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Making Maple Syrup at Saint John's: Records Show Shifts in the “Sticky Business”

Large areas were covered with sugar maple trees, which the Indians and early settlers held in some esteem. In spring they used to cut a horizontal gash into the trunk or bole and collected the sweet colorless sap, which was boiled in large pans over a fire and evaporated, leaving a deposit of soft sugar in the pans. This was maple sugar, some of which was put on the markets. The Indians [used] to pack it into small baskets made of birch bark. I do not think it was generally popular as it could not compete with cane sugar from the South. It is no longer made here, as far as my knowledge goes. Indians still make it.

— Alexius Hoffmann, O.S.B. *The Natural History of Collegeville* (1934)



John Geissler, St. John's Arboretum, fires the evaporator in the St. John's Sugar House.
Photo by Stephen G. Saupe

Fr. Alexius Hoffmann provides a glimpse into the early history of maple syrup making in our area in *The Natural History of Collegeville*, a handwritten manuscript he describes as a “modest labor of love for St. John’s” and “respectfully inscribed to THE RIGHT REVEREND D. ALCUIN DEUTSCH O.S.B., FIFTH ABBOT OF ST JOHN’S.” What may come as a small surprise is that maple syrup was originally valued not so much for its ability to complement a stack of pancakes, but rather because it could be boiled down further to make maple-flavored table sugar. In today’s era of cheap and readily available beet and cane sugar, it’s hard to appreciate that not too long ago table sugar was a highly sought-after commodity. Native Americans and settlers were happy to satisfy their sweet tooth by producing sugar from the sweet sap of the sugar maple tree (*Acer saccharum*). However, once table sugar became more readily available, few maple trees were tapped in this area during the first third of the 20th century (Hoffmann, 1934). Then came World War II.

In 1942, after reading a newspaper article about “catching the sap or being a sap,” presumably written in response to sugar shortages created by the war, Fr. Wendelin Luetmer and helpers tapped 150 trees, collected 1440 gallons of maple sap, and boiled it down to make 45 gallons of maple syrup (Mertz, 1942). This successful experiment initiated a monastery ritual that has continued until the present.

It’s not clear from the data how much maple sugar or maple syrup was produced at St. John’s prior to 1942. There were likely small-scale attempts. For example, Mertz (1942) indicated that “[f]ormerly a few trees were tapped each spring to secure food for the apiary.” And in another *Record* article, Albert (1959) stated that “[p]rior to the ’40s a small amount of collecting was done, with boiling taking place in open kettles.” Nevertheless, the 1942 effort by Fr. Wendelin and crew is clearly the first major effort to make maple syrup on campus. I suspect that even Robert Mertz, the author of the first article appearing in *The Record* about St. John’s syrup-making in 1942, would be surprised to know how prophetic his statement was, that “there is evidence that an eventual syrup industry [at St. John’s] is in the offing.”

Through the years, the monks and their helpers have maintained records concerning the success of their maple-syruping operation. For example, during many seasons (e.g., 1978, 1982, 1985, 1988, 1990, 2002, 2005) the leader of the operation, the “sugar boss,” kept a daily log of their activities or wrote a summary of activities at the end of the end of the season (e.g., 1996, 1999, 2005). A three-ring binder in the St. John’s Arboretum offices serves as a depository for most records. In addition, the syrup-makers penciled the loads of sap that were hauled to the sugar shack on a piece of scrap lumber, and on a second piece of wood the amount of syrup produced was recorded. At the end of the season, these “datasheets” were nailed to the joists in the roof where they greet visitors even today. All of these data will eventually be available at our St. John’s maple syrup web site (www.csbsju.edu/maple).

By initiating a project to make data from the St. John’s maple syrup operation more readily accessible to our community and the general public, I hope to present a more complete historical picture of the monastery’s syruping efforts and a better understanding of the factors that affect maple sap flow and syrup production. In this first article of a series I focus on the individuals who made syrup and how often St. John’s produced syrup. Subsequent articles will provide an analysis of sap and syrup production.

