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President's Message to Syrup Producers

The Hardest Working Folks I Know!:)

We had a great day of workshops at the producers' association meeting in May. You missed some good times if you were not there.



Next year, we will have it a little earlier—April 19-20th, and we hope that fits in everyone's schedule better before the busyness of the summer starts.

2023 certainly did not give us a good syrup season, but it is time to be planning and organizing for a better year coming up.

Let's take advantage of all the opportunities to learn from each other. I look forward to serving as your president another year. It would be great to see our membership to reach 100 members this year!

Thank you!

Paul Ronk

2023: The Year King Kong Body Slammed the West Virginia Maple Syrup Industry

*By Mike Rechlin and Bob Leffler
(Reprinted from The Maple News)*

February is when we make maple syrup in West Virginia. A good season takes us into March, and we can (and probably should) be tapping in January. But February is when conditions are prime for sap flow. So, this past season we did just like we always do: checked our lines, changed our spouts, charged up our drills and tapped our trees. Most West Virginia producers could have tapped earlier, but late January saw high temperatures that hit 70 degrees. It just did not feel right to

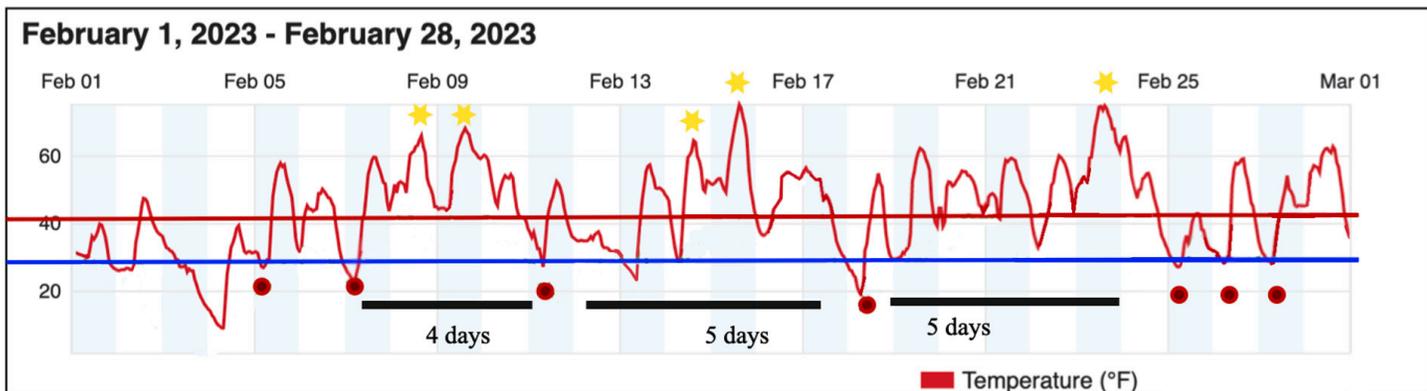


Figure 1. February 2023 temperatures from Weatherunderground station KWVFRANK12.

be in the woods tapping when the weather was that warm. Instead, we waited for winter to arrive, and it came. The first few days of February it got cold, tapping drills were a hummin and sap started flowing. But then things literally went south. The next three weeks saw five days in Franklin West Virginia where daily high temperatures were 65 degrees or higher. What was even worse, we had three extended thaws, where the nighttime temperatures only dipped to the low 30°s at best (Figure 1). By February 21st many West Virginia producers were packing it in, some pulling taps before they had collected enough sap to fire up their evaporators!!

WHAT HAPPENED???

Did climate change catch up with us and relegate the Appalachian maple syrup industry to the trash bin of history, along with whaling industry of New England or the mussel harvesting industry (to make buttons before the age of plastic) of the Mid-West? Well, the answer is no, or at least not yet. But it was climatic conditions and a weather anomaly that gave us a season where for most producers crop clocked in at well below their average yield.

In "The Mountain State of West Virginia" climate is very much related to elevation. For every thousand feet change in elevation, the average temperature decreases by about 3.3 degrees F. Potomac Highlands producers, with sugarbushes between 3,500-4,500 feet look a lot closer ecologically and climatically to our northern neighbors than they do to the community 20 miles, and 2,000 feet lower, down the road. This year the magic elevation seemed to be about 3,000 feet. If you were above that elevation, you were okay. If you were below that, you were "screwed," or maybe

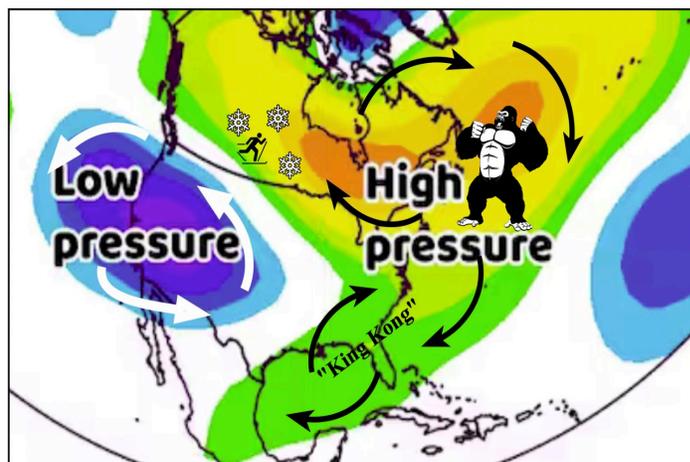
more appropriately for this article you were "body slammed." But how does King Kong fit into the mix?

