

Maple WEEKEND

Tapping into education

Delaware Academy FFA students profit from syrup success

By Elizabeth DeFalco

DELHI - Delaware Academy Central School District at Delhi (DA) Future Farmers of America (FFA) students got a head start in maple syrup production this

year, with nearly 4,000 gallons of sap collected from the school's 1,200 taps. Students tap trees in their "sugar bush" located behind the school and on village-owned property beginning after Christmas break, and have done

so since 2005 when the program was created by former teacher Michael Cipperly.

The program began with five taps to collect sap, science teacher and FFA co-advisor Mark Kline said, and was collected using buckets and gravitational flow. Today, students use intricate tubing with a vacuum system to draw sap from trees, larger holding tanks, and have their own sap house complete with a reverse osmosis machine, an oil-powered boiler, and an electric filter.

At the start of the season, students dedicate time after school to inspect and replace lines in the collection system behind the school campus. FFA Secretary and 10th grade student Hailey Brandenburg said, "And it's definitely a hike. You become part mountain goat."

Kline compared the tubing in the collection system to a human's circulatory system - the thicker main lines acting as the arteries and the thin lateral lines acting as the capillaries, he said, all flowing to the centralized location of the 2,000 gallon collection tank.

Once all lines are prepped and ready to go, tapping begins usually in mid-January, she said, but warmer temperatures this winter season kick-started the process. Students have collected any-



Elizabeth DeFalco/The Reporter

Delaware Academy Future Farmers of America (FFA) President Marshall LaPierre, left, teacher and co-advisor Mark Kline, FFA secretary Hailey Brandenburg, and FFA Vice President Anna Clark display bottles of DA-made maple syrup in front of the "sugar house."

reading the main line monitors.

From the collection tank, sap is then automatically pumped into 250 gallon transport cage tanks and driven to DA's sap house, located across state Route 28 from the campus. When the program first started, transferring sap from the collection tank to a transport tank was done purely by gravity, Kline said - the automatic pump, donated by former teacher Tina James, was a massive time-saver.

to rid it of any naturally occurring minerals or grit, before the syrup is filtered, then transferred into a decanter for bottling. The syrup is boiled once more to between 180 and 185 degrees to kill any bacteria, then bottled and sealed for storage and sale, LaPierre said.

Typically in the beginning of the seasons, students produce amber-grade syrup, Kline said, but this year students are producing a lighter colored syrup. Syrup is not only bottled for sale, but also used to create maple candy, cream, and cotton candy, students explained, which are sold to benefit DA's FFA program or charitable organizations.

DA's FFA program has 61 members between grades seven and 12, DA Agriculture Teacher and FFA Co-Advisor Michelle Somers said, and approximately 20 students assist with maple production, though she credited a select group of 10 students for their consistent dedication to the program.

Maple sales are one of FFA's largest fundraisers, Brandenburg said, and are ongoing most of the school year through intertwining sales with other events, like fruit sales, farmers markets, and



Elizabeth DeFalco/The Reporter

Delaware Academy 10th grade student Hailey Brandenburg and 11th grade student Marshall LaPierre test sugar density of syrup using a hydrometer.

where between 4,000 and 5,000 gallons of sap so far this year, Kline said, putting students approximately two weeks ahead of schedule, which he credited to warmer winter temperatures causing sap to flow early and use of the vacuum system.

The vacuum system suctions sap from trees, leading to a faster flow than typical gravitational flow will provide, FFA President and 11th grade student Marshall LaPierre said, and increased the amount of sap students can collect. Students nearly doubled their maple syrup production through use of the vacuum system, Kline said.

"If it was warm, we'd start to run the compressor and it'd be like drinking out of a straw," Kline said, "On a good day, it would be pouring in like someone left the sink on."