How Often Does Saint John’s Make Maple Syrup?

Since their first modest effort in 1942, St. John’s has made syrup in 30 of the past 63 years (Table 1). Though the interval between successive syrup-making seasons has varied from one to four years (Fig. 1), on average St. John’s has made syrup every 2.1 years. During the 1940s through 1960s syrup was made approximately every other year (Fig. 2). The time interval between syrup-making seasons reached a peak in the 1970s through 1980s when syrup was made roughly every third year. Three of the four times (1968-1972, 1974-1978, 1978-1982; see Table 1) that St. John’s waited four years between syruping seasons occurred during this period. In the 1990s syrup-making returned to a biennial activity, but in recent years syruping has decreased again to an annual activity (Fig. 2).

Figure 1. Time interval between successive seasons of making maple syrup at St. John’s.

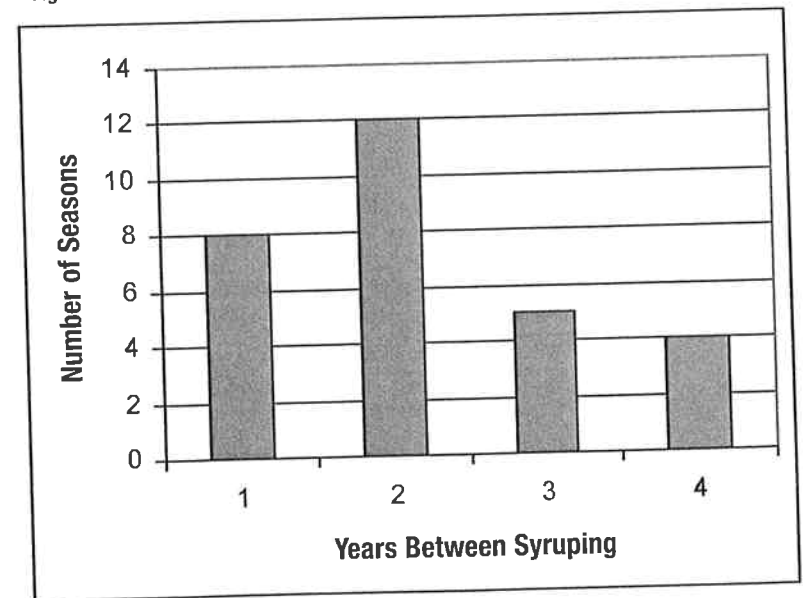
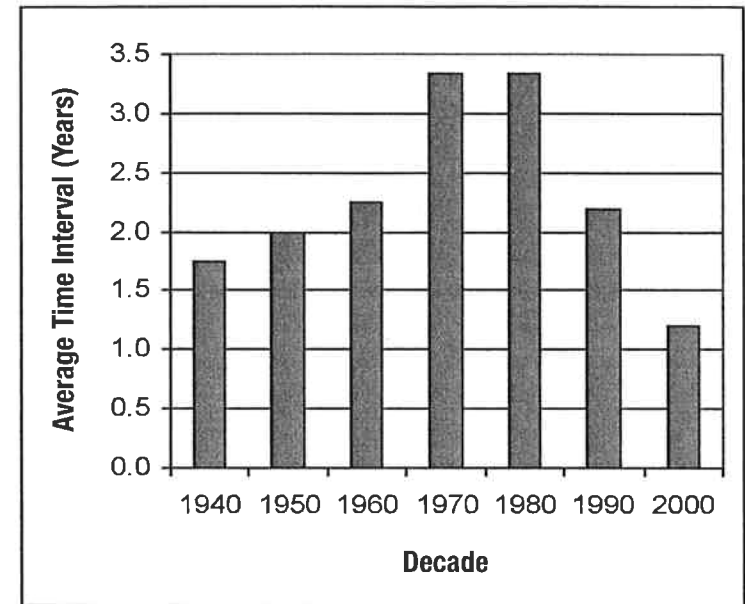


Table 1. Listing of years during which St. John's has made maple syrup and the leader of the operation (if known).