KING KONG

King Kong is the nickname given by the Canaan Valley weatherman Bob Leffler, for a high- pressure ridge that ran diagonally from off the coast from Bermuda down through to the Gulf of Mexico (Figure 2). Bob is a retired National Weather Service meteorologist/ climatologist who issues complimentary winter weather forecasts for the WV Canaan High Country during the colder half of the year.

Weather systems normally move from west to east across the country. This weather anomaly, called a blocking ridge, or wall, developed in January and pretty much stayed put until the end of February. It produced a strong southwest air flow aloft and at the surface, which blocked more typical intrusions of colder Canadian/Arctic air from penetrating into West Virginia, and resulted in the very mild temperatures over much of eastern North America in January and February.

Figure 2.



The effects of this blocking high pressure wall could be quite local. Geauga County Ohio, near Cleveland, had an excellent sap flow season, whereas in Mansfield Ohio, just 80 miles south, the season was well below average. If you lived in an area that was subject to long freeze-ups in the bush, King Kong brought you a milder winter with more freeze thaw cycles and a good syrup crop. If you lived where the sap flow problem was more often related to taphole drying due to extended warm spells, you did not.

This high-pressure ridge, aka. King Kong, where did he come from, and most importantly are we going to see him again? Maybe even sometime soon? Enter La Niña.

LA NIÑA

In West Virginia the 2023 sap flow season was plagued by two occurrences, one climatic, related to long term weather trends, and the other a weather anomaly, a chance occurrence that we may or may not see again anytime soon.

The climatic issue was, the La Niña, which is the cold phase of the El Niño Southern Oscillation (ENSO). La Niña refers to the periodic cooling of ocean surface temperatures in the central and east-central equatorial Pacific. Typically, La Niña events occur every three to five years, but on occasion, it can occur over successive years. This year's third consecutive La Niña tied the all-time record for continuous occurrences. The cold equatorial Pacific Ocean surface temperatures caused a shift in the global jet stream, which typically results in warmer and drier conditions in the southeast.

In terms of maple syrup production, West Virginia is in the southeast and La Niña often leads to poor sap and syrup production. That is unless you were above 3,000 feet elevation. For most of our West Virginia producers the three consecutive La Niña years meant three years of warmer than average winters, resulting in three years of poor sap yields.

With the underlying conditions caused by La Niña, King Kong ruled eastern North America's roost. As shown by the black arrows on Figure 2, air flows in a clockwise pattern around high-pressure systems, bringing warm air from the Gulf of Mexico up our way. West of the High was a low-pressure system. Air flows in a counterclockwise pattern around a

low. We rely on cold Canadian air during the sap flow season. However, King Kong was so big and powerful that he deflected the more typical cold air masses out of Canada from reaching West Virginia during much of January and February.

The exception was that first week of February when most of our producers tapped out, and the last week of February when Kong took a nap and the cold air spilled in. Still, we had only four good sap flow initiating cycles through February 24. The next two weeks, late February into March, after King Kong relaxed his steel grip, and we saw nine. This year, the time to make maple syrup in West Virginia was in March, but for most of our producers by then it was too late.

LOOKING AHEAD

As the renown philosopher Yogi Berra once said, "It is difficult to make predictions, especially about the future." With three La Niña years under our belt climate scientists expect the ENSO cycle to return to neutral or move into the El Niño phase. El Niño, the opposite of La Niña, with its warmer than average equatorial Pacific sea surface temperatures, shift in the jet stream and typically results in a colder winter.

The National Weather Service forecasts an 80 to 90 percent probability that El Niño will form by fall. El Niño is expected to bring colder and wetter conditions to parts of West Virginia for the 2024 sap flow season, but the impacts can vary from year-to-year and with elevation so we will have to wait and see how it all plays out as usual.

Beyond that, some scientists speculate that climate change will bring a more erratic jet stream as well as stronger El Niño/La Niña periods. What does that mean for maple syrup producers? Like we are currently seeing worldwide, weather patterns are becoming more extreme, upending historical norms and threatening existing economic practices. Our challenge is to adapt our sap and syrup production practices to meet the changing weather and climate.

What role if any, the ongoing rapidly warming climate will play in feeding Kong Kong in the future is the joker in the deck. In the meantime, we'll just have to keep an eye out for that big hairy guy in the sky. 🍁

West Virginia Maple Season Update

By Brandon Daniels

The 2023 maple season—can we just forget it and consider it a nightmare? Temperatures were well above average from November through February. All of these crazy warm days and way higher than normal temperatures led to bad things for most producers. The producers that tapped the first two weeks of January seemed to have a better season than producers who tapped the last half of January or in February.

The producers that tapped before the middle of January saw a very good run the third week of January. Temperatures then warmed up until the end of the month, after a few good days of sap flow until another good freeze around the first of February. Producers using buckets and gravity tubing experienced very weak sap flows this season.

The statewide average was well below two pounds per tap and overall, about 50 percent of a normal crop. Along with a lack of cooperation with the weather and temperatures, the sugar content

was lower than normal, likely because of the lack of freezing. Most producers finished in February with the sap turning buddy for most. It seems the biggest culprit of the extreme conditions seen this winter was the jet stream. It was much further north than normal, and this allowed the warmer temperatures from the gulf to push up into most of the state. The farther north in West Virginia a producer was, the cooler the temperatures and the better the conditions for production.

