

# Path of progress leads dairy farmers to maple sugaring

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ACWORTH, NH — From dairy farming to second largest producer of maple syrup in the United States — this is the path of progress that has been followed at Ken and Bruce Bascom's family farm.

Ken is the fifth or sixth generation to sugar and his son Bruce will soon be taking over the business. However, sugaring was only a side-line during their dairying years. The Bascom's herd of 50 Holsteins was sold in 1964. This was a very difficult decision for the Bascoms because Ken had raised nearly all of the herd himself.

Currently the farm operation includes sugaring and related maple equipment business as well as some production and sale of hay. The farm consists of 600 acres with approximately 500 of that being woodland. Two neighboring farms were recently purchased to prevent development by contractors. Ken believes that "once the land is paved over, you won't get it back."

His son Bruce sees sugaring as a possible way for troubled farmers to increase the income from their land and thus possibly save more farms. Many New England and Mid-Atlantic farms include sugar maples along the road (known as road trees) or in the woodlands. "There is the potential to increase gross income by \$5,000 to \$10,000 a year through sugaring," predicts Bruce.

Sugar maples are an "untapped" resource on many farms. Another advantage is that the sugaring season usually runs from mid-February to mid-April. This is often a slow time in terms of work on the farm.

Sugaring at Bascom's began in the 1800's on the original homestead which is one mile away from the current Bascom's Sugarhouse. Bruce is very knowledgeable in local history and notes there were 180 active sugarbushes (orchards of sugar maples) in the late 1880's in Acworth. Now there are only eight. At that time New Hampshire was 85

percent open land compared to the current 8 percent. Some old sugarbushes still remain in the area, but most have not been maintained or replaced.

In the late 1800's nearly every farmer made maple syrup, perhaps because there really wasn't a market for milk. Maple was also the main source of sugar. It was found in every general store from New England to the Midwest.

Maple sugar was stored in large blocks which were scraped or broken to obtain the amount of sugar to be sold. With the production of cane sugar, the market for maple has changed to syrup primarily. Since that time the maple business has declined considerably in terms of amount of product produced. Bruce Bascom believes that maple sugaring could be rediscovered as the farm economy changes.

At Bascom's being on the forefront of new developments in sugaring has been a philosophy. In 1939 with 600 buckets and production of 100 to 150 gallons of syrup, they began using tractors instead of horses to collect the sap. Over the years as neighbors stopped sugaring, the Bascoms added more taps and buckets.

In 1950 tubing was used for the first time. "Tubing" involves attaching plastic pipe to the taps rather than handing a bucket on the spout. Tubing was still in the experimental stage and was laid on the ground then. After six or seven years of research, tubing was suspended in the air between the trees and a better method of sealing it around the taps was developed. Following this, vacuum pumps were used to pull on the tubing, bringing more sap out of the tree.

Tubing has been a great labor saving advance. In 1955 Ken Bascom had 5,500 buckets set; today they have 32,000 taps. One man can collect as much sap in two hours from tubing using a pump and tank mounted on a truck as five men could collect in one day from buckets. Bruce Bascom took tubing one step farther when he and three others formed the U.S. Maple company, which produces



Ken Bascom waits on a customer at the small retail display in their sugarhouse.

and sells tubing and fittings.

Bascoms also uses the reverse osmosis process in sugaring. This is a machine which exerts 500 pounds of pressure on the sap, forcing the water in the sap through a membrane and resulting in a solution of 6 to 8 percent sugar. If sap is left overnight to circulate through this machine it may reach a sugar content of 20 percent.

There are several advantages to this system including: less boiling equipment is needed yet production of syrup is increased, less fuel is used to heat the sap, and the grade of syrup will be better because it is not over the heat as long.

Sugaring itself begins at Bascoms around Feb. 14 when they begin to tap. The total process of "setting" trees takes ten days and the first "run" of sap usually occurs at the end of February. Sugaring depends a great deal on the weather with nights in the 20's and days in the 40 to 50 degree range being the best. The vacuum pumps used on the tubing at Bascom's are controlled by thermostats which start the pump when the temperature is above freezing.

One 5,000-tap section of tubing at Bascom's is located below the sugarhouse. In this case the sap is sucked down to the valley and is then pumped back up to the sugarhouse by a deep well pump operating on a float system in the collection tank.

After going through reverse osmosis the sap enters a heat exchanger system which brings the temperature of the sap to 200°F. by circulating it through copper pipes surrounded by steam. Following this preheating it enters the evaporator pan where the water is boiled off to make syrup.

