

Maple Syrup Season 2010 – Summary

report by

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Overview: This report documents the activities of the Saint John's Maple Syrup operation during the 2010 season. The record number of visitors, volunteers and school groups more than compensated for our low syrup yield.

Staff:

Br. Walter Kieffer OSB, William Mock, Sarah Gainey, and Stephen Saupe ran the operation once again this year. Kevin Sittauer, Gary Gillitzer, Al Meyer and Dan Weber served as chief assistants. Tom Kroll, Saint John's Arboretum, provided logistical, administrative, and technical support. We are particularly proud that our syrup crew represents such a diverse set of backgrounds, from monks to arboretum staff to faculty to local individuals, the maple syrup operation has welcomed and embraced volunteers in truly Benedictine fashion.

Volunteers have always been crucial to our success and this year was no different. We were visited and assisted by many students, faculty, staff, and friends. We asked everyone to sign our logbook with the number of hours that they worked. Overall, volunteers contributed 785 recorded hours to the operation! We anticipate the true total to be even higher, as not all volunteers recorded their hours. Even more remarkably, this figure doesn't include the time spent by the syrup bosses and assistants. We thanked each volunteer with a sample of syrup – from 40 mL to several gallons – depending upon the amount of time they invested. We are strongly committed to keeping our volunteers happy and to recognize them for their service. Without them, the operation would not be able to function.

Tapping:

We tapped trees on Saturday, March 13th. Though this was a little later than we might prefer, it was necessary because of Spring Break week (March 1 – 7). As has become tradition, we held a mini-festival to celebrate the opening of the season. We provided coffee, hot chocolate and pastries for the attendees. The celebration included a blessing by Br. Walter, a performance of the "Maple Syrup Song" which is an original piece composed by Arboretum student employee, Melissa J. Bach, and a brief history of syruping at St. John's. This was followed by an explanation of how the tapping process would work.

To involve more people in the process, this year we decided to have several teams of tappers, rather than just a single tapper as in the past. We requested individuals bring as many cordless drills and spare batteries as possible. Each crew consisted of a tapper with portable drill (and spare battery), a spile-driver with a hammer and bucket of spiles, a bucket runner, a lid runner, and a hanger who placed the bucket and lid on the spile. Br. Walter and Steve Saupe directed the crews in the field. This worked very well and we plan to do it again next year. Since

inexperienced individuals were tapping, to insure that they correctly identified and tapped sugar maple trees, on the day before the event we marked each tree for tapping using paintballs. This worked well except that because of the week of rain we had, the trunks were wet and the paintballs didn't show up very well. This meant we had to replicate the process on the morning of tapping day. Two crews went out about two hours before the event and were able to mark all of the trees to be tapped. In about 3 hours we had tapped about 800 trees. While the majority of the crew placed taps, another crew remained in the sugar house to set up the evaporator.

This year we put out only buckets on tapping day. Then, during the season, we installed bags.

By the end of the season, we had placed out 938 taps. We started to remove taps on April 11 and initiated cleanup.

Recommendations for next year: (1) put out at least 1000 taps on the initial tapping day. This will insure a greater amount of sap earlier in the season to allow for more cooking and to take advantage of weather conditions that are usually more favorable for sap production; (2) host a pre-tapping day event. On the Friday evening before tapping host a pancake dinner with a speaker, awards presentation (see #3), and/or other activities. We would charge a few dollars for food and this could not only be a way of advertising and building community, but could be an Arboretum fundraiser; (3) Initiate a Maple Syrup Award or Hall of Fame. Since it is vitally important to keep our volunteers happy, we suggest giving awards for contributions to the St. John's maple syrup operation. Winners could have their name put on a permanent plaque in the sugarhouse, given a bottle of syrup, and an official certificate of appreciation; (4) hold tapping day in the afternoon instead of the morning because it will be warmer and buses will be running from CSB; (5) use ribbons marked for 1 or 2 taps; (6) distribute the buckets/lids/spiles throughout the woods before tapping so people don't have to return to one place.

Clean Up:

One of the drawbacks of using buckets to catch sap is the cleanup that is involved. This year the Arboretum sponsored the 'Bucket Brigade' on Tuesday, April 13th and washed up the buckets in a jiffy. There were over 20 volunteers who made quick work of the cleanup. The shack and evaporator were primarily on the day after our last festival. The pans were removed and power washed. Everything was sanitized with bleach by mixing a gallon of bleach in the tanker filled with about 100 gallons of water. The mix was sloshed around in the tank and then after about 30 minutes emptied into each of the three holding tanks. All hoses, taps, and other supplies were immersed in the tanks of bleach for at least 30 minutes. Finally everything was rinsed with a tanker load of fresh hot water.