In conclusion, 2023 was the worst crop in West Virginia since the 2010 season when a lot of the state received 130 to 180 inches of snow. As the old saying goes, there is always next year. One thing for sure is that maple producers are always looking forward to the next season with anticipation. The salt in the wound for most producers was the below average temperatures that the state experienced the first three weeks of March. Unfortunately for nearly everyone, the sap was buddy. The few producers that continued to produce throughout the month of March, nearly all of the syrup was off flavored. Some producers kept waiting for temperatures to change and this never happened, and they never tapped. Other producers in warmer climates only made 10 to 15 percent of an average crop. 🍁

Minutes from the WVMSPA Annual Meeting

By Tina Gainer Barton

As my last year as Secretary of the WVMSPA, I regret to inform you that this is the last time I will take way too many notes of things I don't always catch, or understand.

May 20, 2023, 9:00 am - housekeeping, mostly about the contest and banquet

Season Production:

- Paul Ronk - added more trees to make up for the worst year ever: 250 new taps (tapped at the end of January).
- Ron Stemple - Did well until a warm spell - 1070 gallons - a tad short of last year. Also buys sap from 5000 taps that did well (2300 feet in elevation).

- Keith Heasley - 1800-2200 feet in elevation. 77% of long term average, or 430 gallons
- Brandon Daniels - He never did say how he did himself. He talked in general about the state of maple. The closer you were to the jet stream, the colder it was. Pennsylvania did well. If you are too far north, it was too cold, so BAD. Quebec had a terrible year. The price went up.
- Ronk - Noted that a Vermont lady bought two gallons of syrup to take up there, proving that WV is the best!
- Cathay Hervey - Not good - only enough for the family (1200 feet in elevation).
- Kody Boone - 250 taps - tapped around January 23. He got 0.2 gallons per tap, which is not great but not the worst. He had super low sugar

content at the end, but he ran it anyway.

- Thomas - Mirrors Boone's production but tapped two weeks earlier and did better, at 1000 feet elevation.
- Boone is in a microclimate and budded out on 2-18 (soft wood maples).
- Ronk said Jamie Schuler did a study and showed that tapping in December may be advisable.
- Mark Bowers - 60% of Last Year. He's spent 25 years in the wood and he has noticed season compression as moved spring up four weeks.
- Ed Howell - In Tyler County near Ohio, 800 feet elevation. He said he's going to break out into 150 tap sections and start at Thanksgiving in phases. He got 22 gallons on 150 taps, his worst ever.
- Michael Gray - sanitized, upgraded taps. Got three weeks of running sap (I think that's what my note says).
- Kendall Hill - She works with Jamie - tapped from the 2nd-3rd week of January to February 14 or so, 300 taps.

Questions about lights - verdict is that they seem to work to clean up sap, as does a sap filter system. Brandon uses a pool filter, before RO. It keeps the tank cleaner. Steamaway saved a lot of fuel.

Maple Days -

- Ronk - bridge flooded in February and he sent everyone to Herman. In March attendance was lower but sales were good.
- Boone made a comment that he'd be more willing to hold an event except he's worried about inspections. This brought up an important topic: Inspections are voluntary and will NOT shut you down. They will just give you suggestions. Boone suggested this be advertised better. WVMSPA is missing new members because of fear of inspections.
- FDA comes in when you sell across state lines. Value added products get more kitchen inspection.
- The Grays went to the Pickens festival and suggested we need to have more of a presence there, such as the mobile sugar shack. There was no one there to show how maple syrup is made.
- The vote on continuing maple days passed. The decision was made to hold it on the 3rd Saturday in February and March in perpetuity. It purposely matches the Pickens festival.

- Luke Taylor-Ides (FGU) says we need to sign up by the end of summer so that we can get WV Living and WV Tourism involved. We need to step up the game.
- Heasley said that his Visitor Bureau wants you to pay a \$300 fee - but Luke says that it is supposed to be funded by hotel/motel tax so this may be illegal.
- Heasley requested auto-renewal for Maple Days on the website.
- Boone also requested auto-renewal for membership.

Luke Taylor-Ides FGU Update -

- ACER grant has been submitted to get a web developer and funding for the mobile sugar shack (the latter must be used for education).
- A report on the economic impact of Maple Days is coming out soon. It looks impressive.
- WVDA collaboration - Info is clearer and easier to use.
- Working with NAMSC (?) on using food grade isopropyl alcohol for cleanup - it will be legal September-October on the federal level.
- Walnut and sycamore research still in the works, and webinars will continue this summer.
- He introduced Heather Harper, who helps with communication.
- He asked for ideas for webinars and other workshops in person. The in-person training



Maple Contest Award Winners: Left to Right: Kody Boone (Boone Valley Farm) Grade A Very Dark; Michael Gray (Gray Farms), Grade A Amber and Best in Show; Mark and Debbie Bowers (Bowers Maple Farm) 1st place Candy and Confections; Gary Mongold (Mongold Farms) 1st place, alternative species: Walnut.

ideas need six month's advance notice.

- Mark Bowers suggested a candy and other value-added class.
- You need to let Heather know if you want to go to Lake Erie.
- Penn State and OSU Appalachia Maple Camp will be in Pennsylvania in September.

State Fair - Made \$2750 in 2022 with cotton candy. In 2023 it is August 10th to 18th, 11am to 6pm. Brandon Daniels is POC again.