The Bascom's evaporator pan was custom made in St. Louis two years ago. The boiler under the pan uses oil for fuel and produces steam which is piped in to result in a "steam-jacketed pan." The bottom of the evaporator pan reaches a temperature of 300°F. yet does not burn the syrup due to the new steam system. A suction fan over the evaporator pulls the steam out of the sugarhouse.

It takes approximately 40 gallons of sap to make one gallon of maple syrup. This may vary slightly depending on the sweetness of the sap. Approximately 20 minutes after the sap enters the pan it is boiled down to syrup. The evaporator at Bascoms typically produces around 40 gallons of syrup an hour.

From the evaporator the syrup is pumped through a filter press which uses pressure to filter out sugar sand. This is a granular substance like sand which is in the syrup. Liz Bascom explained that



In a free moment Ken Bascom quenches his thirst with sap collected in an antique wooden sap bucket.

sugar sand is pulled by the sap from the rocky soils which the sugar or "rock" maples grow well in.

After filtering, the syrup is graded by comparing the color to that of a standard for each grade. Maple syrup is graded primarily by color, although flavor is a consideration and must match the color produced.

The grades of syrup include Grade A light amber, medium amber, and dark amber. All of these are table grades of syrup in which the color and richness of the flavor vary. Light amber typically has a delicate flavor while dark amber has a more robust taste. Pure maple syrup is all maple as compared to the typical pancake syrup purchased in the grocery store which is made of corn syrup, sugar, water, and only 2 percent maple syrup.

Maple syrup is also used in commercial food production and in commercial baking. Grade B Cooking Syrup is used for this purpose and is a darker, more strong flavored syrup.

At Bascom's Sugarhouse the syrup is stored in 30-gallon drums or in 2,000-gallon storage tanks in their warehouse. Inside the storage tanks is an ultraviolet light which kills any bacteria that may enter the tank as it is vented while the syrup is pumped in. In order to use the storage tanks Bascoms must have large quantities of the

same grade of syrup.

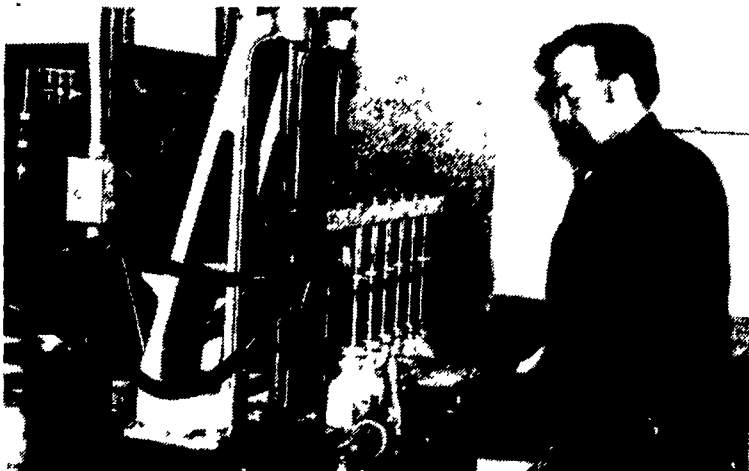
The syrup is recanned in retail containers as needed. It must be heated to 200°F. before canning to kill any bacteria. Bascoms sells their syrup on both a retail and wholesale basis. They have established much business in selling to corporations. In this case they can syrup in the corporation's container, add a gift card, and ship as requested. They have even secured a contract to sell syrup into England.

The buying and selling of bulk syrup has become almost a second business for the Bascom family. Currently under construction is a 50 x 120-foot two-story warehouse for storage of maple equipment and bulk syrup.

Although Bascom's Sugarhouse and maple business has expanded greatly over the past years, it continues to be a family business. Currently Ken and Bruce share the business equally. In five years Ken looks forward to fulfillment of their plans for his retirement when he will decrease his workload.

Liz, Bruce's wife, works in the sugarhouse and conducts tours of the sugarhouse for visitors. Ruth, Ken's wife, bakes her special Maple Pecan Pie during the maple season which she sells at their retail display.

Despite an extremely poor year for sugaring in 1986, the Bascom family has found sugaring to be a "sweet" enterprise for their New Hampshire family farm.



Bill Parsons, an employee, prepares plastic jugs for filling with maple syrup.



Bascom's Sugarhouse is a family operation which includes: (front) Cindy, Ruth, Keith; (back) Liz, Bruce and Ken Bascom.