A local maple supply distributor, Tom Kaufmann, recently donated a high-tech system that is in the progress of being installed and tweaked, Kline said, and will read and provide the pressure of the system. Typically, a system's pressure level should be between 20 and 25 inches of mercury, Kline said, but if a line is chewed or damaged, the system's pressure level will decrease. The donated system is complete with pressure monitors on five of the main lines, Kline said, so when the overall system reports a decrease in pressure, the source of the leak can be centralized by



Elizabeth DeFalco/The Reporter

Delaware Academy Agriculture Teacher and FFA Co-advisor Michelle Somers peeks into the oil-fueled evaporator.

The transported sap is pumped into a 500 gallon tank outside of the sap house, and flows into the sap house to first be processed through a reverse osmosis machine. The reverse osmosis machine removes approximately 50% of the water from the sap to concentrate it and reduce boiling time, LaPierre explained; sap from DA's sugar bush typically is between 1 - 2% sugar, he said, and comes out of the reverse osmosis machine at approximately 8% sugar.

The concentrated sap is then run through an oil-fueled evaporator, where the sap is heated and concentrated until it becomes maple syrup. To test if syrup is ready to be filtered, students use a hydrometer to test its density, LaPierre said, and must be at certain density levels to be "legally considered syrup." When it becomes syrup, LaPierre said, diatomaceous earth is mixed in

selling maple cotton candy at Delhi's Fair on the Square. In the past, students would participate in New York State's Maple Weekends by hosting a breakfast and an open-house, Somers said, but have recently taken a step back to allow local producers to have the spotlight.

"We don't want to compete with local producers," Somers said, and only sells at farmer's market when other producers cannot attend and a vendor is needed to supply the demand for maple products.

In March, students in grades first through fifth who are part of the Junior Rangers after-school program will be given a tour of the facility, from the circulatory collection system to the sap house, Brandenburg said, with the hope of creating future FFA students and continuing the program.

What is Maple Weekend?

Maple Weekend is a chance for the public to come to the farm to learn about New York's maple sugarmaking processes and traditions and to provide a chance to taste pure maple syrup in its many forms - right from the source.

The event is organized and sponsored by the New York State Maple Producers' Association.

In Delaware County visit: Brookside Maple & Farm,

Delancey; Buck Hill Farm, Jefferson; Dar-View Maple, Delancey; Catskill Mountain Maple/Kaufman Farm, DeLancey; Kenneth Burger Farm, Margaretville; Maplewood Farm & Orchard, Bovina; Off-Road Maple, Franklin; Reed's Maple Products, Downsville; Roxbury Mountain Maple, Hobart; Shaver-Hill Maple, Harpersfield; and Tree Juice Maple Syrup, Arkville.

Pancake Breakfast Returns!

MAPLE WEEKEND

Saturday-Sunday
March 16 & 17, 23 & 24 • 9am-1pm
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 between DeLancey and Andes

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Shaver Hill Maple WEEKEND

Tapping into tradition at Shaver Hill Maple

By Alyshia Korba

HARPERFILED - Shaver Hill Maple is well-known as an industry leader, not just locally, but in the maple community as a whole, and with their state-of-the-art equipment producing 50 gallons of syrup per hour from over 10,000 trees, there is no question why. However, this has not always been the case.

Shaver Hill Maple was founded 1912, but at the time it was known as Shaver Farm and was primarily a dairy farm. It was owned by Alvin and Alice Shaver who ran a small maple operation on the dairy farm. In 1959, Dennis Hill started working on the farm which was then owned by the Shavers' son, Gaylord Shaver, and Hill bought the farm from Shaver in 1984 with his wife, Barbara.

It was important to the Hills to keep the Shaver name on the farm because of historical significance. The Shavers were direct descendants of Colonel John Harper who founded Harpersfield where the farm is located.

The Hills maintained the dairy and maple production at the farm for some time, but switched to maple full time in 2004. Today, the farm is run by Dennis and

his two sons, David and Dwayne Hill.

David Hill said that he and his brother have seen the farm expand significantly in their lifetime, having started working on the farm as young children. At that time, he said, they were using buckets to collect the sap instead of the tubing system used now.

"When we were younger, we had 400 buckets to gather," David Hill said. "So it's a lot different now — considerably different."