Julie Stutler, NRCS and Jeff Barr -

- Representing USDA agencies. If you talk to Mary Marple on the phone, no need to do more.
- Farm Service Agency has non-insured crops assistance
- Energy Assistance Programs and Value Added Products Assistance
- Technical Assistance and Conservation planning financial assistance- brush management, energy audits, flyers were provided.
- Farm Service Agency received COVID relief unless already participated - to make up for loss from 2020 - a loan.
- Sign up for EQUIP audit which is backlogged a year - they fund the audit. (I have to admit I was pretty lost during this whole NRCS section.)
- Luke brought up REIP grants but don't waste time if you have less than 20K investment.

Date of Annual Meeting -

- We discussed setting a date such as the first Saturday in May but it was rejected. People want a date like with Maple Days, that is in perpetuity. The 3rd weekend in April was approved, but it will sometimes clash with Easter.

NAMSC Rep -

- Mike Rechlin will be it again. WVMSPA pays \$200.

Joe Hatton, WVDA -

- Encouraging us to work with NRCS on forestry
- And attend NRCS public meetings which are virtual - you get an opportunity to have an impact on the conversation. Not many AG people attend.
- Surveys show maple production is growing. Be sure to fill out the survey.

- There are vacancies in the department
- WV still does not have avian flu, the US lost 65-70 million birds but Virginia is not in the major fly routes. Valleys change air flows and help keep out infections.
- No leadership at maple camp at Potomac State College - may be opportunities there for educational purposes.
- Census of Ag - call for engagement.
- Joe went to Heasley and Hervey farms for Maple Day.
- WV Grown Festival had a huge turnout. Paul Ronk went and sold cotton candy.
- Willing to help facilitate with what we need at the fair - hope to get the mobile shack closer to the store.
- There was something about Process Authority that I don't understand. VA Tech does this but is backlogged.

Other Business -

- Deadline on dues is June 1 to get Maple Digest
- Financial Summary was provided by Heasley and approved by the membership
- Brandon has some of the metal signs
- Need progress on adding new members to correspondence. (my bad)
- Minutes from 2022 were accepted

Officers:

President: Paul Ronk will continue

VP: Kody Boone was nominated and reluctantly accepted. Greg Christian, previous VP, was not present but made it clear he would only continue if no one else would.

Treasure: Keith Heasley will continue

Secretary: Cathy Hervey will take over for Tina Barton

WVMSPA Board Members At large:

Continuing in office: Michael Gray, Mark Boers, Tom Salvetti, Kris Marsh

Nominated: Herman Hill, Greg Christian, Chris Grimes, Kate Fotos

Moved to accept as there were no objections or competitive races.

This is the end of my time as secretary, and I really appreciate being trusted to serve these two years. I'm happy to continue with the website and with the newsletter. 🍁

Creative Ways to Protect Appalachian Waterways while Adding Value to Your Syrup

By Sarah Collins-Simmons, Future Generations University



Tapping sycamore trees with FGU's Michael Lucero and WV Commissioner of Agriculture, Kent Leonhardt.

Does your sugarbush or farm include a riparian buffer area such as a stream, river bank, or floodplain area? Are you looking for new and creative ways to protect the waterway on your farm without losing productive space? Are you interested in different value-added ideas for your maple syrup products?

Future Generations University's project "Finding Value in Appalachia's Riparian Buffers" may be able to help! We are creating multi-media guides for four plant species, commonly found in riparian buffers in the region, that can be managed and used to generate additional farm income while still preserving the integrity and stability of the streambank. Most applicable to existing maple syrup producers will be the guides for black walnut (*Juglans nigra*), sycamore (*Platanus occidentalis*), and elderberry (*Sambucus sp.*); additionally, information will be created for the cultivation and processing of stinging nettles (*Urtica dioica*) for herbal/medicinal use. These guides will include comprehensive videos as well as short publications that contain information about species identification, propagation and care, processing, and finished product sales.

If you are already producing maple syrup and have black walnut and sycamore trees on your land, you can integrate tapping these species into your operation and increase the value of your maple syrup by creating novel blends such as Maple-Walnut and "Maplemore" syrups. Elderberries and Elderflower are recognized for their medicinal properties and maple syrup is known to be a healthier sweetener than other options available; by combining the two, maple syrup producers can create a tasty value-added product with herbal medicinal properties. You can infuse the syrup with elderflowers, make elderberry juice and make a blended syrup, or infuse the syrup with elderberries. All of these options can increase the value of your maple syrup and distinguish your products from others available in the market.

These new resources from Future Generations University, with all the details about how to add value to you farm and syrups, will be available in early fall and we look forward to sharing them with you. Additionally, some of our Out of The Woods webinars this summer and fall will include expert guests speaking about some of this work. 🍁

There are only two seasons: Maple season and getting ready for maple season

The wisdom of: Garnett Wetzel – Mathias WV

Getting ready for maple season means tuning up your sugarbush and tuning up your knowledge of sap collection and syrup making. Working with the WVMSPA Future Generations Appalachian Program is organizing several maple education programs. You will soon be receiving a questionnaire to gauge your interest in these programs. They will only be offered if there is sufficient interest among producers. Potential programs that are presently on our list include:

1. September 6,7, 8 – **Pennsylvania Maple Boot Camp**, an offshoot of the “Cornell Maple Camp” this program is meant to give new producers the skills to get going and existing producers the advanced knowledge to improve their operations. Offered as part of the Ohio, PA, WV Acer 019 collaborative, come for the whole program or for a single session with headliner Steve Childs. Contact Scott Weikert sjw128@psu.edu or (814) 560-4194 to register.