YEAR	SYRUP OR SUGAR BOSS
1942	Fr. Wendelin Leutmer, Br. Charles Kirchner
1943	
1945	Br. Phillip Heidkemper
1948	Br. Julius Terfehr
1949	
1951	
1953	Br. Julius Terfehr, Br. Michael Laux
1954	Ralph Meyer
1958	
1959	Br. Julius Terfehr, Ralph Meyer, George Fruth
1962	
1964	
1966	Br. Marcellus Handorgan, Ralph Meyer
1968	Br. Marcellus Handorgan
1972	
1974	Br. Marcellus Handorgan
1978	Br. Arnold Jirik, Br. Walter Kieffer
1982	Br. Arnold Jirik
1985	Br. Arnold Jirik, Br. Walter Kieffer
1988	Fr. Paul Schwietz, Br. Arnold Jirik, Br. Walter Kieffer
1990	Fr. Paul Schwietz, Br. Arnold Jirik, Br. John Ambrose Stattelma
1992	Fr. Paul Schwietz, Br. Arnold Jirik, Br. John Ambrose Stattelma
1994	Fr. Paul Schwietz, Br. John Ambrose Stattelma
1996	Br. Walter Kieffer
1999	Br. Walter Kieffer
2000	Br. Walter Kieffer
2002	Br. Walter Kieffer, Stephen Saupe, John Geissler
2003	Stephen Saupe, John Geissler, Br. Walter Kieffer
2004	Stephen Saupe, John Geissler, Br. Walter Kieffer
2005	Stephen Saupe, Bill & Linda Mock, Sarah Gainey, Kyhl Lyndgaard

Figure 2. Average time interval between successive seasons of making maple syrup at St. John's sorted by decade.



Goal of Saint John's Syrup Making

The time interval between successive syrup-making seasons is largely a function of syruping success. Until 2002, the main purpose of making syrup at St. John's was to provide syrup for the monastery dining room and for Abbey gifts (Br. Walter Kieffer, personal communication; *Minneapolis Star Tribune*, 1982). The Benedictines fired up the evaporator only when they needed to replenish dwindling supplies. "When we run out of syrup, we start collecting again," Fr. Paul Schwietz, the syrup boss in 1988 told *The Record* (Armon, 1988). And this has been the case since the beginning. Near the end of the third season of syruping, *The Record* (April 12, 1945) wrote that "[a]ccording to Brother Phillip, it is not expected that these operations will be extended next season, as none of the syrup is sent out, and the present yield is sufficient for the school's needs."

Making maple syrup, especially on the grand scale carried out by St. John's in the 1960s through 1990s, is a very labor-intensive process. With syrup in the larder, the crew can take a break from the long hours in the sugar shack. Br. Walter Kieffer reflected in his year-end maple summary for 1996: "In two years one will forget the hours and pains and again be ready to carry on the tradition of sap to syrup."

How Much Syrup Does Saint John's Use Annually?

Using data on the number of monks at St. John's provided by Fr. Colman Barry (1993) for the years 1978 to 1992 (Table 2), I calculated that the overall average of annual syrup usage for this period was 0.54 gallons of syrup per monk (Table 2). Thus, we assume that the frequency of making syrup should be dependent on supplying the monastery with approximately one-half gallon of syrup per person.

Table 2. Summary of Maple Syrup Usage at St. John's from 1978 to 1992.