While less efficient, the bucket

collection method is deep-rooted in maple tradition as that was the method used as early as 1609 by Native Americans who were the first to produce the syrup. The sap was originally harvested by cutting a 'V' into the tree and catching the sap with a vessel made from logs, bark or clay, according to the Massachusetts Maple Producers Association. The sap was then boiled by placing hot rocks in the vessel.

This method was refined with more effective taps and metal pots to boil the sap in the late



Alyshia Korba/The Reporter

These handmade molds were used to form maple bricks which were popular because they were easy to store and ship. The bricks would be shaved down to get maple sugar.



Alyshia Korba/The Reporter

Having been around for over a century, Shaver Hill Farm has an extensive collection of equipment on display from wooden buckets to the present day vacuum systems.

1700s and early 1800s. The technology continued to progress with the invention of flat pans and evaporators to the introduction of reverse osmosis machines in the 1970s which are widely used today. According to David Hill, their reverse osmosis machine processes approximately 3,600 gallons of sap per hour — quite a bit more efficient than the original hot rock method.

While small hobby farms may still use the bucket collection method, most producers, like Shaver Hill, use a system of tubes and vacuums to collect sap. At Shaver Hill, over 40 miles of these tubes are used to collect approxi-



Alyshia Korba/The Reporter

Each barrel of syrup produced at Shaver Hill gets a sample taken, and this display shows the variance in grades between last year's barrels. Maple is classified into four grades from light to dark.

mately 10,000 gallons of sap per day, according to David Hill.

Just as the technology continues to develop, maple producers continue to invent new products to make. Shaver Hill is especially known for its maple confections like maple sugar candy, hard candy, cotton candy and maple cream among many others. The Hills even run seminars all across the northeast and in Canada to teach other maple producers how to make these products.

"It's not that we're the experts, but people like the way that we show how to make the products," Dwayne Hill said.

Unlike other agricultural industries, Dwayne Hill said, maple producers are often willing to help each other and share information. He said this is because the market is less competitive due to the limited region in which maple can be produced.

"Maple syrup is only made right here in the northeast," Dwayne Hill said. "We have the whole world to market it to, and we're not even touching a drop in the bucket."

Along with the seminars, the Hills also support other producers by selling maple equipment and labeling products for other maple producers. Dwayne also served as president of the New York Maple Producers Association and continues to act as a Catskill delegate with the association.

The Hills are not only passionate about teaching other maple producers, but also teaching the public about maple. This year will be Shaver Hill's 28th annual open house and pancake breakfast for Maple Weekend, March 16 and 17, and 23 and 24, and they will be open 9 a.m. - 4 p.m. both weekends. Each day of Maple Weekend, Shaver Hill will have an all-you-can-eat pancake breakfast from 9 a.m.-3 p.m. and, weather permitting, horse-drawn wagon rides. Visitors will be able to sample some of the many maple products sold by the farm, see the equipment used on the farm and even buy some equipment if the event leaves them inspired to make their own maple syrup.

Delaware County Farm Bureau Supports Our Maple Producer Members!

Please Support Them by Visiting Their Operation on **Maple Weekend Open House** March 16th & 17th and March 23rd & 24th and Learn More About Maple Syrup Production!



These Members Invite You to Join Them on Maple Weekends!

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- **Catskill Mountain Maple**
65 Charlie Wood Rd., Delancey
- **Dar-View Maple**
2818 Fall Clove Rd., Delancey
- **Hidden Acres Maple**
380 Lumber Rd., Deposit
- **Maplewood Farm & Orchard**
598 Miller Ave., Bovina Center
- **Reed's Maple Products**
1071 Reed Rd., Hamden
- **Roxbury Mountain Maple**
750 Roxbury Mtn Rd., Hobart (23rd & 24th only)
- **Shaver-Hill Maple**
450 Shaver Rd., Harpersfield



Maple Weekend Open House

Saturday & Sunday
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9 AM - 3 PM

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