2. November 9,10, 11 (Maple) **Magical Mystery Tour** – sorry, the Fab Four won't be with us on this one. Funded through our ACER 2021 program Future Generations University will be organizing and providing support for a multi-state tour of maple syrup operations. We'll be heading to Ohio to learn the **Magic** touch Stan Hess, a producer who routinely gets almost one gallon of syrup/tap. From there we'll swing into Pennsylvania to the Hurry Hill Farm and Maple Museum. Here Jan Woods keeps alive the **Mysteries** of the award Newberry winning book “Miracle on Maple Hill.” The tour will end with two days of lectures, demonstrations, and trade show at the Lake Erie Maple Expo. Plan a maple vacation and stay tuned for details.

3. The third Thursday of every month – Log onto the Future Generations University's **Out of the Woods: Enriching your maple business** webinar series. This series brings the best in the maple business to your computer screen to discuss

topics of tree biology, tapping and syrup making technology and business acumen. You would have to travel to maple shows throughout the northeast to avail yourself of this level of maple expertise. Signup at www.future.edu/maple



4. **Tap Talk** - an online discussion where we can zoom in and share our experiences making and selling maple products. No experts here, just a lot of expertise that you all bring to the table. We did some trial sessions this past spring and will carry the program forward as we get ready for the coming season. Please fill out the inquiry form and we'll schedule sessions around what you all want to talk about.

5. September 30 - **Forest Management for increased sap production workshop** Tom's Creek Maple. Many sugarbush owner have the opportunity to thin their woods in a way that will provide a usable product of either firewood or timber while increasing sap sweetness and volume yield. This workshop is for landowners and forestry service providers. Its goal is to give you the skills to make management decisions that will improve the long-term productivity and health of your sugaring woodlot.

6. **Maple Confections Workshop**, presented by confectioner extraordinaire Steve Childs. Steve, author of the Confectioners Handbook, has retired from Cornell but not from maple. He has offered to come to West Virginia for a full day of learning and hands on practice in making value added maple products. Taking your maple syrup and turning it into maple cream, maple sugar candy, maple suckers and more is a sure way to turn a bigger profit from your sugaring enterprise. 🍁

Learning to Read the Woods

By Joey Aloj, Future Generations University

Future Generations University's Appalachian Program is being funded by the Northeast Sustainable Agriculture Research and Education (NE SARE) program for our project "Reading the Woods." Led by our faculty member Tom Hammett, who has decades of experience working in non-timber forest products, our project aims to help service providers – like staff at NRCs, the WV Division of Forestry, or WVU Extension – to learn how to holistically assess forests for their agroforestry potential. We're doing this work by hosting a series of educational workshops for these service providers and by developing a toolkit that allows these service providers to follow-up with the landowners and businesses they serve.

Appalachians have long known that the hilly forests behind our farms – the back 40 – can be just as important for small-farm viability as the cropland at the bottom. Tree syrups like maple are one of the business opportunities available in the forest, of course. But there are all kinds of other crops that can be forest farmed, too. There are edibles like wild mushrooms, ramps, walnuts, paw paws, and persimmons. There are medicinal plants like ginseng, elderberry, and goldenrod. There are experience opportunities like leasing hunting rights and renting cabins or trailers to vacationers. And, of course, there are opportunities involving the timber itself – selling it, turning it into crafts and selling those, or leaving them alone and selling the carbon credits. The possibilities might not be limitless, but it's close enough!

Other than finding the time for it all, the most difficult problem for most landowners is that each of these enterprise opportunities has a bunch of difficult legal or regulatory hoops to jump through and agricultural or scientific details to master. For each of these different opportunities, there's a different kind of expert the landowner needs to consult. And because there's so many things these experts have to learn about their specific field, almost nobody knows about all of it. That means that a landowner either needs to consult several different experts, or needs to feel ok with running the risk of missing out.

The Reading the Woods trainings and toolboxes are



Participants listen to Missy Moyers-Jarrells (second from right) explain the nature-based enterprises of Laurel Fork Sapsuckers.

supposed to help those service providers who are interested learn the basics of all these different types of expertise. No one should expect to be an expert in everything, of course. But a forester can learn about all the different non-timber forest opportunities, and can get a rough idea of who they should reach out to if the landowner they're consulting is interested in a certain practice. Accordingly, our Reading the Woods approach teaches these service providers to be aware of three big areas of possibility: the natural possibilities of the landscape, the human possibilities (how many folks work the land and what they're interested in and capable of), and the economic possibilities (answering the question "will I lose my shirt?").

So far, we've had three classroom trainings, one on-site workshop, and we've developed a pretty robust toolkit. The toolkit has some assessment checklists and forms that allow service providers to keep a wide horizon while looking at a woodlot. We've also had several on-farm visits where service providers with different types of expertise all look at the same woodlot, right alongside the landowner, and everyone learns from each other. We feel pretty confident that by the end of the grant period we'll have a useful toolkit for service providers. And we intend of advertising it and making it available even well after the project ends.