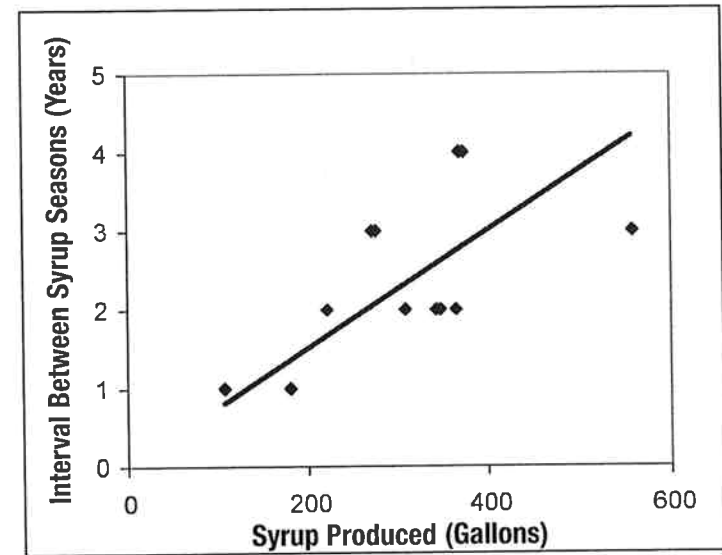
TIME INTERVAL	AVERAGE NUMBER OF MONKS AT ST. JOHN'S DURING TIME INTERVAL (data from Barry, 1993)	TOTAL SYRUP (gallons) AVAILABLE DURING TIME INTERVAL (= amount of syrup produced during first year of time interval)	SYRUP (gallons) PER MONK PER YEAR DURING TIME INTERVAL
1978 – 1981	307	373	0.30
1982 – 1984	303	271	0.30
1985 – 1987	261	560	0.72
1988 – 1989	249	348	0.47
1990 – 1991	245	364	0.74
1992	235	344	0.73
	mean		0.54

The amount of syrup actually produced during a season is dependent on two major variables: the number of trees tapped and the weather. Ignoring weather for a moment, to provide a constant annual supply of syrup, a producer could tap fewer trees annually or tap large numbers of trees less often. As mentioned above, St. John's has historically opted to make larger batches of syrup less frequently. Since the process is dependent on weather, putting out a standard number of taps is unpredictable and can result in wildly different amounts of syrup production. For example, in 1978 the monks installed 1850 taps and made 373 gallons of syrup but in 1982 the same number of taps yielded only 271 gallons of syrup. And in 1985 when only 100 more taps (1950) were installed, St. John's produced a whopping 560 gallons of syrup.

Thus, we can hypothesize that following a year in which lots of syrup is produced, St. John's will have enough syrup in stock that they will not need to make syrup the following season. Or stated more scientifically, there should be a direct correlation between the amount of syrup produced during a syrup season and the time interval until the next syrup-making season. To test this hypothesis I have graphed the interval

between successive syrup-making years versus the amount of syrup produced (Figure 3). These data provide clear support for our hypothesis: the more syrup that is made in a given year, the longer the lag period before St. John's made syrup again.

Figure 3 Time interval between successive seasons of making maple syrup at St. John's from 1972 to 2003 as a function of the total amount of syrup (gallons) made in the first of the two seasons.



One advantage of graphing these data is that the slope of the trendline provides an estimate of the total annual monastery syrup use. The slope of this line, which is 0.0075, is expressed in units of 'years between syrup-making seasons per gallon of syrup.' If we calculate the inverse of the slope of this line ($1/0.0075$) we convert the units to gallons of syrup per year. The end result is that our calculation shows that the monastery has used an average of 133.3 gallons of syrup per year.

A Philosophical Shift

In 2002 there was a philosophical change in the purpose of the operation. Rather than serving the main role of providing the Abbey with syrup, the operation took on a primarily educational role. This occurred when Abbot John Klassen asked the Arboretum to share responsibility for the operation because the chief syrup-maker, Br. Walter, was busy with graduate studies. The Arboretum was honored by this request and elucidated three major goals for their tenure: (1) to maintain the monastery tradition of making syrup at St. John's; (2) to provide the monastery with