Festivals: Once again we held two festivals (March 28 and April 11). The festivals featured maple syrup sundaes, live music, a children's nature area, tours of the sugarhouse, educational lectures, tapping demonstrations, horse drawn wagon rides, and a Native American area. Overall, the two festivals were visited by a total of over 1600 people. The second festival was held a little later than usual because of the Easter holiday. The advantage of the later date is that the weather was absolutely beautiful leading to our best crowd ever (ca. 950). However, the disadvantage was that the sap had stopped flowing nearly two weeks before, which meant that we had to boil water in the evaporator. In fact, we had crews taking the taps out of trees in one part of the sugar bush, while visitors installed demonstration taps in another section.

Publicity:

To our knowledge, the following publications about the maple syrup operation appeared:

- DeMars, Dave (2010) Maple syrup fests - 'How sweet it is'. *St. Joseph Newsleader*. March 19; p 1.
- Kutter, Jenny (2010) The story of cane and maple. *Sagatagan Seasons*, Spring 2010, p 1 & 2.
- Saupe, Stephen (2010) Energetics of maple syrup production. *Sagatagan Seasons*, Spring 2010, p 4.
- DeMars, Dave (2010) Upward Bound preps students for higher ed. *St. Joseph Newsleader*. April 2; p 5.
- DeMars, Dave (2010) A springtime visit to the sugar bush. *St. Joseph Newsleader*. April 2; p 1 & 4.

At the fall 2008 opening Convocation at the College of St. Benedict, one of us (SGS) gave a speech entitled, "Find Your Shack," that used the maple syrup operation as a metaphor for college life (available at the following link:

<http://www.employees.csbsju.edu/ssaupe/essays/Find%20Your%20Sugar%20Shack.pdf>).

Although we expected this to generate some interest in the operation, we were surprised by how effective it was in recruiting visitors to the operation. Several groups visited as a direct result of this presentation, including at least one this year.

Sap/Syrup Production:

Our sap and syrup production are summarized in Tables 1 – 3. We collected a total of 5345 gallons of sap on 7 different days. The first day on which there was enough sap to collect was March 17 and the last day of sap collection was March 29 (Table 1). By the end of the season we jugged 130 gallons of syrup, which yields a sap/syrup ratio of 41.1 with a seasonal sugar concentration of 2.1%.

Overall, it was a fair season for syrup making. Like any other crop, maple syrup production is also weather-dependent and sadly our weather was not cooperative. The main problem is that it got warm too quickly and stayed warm. Though it's hard to complain about beautiful warm spring weather in Minnesota, it meant that the trees didn't receive the cold nights they require for sap flow.

Overall, our yield was about 30% below what we expected. Historically at St. John's, we produce 0.8 quarts of syrup per tap. Since we installed 938 taps, we should have made 750 quarts of syrup or 188 gallons of syrup. However, our production was only about 70% of expected. We should point out, that our final syrup numbers are always a little low because we report only the amount of syrup actually put into jugs. In recent years, we've used 10 or so gallons at our festivals and for school groups and other visitors. If these values were factored in, our seasonal yield would be better.

Education:

We provided educational tours to more than 1100 students, from preschoolers to high schoolers. CSB/SJU students also were involved, including 2 FYS classes and 12 sections of Biology 221 lab visiting the sugar shack for a lab session. One of Carol Jansky's lab sections won the 2nd annual 'Maple Syrup Spirit Award.' As a reward for showing the most maple syrup spirit out of all the lab sections, they were treated to a maple syrup sundae during their next lab session.

Saint John's Arboretum's monthly Natural History Lecture Series featured Steve Saupe's presentation *The Natural History of Maple Syrup Production* with 25 people attending.

A more concerted effort to involve CSB/SJU students was initiated by Arboretum student employee Richelle Caya. Her 'It's Coming...' campaign started a few weeks before tapping day, with intriguing messages across campus to peak students' interest. After the CSB/SJU spring break, the campaign shifted into the 'It's Here!' phase and students were able to enjoy Saint John's maple syrup in a variety of ways on both campuses. Maple syrup sundaes were served during dinner one night on each campus, maple syrup 'shots' were served at Brother Willy's pub, and syrup was available at Coffee Mondays at Alcuin Library. All activities were accompanied with information about how CSB/SJU students could be involved with the process. Presumably as a result, we saw more CSB/SJU students volunteer, attend the festivals, and express interest in maple syruping at Saint John's.

Licensure:

We were again licensed by Stearns County Environmental Services. We are very proud of licensure and work hard to insure that we are a licensed facility. Each year we continue to make improvements to insure licensure. For example, this year we replaced our finishing pan with a new stainless steel one. In addition, we replaced the wooden platform of our syrup lifter with stainless steel. We've insured that all supplies are in plastic storage containers to keep them from being exposed to mice and dirt. Each year we need to call Mr. Hank Schreifels, Stearns County Environmental Services, at the start of the season to schedule a time for him to visit the operation.