If you're a service provider who'd like to learn to Read the Woods, or if you're a landowner who'd like to be a host for one of those collaborative woodlot assessments, just send an email to forest@future.edu. We'll make sure you're a part of our Appalachian Agroforestry Network! 🍁

Stories From a Maple Syrup Hobbyist

By Tina Barton



When my father retired and moved into his father's home in Tanner, West Virginia, he had no intention of farming, like his father and grandfather before him. You see, my great-great-grandfather Frank Gainer had about 400 acres which were cleared for raising cattle. We have pictures of his father Nicholas Gainer in the field with his grandsons, looking like the quintessential bearded farmer of the early 1900s, but my great-grandfather was no farmer. He went to Mountain State Business College in Parkersburg and was an accountant for a company in Parkersburg. He died young, leaving his widow and five surviving children, who moved to the family farm. His son Patrick earned a PhD or two and was a popular and esteemed professor of English and folklore at WVU. Not a farmer. Far from it. But he loved these West Virginia hills so he built his country home on a hill in Tanner. Grandmother made it look more elegant than its cheaply built mid-century modern frame might suggest.

So my Dad followed in his father's non-farming footsteps and became an aerospace engineer in Virginia. Not that my parents didn't grow an impressive garden when they moved to Tanner... And someone, Mom or Grandma, planted pear trees which still produce yummy, though small, pears despite years of neglect. Now the house is mine. And like my father, grandfather and great-grandfather, I'm not a farmer. I'm a mathematician. However, I am retired, and also an agroforestry wannabe.

I have pawpaw trees (that sometimes fruit) and black cohosh galore. And I'm trying to grow some Chinese chestnuts gifted by a neighbor. She said I was not allowed to thank her for them because that would kill them. Is that an Appalachian thing? Anyway, I also want more pear trees and redbuds. (Redbud flowers and seed pods are edible but I just like looking at them.) I want things to grow and take care of themselves and I'll do an iota of work to get them started.

But what gets me close to calling myself a farmer is maple syrup. I don't make enough to sell, but I make enough to share with family and friends. And there is something special about my maple syrup. It's better than anyone else's, not that I want to brag. We have good mountain spring water and I guess the trees are drinking the same magical stuff!

My husband thinks I'm crazy, wanting to do all this work, and go to all this expense for something I can buy for \$12 at Costco in Maryland where we live most of the year. But I guess there's still some primal desire from my DNA that tells me I have access to this land (shared with cousins and siblings) and something oughta come out of it! My dearly departed sister Frances first put the idea in my head, and I proceed in memory of her, in part. Another part is some of that Gainer stubbornness which is also in my DNA. And did I mention the taste? It is liquid gold and worth everything I go through for it.

The first year, 2018, I tapped nine trees by attaching the taps to short tubes which led to well rinsed soda

bottles. I spent 250 dollars, and got three cups of syrup (about \$100 was for my outdoor cooker which I still use). The next year I expanded my operation to 30 trees and got 30 cups. I started in January and wasted about 3 weeks waiting for the sap to run... did you know that Gilmer County, WV, has 75 percent cloud-cover in January? It is something about the orographic lift caused by weather coming from the west and hitting mountains to the east. What with the short days and the clouds, though the temperature was SUPPOSED to go above freezing, it only did so for about a minute. Not the freeze-thaw cycles I needed for sap to run.

At least I didn't have many additional expenses in 2019 except canning jars and natural gas used for boiling, boiling and more boiling. But if you remember that year, it rained for 12 months straight. The winter was mild and my property was a mud bath. I fell more times than I can count, because, did you know, there are a lot of hills in West Virginia? And when I went away for three weeks leaving the operation in the able hands of my neighbor, he swore some of my bottles came unhooked from the trees causing sap to run to ground. Yeah right! Tall tales or clever raccoons? He did make 13 bottles of syrup so I can't complain.

In 2020, I invested in actual mapling buckets. I carried empty buckets out to my trees twice every day to collect the sap, and though it wasn't quite so muddy, I still fell a lot and had lids rolling down into the gullies, and I dropped buckets after them in my attempts at reclamation. But reclaim them I did, every time! My husband came out with me that year and helped haul sap, but he says he doesn't like winter in WV and hasn't come out to help since. I think it's the Asian lady beetles he doesn't like. Also that year we had termites swarm and alert us of their presence. He thinks the house is cursed. I think it is blessed by the ghosts of Gainers-past.

In 2021, I spilled two full buckets of precious sap and also lost a quart of even more precious "Almost Syrup" one dark night. But the worst thing was that my dog Buster got seriously ill one Saturday. I called my vet and she said it was an emergency and I had to get him to an after-hours vet. I said the driveway was snow-covered. She said to start shoveling. I started shoveling, and crying, and shoveling. Our driveway is long and steep, with a switch back,



typical of the area. I got one swath cut all the way down, and my husband advised (over the phone) that as long as I kept two wheels in the track, I'd be ok. I was. Later, my neighbor said I should have come over and he would have shoveled. He doesn't have a phone and I reckoned it was easier to shovel it myself than to tromp to his house and risk him not being there. In the end, I felt proud of myself and while Buster had to spend three nights in hospital, he eventually made a full recovery from pancreatitis.

In 2022, the only challenge besides hauling heavy buckets around was the wind. I tried various arrangements of tarps as windbreaks to no avail. Also it was an Olympic year so I'd set sap to boil, and sit down to watch. My little Buster would jump in my lap and fall asleep, I'd watch a couple ice skaters, only to have to wake him up 20 minutes later so I could add more sap. He'd give me a look that clearly implied I was rude. It's a relaxing hobby, right?

