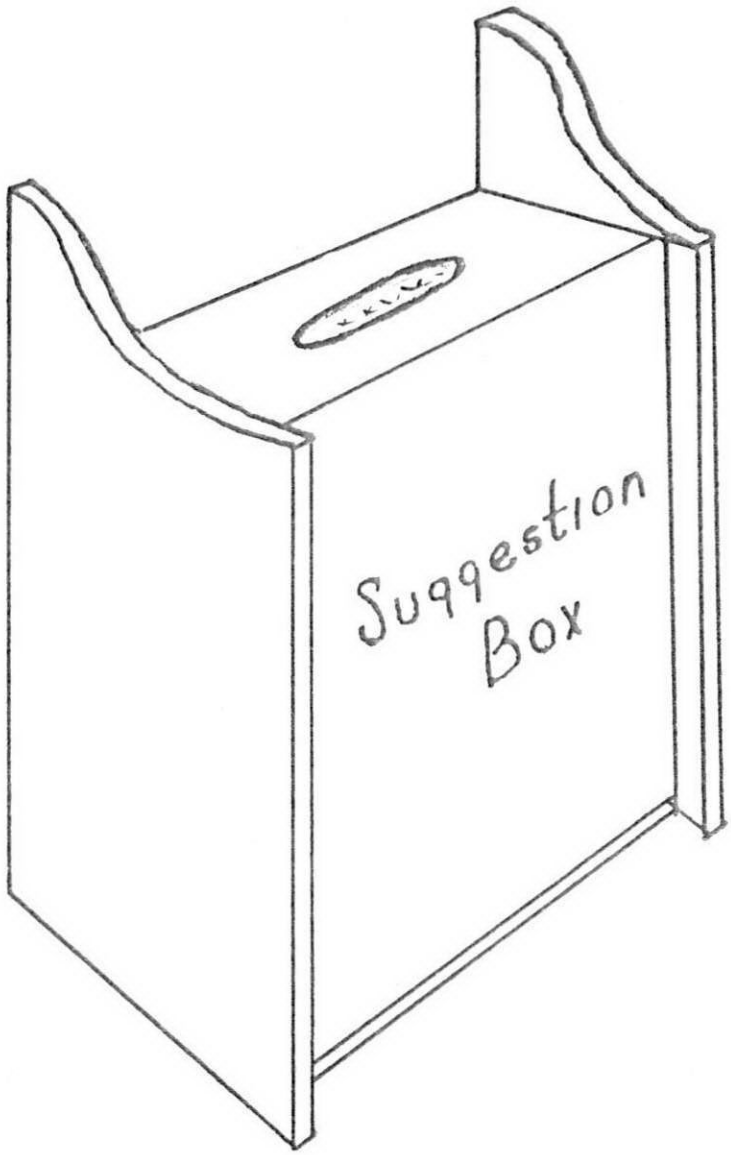
Sugar Bush Management

The Vermont Maple Sugar Makers Association has appointed a Sugar Bush Management Committee. Chairman is Frederic P. Elwert of 19 Crescent St., Rutland. Other members are Alston Ham of Sheffield, Wilson Clark of Wells, and Richard Adams of Cuttingsville. The Committee is in the process of planning a promotional and educational program on sugar bush management. Prime objective will be the removal of low-testing trees in stands that need thinning. A youth program will probably be included, with recognition of outstanding youth at the Annual Meeting of the Association in Barre. A large-scale summer meeting may be planned with emphasis on aspects of good management.

Maple Crop – 1962

U.S.D.A. figures show Vermont as producing only 367,000 gallons of syrup in 1962, as compared with New York's 524,000 gallons. The U.S.D.A. report does not jibe with Vermont's own maple crop report, recently released by the Division of Markets, Vermont Dept. of Agriculture, which shows a crop of 446,335 gallons. The Vermont crop report showed that 1592 Vermont producers sugared in 1962, compared with 1720 in 1961.

We sincerely thank all those who have contributed suggestions that have helped make Naturalflow Tubing a success. However, we don't intend to stop now. In fact, we're just getting started.



No, we don't intend to sell suggestion boxes, but we do have a few areas open to inventory stocking dealers.

A. C. LAMB & SONS · Liverpool, N. Y.