Sugar Shack Renovation

We have nearly completed the renovations to the sugar operation. It's hard to describe what a difference the renovated building has made to the comfort and enjoyment of our visitors. The renovated shack is beautiful and a monument to the work of Br. Walter, Bill Mock, Kevin Sittauer and all the syrup makers and volunteers. This past summer, Br Walter and a crew of students funded by President Dan Whelan (Benedictine Action Corps) built an addition on to the wood shed that will provide for more wood storage and a place to store and lock up the tractor and other supplies. They also added a cement floor in the wood shed and landscaped around the shack. Though we now have a great facility, there are a number of things that remain to be completed:

1. Paint (or panel) the ceiling of the sugar house
2. Paint the exterior of the shack, especially the front, and doors/trim.
3. Replace the plywood panels beneath the windows in the sugarhouse
4. Replace the hand-lettered signs identifying the wood types with educational displays or a more professionally lettered sign.
5. Finish the design on the sign above the back door

6. Enclose the area above the double doors near the evaporator
7. Paint or panel the areas on the west side of the shack and permanently mount the past data boards
8. Enclose in wood panels the exposed wall from the original shack
9. Weed around the sugar house
10. Clean up the old railroad tie steps on the north side of the shack so the steps can be used again
11. Make a sign for the outside of sugar house with our logo
12. Seal the floor with concrete sealer
13. Install heat shields near the steps to prevent visitors from falling into the hold stove
14. Build a new stand for the finishing stove
15. Replace with old tool cabinet with a smaller one that has just essential tools (other tools can be stored in the shed), then replace it with a display case

Table 1. Sap Collection Data – Spring 2010	
Date	Sap collected (gal)
17-Mar	250
21-Mar	675
22-Mar	600
23-Mar	1320
26-Mar	390
27-Mar	900
29-Mar	1210
total	5345

Table 2. Syrup Production Data – Spring 2010	
Date	Syrup (gal)
23-Mar	49
24-Mar	11
27-Mar	11
29-Mar	35
30-Mar	10
10-Apr	14
Total	130

Table 3: Summary – Maple Syrup Season 2010	
# sap collection days	7
Tanker loads of sap	26
Total sap collected (gal)	5345
Syrup produced (gal)	130
Ratio (sap/syrup)	41.1
Sugar concentration (%)	2.1
Number of volunteers	Over 200
Hours of volunteer time (<i>excluding leaders</i>)	785
preK-12 th grade student visitors	Over 1100



Mission Statement

The mission of the St. John's Maple Syrup operation is to continue the long-standing Benedictine tradition of making maple syrup from the sweet sap of the abundant sugar maple trees (*Acer saccharum*) that grow on campus. Approximately every other year since 1942, the monks and their friends have gathered together to tap trees, collect sap and boil it down to produce a heavenly confection that is a testament to the forest stewardship of the Benedictine community. In addition, we strive to provide opportunities for the St. John's community, including monks, students, and the public at-large, to learn about and participate in the process of making this sustainable forest product.



A Blessing - by Walter Kieffer, O.S.B.

Oh, God of all goodness.

In the beginning you created the earth and divided it between the lands and the waters.

On the lands you created all kinds of vegetation; plants and trees of all kinds, and commanded them to cover the earth, providing both shelter and food for all.

Of the multitude of trees you have given us in this forest, you gave us the sugar maple to provide your gift of sweet sap from the healthy trees, and fuel for the cooking from the old and culled trees.

Today, following the rich traditions of our native brothers and sisters, we ask your blessing on this spring ritual of sapping.

May all the tap holes be clean and of a correct depth.

Help us to tap the spiles correctly – hard enough to seal the spile and hold the bag, but without damaging the tree, splitting the wood and losing the sap.

We ask your blessing on this season's collecting, boiling, jugging, cleanup and wood restocking.

May you reward our labors with a fruitful harvest.

Lord, we ask your blessing on all nature.

Protect the woods and waters of our lands for generations to come.

Bless all who come out to work, observe, and visit.

May we be ever mindful of all gifts you provide for us.

We make this prayer as always through Christ our Lord, and in the power of your Holy Spirit.
Amen.



Figure 1. Bucket Cleaning Crew – April 2010. Image by Br. Walter Kieffer.



Figure 2. Patrick Ross marking trees using a paint ball gun. Image by Stephen Saupe.



Figure 3. Local residents and master naturalists, Mike Leedahl and Doug Stuckey looking for a tree to tap. Image by Stephen Saupe.



Figure 4. St. Ben's students, Melissa Gearman, Jenna Pollard, MJ Bach & Megan Gensler, arriving to help on tapping day. Image by Stephen Saupe.