Now we come to 2023, and I'm not alone, in the lower regions, to have a terrible year. So much for all my bragging about having the best maple syrup! I got a late start and didn't get to West Virginia until February 21. We had a good freeze a week or so earlier, so I was hopeful. I was justified, slightly, in that my experiments prove I'm in a microclimate and it is about 10 degrees colder at night than the forecast says. But sap flow was pathetic. However, it was clear and smelled good cooking. I made about 32 ounces. One bottle was not full, being larger than the others, so when I had more sap and started cooking, I opened it to add the new syrup to it (for my own personal use). Immediately I noticed the smell. Ugh!

(continued)

Lesson learned. Let the syrup cool before you taste it! According to my off-flavor sample kit, it was most like metabolism. I know my trees weren't buddy. I had just learned at a workshop in 2022 that you can cook metabolism out. But I melted my candy thermometer trying to get it to 240 degrees F. So I never quite knew how hot I got it. I got it hot and thick and then added spring water to make it syrup again. And when it cooled, four times, it was still off. The fifth time was the charm! This was a ton of work for very little reward, and while it wasn't good syrup, it could be used. I sent some to my daughter in Hawaii, and she liked it. I took some back to Maryland, intending it for meat glazes and baking. I made maple scones, and they were delicious, except I put the syrup in the glaze on top of them, and it was not good! But as long as I just use it in baked goods and cooking, I can get rid of it.

Anyway, after all this, I call it a success. I entered my syrup in the West Virginia Maple Syrup Association's contest at the 2022 annual meeting, and I won Best Golden Delicate Syrup. Except I didn't. I was disqualified for putting it in the Amber Syrup category. It's still a learning process. It's hard work. I'm crazy to want to do it. I say this to myself as I make a list of supplies I need for the 2024 season: more jars, more lids, more filters. My maple friends have me talked into using tubing into my buckets for vacuum. A refractometer and a Murphy Cup would be nice... an RO Bucket? No, that's going too far. More technology would mean less physical labor but more maintenance and less of the fun, outdoor, tree-hugging type of work. Besides, Buster will get too fat if I don't have to get him off my lap to add sap for 10 hours straight! 🍁

Excited to Educate!

By Jenny Totten, Future Generations University

The Appalachia Program Team has been popping up all over the region this year educating folks about forests, getting people excited to taste real tree syrups, and engaging the next generation of biologists, foresters, and economists in exciting activities! Whether you were in Virginia or West Virginia, there is a good chance you caught one of our staff or partners out and about.

We hosted a number of youth activities at the Mobile Sugar Shack at the West Virginia State Fair in August in Fairlea. Over the 10 days of the fair, Future Generations staff, maple producers, and McDowell County students interacted with 1,610 attendees. Visitors learned about how maple syrup is produced, designed their own leaves, built lizard habitats, and were treated to a full-on play pancake breakfast for kids.

Last fall, one of our West Virginia State student interns, Meredith Miller, set up at Spring Hill Cemetery Park in Charleston for Founders Day. She hosted syrup tastings of maple, walnut, birch, and sycamore for visitors to try as they walked along the paths to different Appalachian heritage and state history activities.



This year's Mountain State Maple Days was a resounding success. Over 35 partnering maple producers opened their sugar houses and tapping areas for tours, tastings, and syrup purchases. This year featured more maple value-added goodness than ever before, including cotton candy, infused syrups, baked items, and barbequed pork sandwiches. Program staff and partners were stationed at McCoy's Mill in Pendleton County, Frostmore Farm in Pocahontas County, Ronk and Estep Branch farms in Lincoln County, and Toms

Creek Maple in Wayne County. Partners from Virginia Tech, West Virginia State University, and McDowell County Schools collected from sites to determine community level economic impact data so that the Appalachian Program can better assist in the planning process.



West Virginia State University, one of our research partners, presented to the West Virginia Legislature in early March. Dr. Yangjin Jung and her lab technician showed a demonstration on proper maple mainline sanitation practices to illustrate creative research partnerships between both land grant universities and Future Generations University. Over 100 elected officials and staff members were able to learn about the importance of the maple industry to the region historically and current research to keep producers profitable.



The longest running maple festival in the country is in Highland County, Virginia, right across the border from the main university campus. Through partnerships with the Highland County Chamber of Commerce and Virginia Tech, the Appalachian team manned the Mobile Sugar Shack and talked to 948 people over a four-day period in March. Maple producers in the county are open for tours, restaurants serve maple-themed specials, and local crafts makers sell their wares. This festival has shown to bring over one million dollars of revenue to the county annually.



Finally, the team participated in Troutfest the first weekend in May by manning the Kids Conservation Area. Visitors to the Franklin area were able to explore forestry principles, create a fish print, and design their own water cycle bracelets all while learning about best practices and conservation. The team interacted with 54 people and was the highlight of the festival for many attendees.

It has been a busy year for the program team, and we are all looking forward to seeing you at more regional events this coming year, starting with the West Virginia State Fair in August! 🍁

Maple syrup festival makes a big impact for a rural Virginia community

By Daniel Grizzard and Tom Hammett, Virginia Tech



Highland County visitors take a break to enjoy the famous maple donuts (foreground) and the arts and crafts fair during the 2022 festival. (Photo courtesy of the Highland County Chamber of Commerce).

