ECONOMICS

Few forestry activities are as lucrative as maple syrup production, which can produce a steady supply of income on a sustainable basis. Like any other business, the net profit is the difference between the costs of production and the proceeds from the sale of the syrup. Some fixed costs include the cost of the sugar house and evaporator, storage tanks as well as collection equipment. Variable costs include the cost of labor for collecting the sap as well as fuel for processing the syrup into sap. Several other factors affect potential profit including tree species tapped, the number of taps and the weather.

To produce maple syrup a large quantity of sap needs to be collected and processed. Depending on the tapping method used, minimum levels for profit are estimated at 30-90 taps per acre. The widely accepted minimum is 40 taps per acre- at lower densities the trees are too scattered to offset the collection cost. The exception to this is trees adjacent to roads, which are more accessible. Roadside trees and open grown trees also tend to be larger and have larger crowns; which increase sap production.

MARKETS

Consumers identify with maple syrup as a natural product from the forests of New England giving it a marketing advantage over other sweeteners. Marketing outlets range from direct sale to consumers through means such as farmers markets or internet sales to wholesale to specialty shops or grocery stores.

Renting the rights to tap your trees to a syrup producer may be an alternative to collecting, processing, and marketing the syrup yourself. The fee paid for the right to collect sap is a fraction of that realized from producing syrup and is a function of the size of the trees and their accessibility.

BOOK REFERENCES

New Hampshire Maple Quality Control Manual. University of New Hampshire Cooperative Extension, NH Department of Agriculture, & New Hampshire Maple Producers' Association, Inc. 1993.

Backyard Sugarin', Rink Mann. Photographs by Daniel Wolf. 1976 & 1978.

Sugartime: the Hidden Pleasures of Making Maple Syrup with a Primer for the Novice Sugarer. Susan Carol Hauser. 1997.

North American Maple Syrup Producers Manual. Melvin R. Koelling and Randall B. Heiligmann editors. Ohio State University. Bulletin 856.1996

OTHER SOURCES OF INFORMATION

- *Cornell University's Sugar Maple Research and Extention Program. (http://www.dnr.cornell.edu/ext/ext/e&moflands.htm)*
- *Massachusetts Maple Syrup Growers Association (http://www.massmaple.org.)*
- *Ohio State University Cooperative Extension (http://ohioline.ag.ohio-state.edu)*
- *Connecticut Cooperative Extension (http://www.lib.uconn.edu/CANR/plsci/ext_act.htm)*
- *Massachusetts Cooperative Extension (http://www.umass.edu/umext/for_prod.html)*
- *New Hampshire Cooperative Extension (http://ceinfo.unh.edu)*
- *Market information: (http://www.nass.usda.gov/nh/99maple.htm)*
- *Maple Syrup Producers Association of CT, 387 County Road, Woodstock, CT 06281*

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Office of Strategic Planning & Policy
Division of Forest Environment
Division of Agriculture

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100% post-consumer waste recycled paper

How can I generate income on my forestland?

MAPLE SYRUP

as a sustainable land-based business

Sponsored by Rhode Island Department of Environmental Management, in cooperation with the Rhode Island Rural Lands Coalition

Project funding provided through a grant from the USDA Forest Service – Rural Development through Forestry Program

Maple syrup is truly a natural product. Although the technology for collecting and processing the sap has evolved, it is essentially the same forest product first gathered and used by Native Americans.

PRODUCING MAPLE SYRUP AS AN ALTERNATIVE FOREST USE

What would pancakes and waffles be without maple syrup? There are multitudes of imitation syrups to choose from, but maple syrup is the real deal! It is made from the natural goodness of maple trees. Producing maple syrup can also be a viable and profitable alternative use for your forestland. This publication will provide you with a quick look at the facts behind the enterprise.

Native Americans first discovered that the sap from maple trees could be processed into syrup. This led to collecting and processing maple sap for syrup. Early settlers incorporated it into their spring adventures because it not only tasted good, but the process took place during a season when there were few other farm activities. Maple syrup was the most widely used food sweetener until after the Civil War. At this time, cane sugar became the dominant sweetener and maple syrup was considered a specialty product.

SYRUP FROM TREES?

Maple trees become dormant in the winter and store food within the tree as liquid starches and sugars. Maple sap flow can occur anytime during the dormant season when air temperatures fluctuate above and below freezing. The peak flows of sap occur late in the winter and early in the spring during the months of February and March when warmer daytime temperatures followed by freezing periods at night stimulate strong sap flows. This period lasts until leaves emerge, which occurs as early as mid-March for red maple or later for sugar maple.

TREES TO TAP

Only maple trees found in North America have suitable sugar content to produce maple syrup. Sugar maple (Acer saccarum) is the preferred species for producing maple products. With a sugar content of two to 2.5 percent (sometimes higher), it takes fewer gallons of sap to produce a gallon of maple syrup. Sugar maple, which is native to northern New England, is uncommon in Rhode Island and is usually found along roads and in association with old farmsteads.

Red maple (Acer rubrum), which is the Rhode Island state tree, can also be tapped to produce maple syrup. This species, also called soft maple or swamp maple, is very common in Rhode Island, usually found in poorly drained areas. Its sap has a lower sugar content than sugar maple and the tree begins growth earlier in the spring- resulting in a shorter collection season.

Norway maple (Acer platanoides) is native to Europe but has been widely planted in Rhode Island as an ornamental and street tree. This species is highly adaptive to different habitats and tends to be invasive. Although it is rarely used for maple syrup in other areas, it is commonly tapped in Rhode Island because it grows to large size and other maples are scarce.

Red Maple

Sugar Maple

SAP COLLECTION

Tapping involves drilling a 7/16-inch diameter hole 2.5-3 inches into the sapwood of the tree. A specially designed metal spout is inserted which allows the flow of the sap to be directed into a collection bucket or into plastic tubes which carries the sap to a sugar house where it is processed. Immediately following the tapping season the spouts are removed to allow the tree to recover. The acceptable number of taps varies with the size of the tree and its condition.

PROCESSING THE SAP INTO SYRUP

Boiling the sap, causes water to evaporate, concentrating sugar to approximately 66 percent. The number of gallons of syrup that must be boiled, hence the time required, is a function of the sugar content of the sap. The quality of syrup is graded by color; the highest quality is lighter.