An economic impact analysis of the 2022 Highland County Maple Festival found that the event brought over \$2 million in direct spending to Highland County, Virginia. The 2022 festival was the 62nd edition of this annual event, and the first since 2019 due to the Covid-19 pandemic. Over 26,000 visitors poured into the rural Virginia county, known as “Little Switzerland”, to visit the 10 sugar camps that were open for tours. When visitors needed a break from touring camps, they could refuel at one of the four pancake breakfasts hosted by local Ruritan clubs, visit vendors that setup stalls throughout the county, or attend a live performance by a local group.

Festivals like the Highland County Maple Festival

mean a lot more to local communities and sugar camp operators than just the revenues they produce can represent, and this study sought to quantify some of the non-financial benefits of this festival. A research team from Virginia Tech and Future Generations University took a random sample canvassing 380 visitors to learn more about the impacts of the event.

The Highland County Maple Festival serves as an important tool for educating people in Southern Appalachia about what maple syrup is, and how it can be used. At the 2022 festival, 20 percent of visitors learned for the first time about real maple syrup, and visitors reported being 21 percent more

likely to purchase maple syrup after attending the festival than before the event.

“The Chamber is excited to have reliable concrete data from this report, and it reinforces what the Highland County community has known for so long. The Maple Festival is special in the hearts of so many, and it is critical to the local economy;” said Chris Swecker, Executive Director of the Highland County Chamber of Commerce. “The information in this report will be used to help us improve the festival for future years, apply for potential grants, and to just plain celebrate all the hard work that goes into holding this annual county-wide.”

The festival brings in visitors from all over the United States, with 14 different states represented by visitors who were surveyed at the festival. These visitors had traveled an average of 98 miles to get to the festival. This shows the appeal of maple syrup-based events as nearly 64 percent of visitors said that learning about or eating maple syrup was their favorite part of the festival.

Agritourism events like this can also raise awareness



Boiling sap at Duff's Sugar House. Large and small sugar camps host visitors for the two weekend festival. (photo courtesy of The Recorder).

for other tourism opportunities in the area. Seventy-three percent of visitors said that after attending the festival they would like to come back to visit Highland County during another time of year.

These findings from the Highland County Maple Festival show the amazing impact that agritourism events focused on maple syrup can have not only financially, but also in terms of teaching people about maple syrup and creating new tourists for a region.

The economic impact analysis of the 2022 Highland County Maple Festival was conducted by Virginia Tech with support from Future Generations University and the Highland County Chamber of Commerce. This work was funded through a USDA ACER grant: “Accessing South Atlantic markets for US maple syrup: educating consumers and enhancing distribution networks”. If you have questions or would like a copy of the full Highland County Maple Festival Economic Impact Analysis, please contact Daniel Grizzard at danielg2@vt.edu or Tom Hammett at Himal@vt.edu. 🍁

Highland County Maple Festival 2022 Impact Report: Summary



Photo from the Highland County Chamber of Commerce

Key Findings

- The festival generated between **\$1.36 and \$2.02 million** in spending in Highland County
- About 26,500 visitors attended
- The average visitor spent between \$15 and \$22 at sugar camps

Visitor Information

- Visitors on average traveled 98 miles to attend the festival
- 85% of visitors were from Virginia
- Visitors from 14 states attended
- Over 70% of visitors were repeat festival attendees
- Returning visitors on average attended the festival 13 times
- Over 90% of visitors said they are planning to attend the festival again

Other Information

Visitor's Favorite Activities

- Favorite activity for 42% of visitors was sampling maple products
- 23% of visitors said their favorite part was visiting arts and crafts vendors
- 21% said their favorite activity was learning about maple syrup

Promoting the Festival

- 59% of visitors heard about the festival through word of mouth
- The next most common way people heard about the event was via social media (19% of visitors)

Other Impacts

- 73% of visitors were interested in visiting the area during another season
- Visitors were 21% more likely to purchase maple syrup after attending
- 20% of visitors learned what real maple syrup was during the festival

About the Report

This document includes key findings from the Economic Impact Report for the 2022 Highland County Maple Festival created by Virginia Tech. The report was created with support from the Highland County Chamber of Commerce and Future Generations University. This work is funded through a USDA ACER grant: “Accessing South Atlantic markets for US Maple Syrup: educating consumers and enhancing distribution networks”. Information comes from surveys conducted during the event with visitors and vendors. If you have any questions, please contact Daniel Grizzard at danielg2@vt.edu.



WVMSPA Membership Application 2023

Purpose

The purpose of the West Virginia Maple Syrup Producers Association is to promote, educate, and research the maple and other tree syrup as well as value-added syrup products throughout West Virginia.

Membership

Membership is open to persons interested in maple or firms engaged in any phase of producing, processing and/or marketing maple syrup, and/or tree syrups and value-added products of maple syrup and other tree syrups.

We invite you to join with us as we learn and promote our industry!

Name _____

Farm/sugarhouse name _____

Street address _____

City _____ State _____ Zip code _____

Phone number _____ Cell _____ Email address _____

Membership category (check one):

- West Virginia members. (With full voting rights).
- Associate and Honorary members. This category is for friends from other states who want to join our organization. (Without voting rights)

Listing preference (check one):

- I give permission for my contact information to be shared with paid members.
- I do not give my permission to share my contact information with paid members

Annual dues: \$25, includes:

- Maple Syrup Digest Subscription
- Biannual Newsletter
- Workshops on relevant sugaring topics
- Participation in WV annual maple weekend

West Virginia Maple Syrup Association
2988 Compressor Station Rd
Bruceton Mills WV 26525

