Tree syrup in Virginia

Woods & Wildlife Conference

February 15, 2020

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TAPPING WALNUT TREES FOR A NOVEL AND DELICIOUS SYRUP

by Michael Farrell

Most people are familiar with maple syrup production- it is a time honored tradition throughout eastern North America and has seen a resurgence in popularity over the past decade. Though it is not well known, all species of walnut (Juglans spp.) also produce a sweet sap that can be boiled down into valuable syrup. There is a well-established resource of black walnut (Juglans nigra) trees throughout eastern North America that could be utilized for syrup production to complement existing sugaring operations. Tapping walnut trees is a relatively new phenomenon and very little information exists on the optimum tapping time for these species, the expected yields from traditional bucket or more modern vacuum-enhanced tubing systems, and the overall economic outlook for producing walnut syrup. Although the number of tappable black walnuts is significantly less than the number of tappable maples, there are excellent opportunities for sugarmakers to utilize the trees they currently have while also planting these trees for long-term benefits. They grow extremely fast and are relatively easy to establish in open fields and along watercourses as riparian buffers. Most people currently plant walnut trees for their timber value and nut production, however syrup production could be one more attribute to add to the list.

Sap flow in walnut trees was first reported in North America in the 19th century as part of a

Why make syrup?

- Extra income
- Hobby/novelty
- Tourism compatibility
- Off-season enterprise
- Plenty of opportunity
  - 978,466 sugar maples
  - 2,609,775 red maples
- Possible even if no trees owned
- Possible even if not cooking

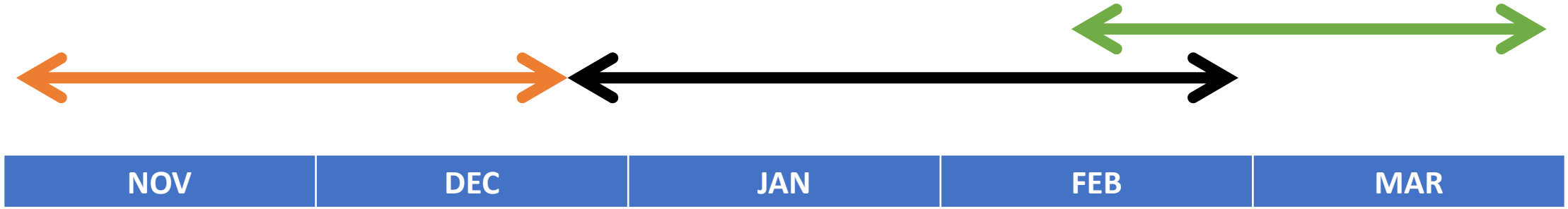
flavor.

Pure Virginia Maple Syrup

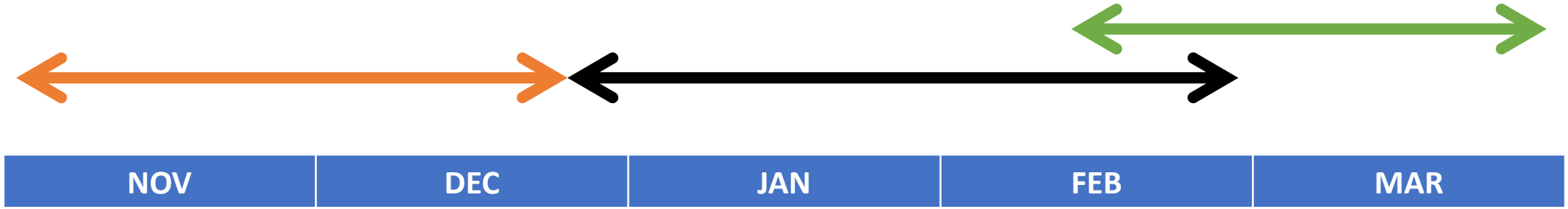
Grade "A" Golden Delicate Taste		Grade "A" Amber Rich Taste		Grade "A" Dark Robust Taste		Grade "A" Very Dark Strong	
Gallon $65.00	Add to Cart	Gallon $65.00	Add to Cart	Gallon $65.00	Add to Cart	Gallon $65.00	Add to Cart
Half-Gallon $34.00	Add to Cart	Half-Gallon $34.00	Add to Cart	Half-Gallon $34.00	Add to Cart	Half-Gallon $34.00	Add to Cart
Quart $20.00	Add to Cart	Quart $20.00	Add to Cart	Quart $20.00	Add to Cart	Quart $20.00	Add to Cart
Pint $12.00	Add to Cart	Pint $12.00	Add to Cart	Pint $12.00	Add to Cart	Pint $12.00	Add to Cart
Half-Pint $8.00	Add to Cart	Half-Pint $8.00	Add to Cart	Half-Pint $8.00	Add to Cart	Half-Pint $8.00	Add to Cart
				100 ml $5.00	Add to Cart		

Maple tapping

Maple tapping + Sycamore + Birch



Beech? Tulip-poplar? Walnut? Yellowwood?



Maple Walnut Syrup

from **$18.00**

Maple Birch Syrup

from **$18.00**

Tangy Birch Syrup

$18.00

Pure American Beech Syrup

from **$36.00**

Pure Maple Syrup Amber Color Rich Taste

$15.00

Maple Beech Syrup

$28.00

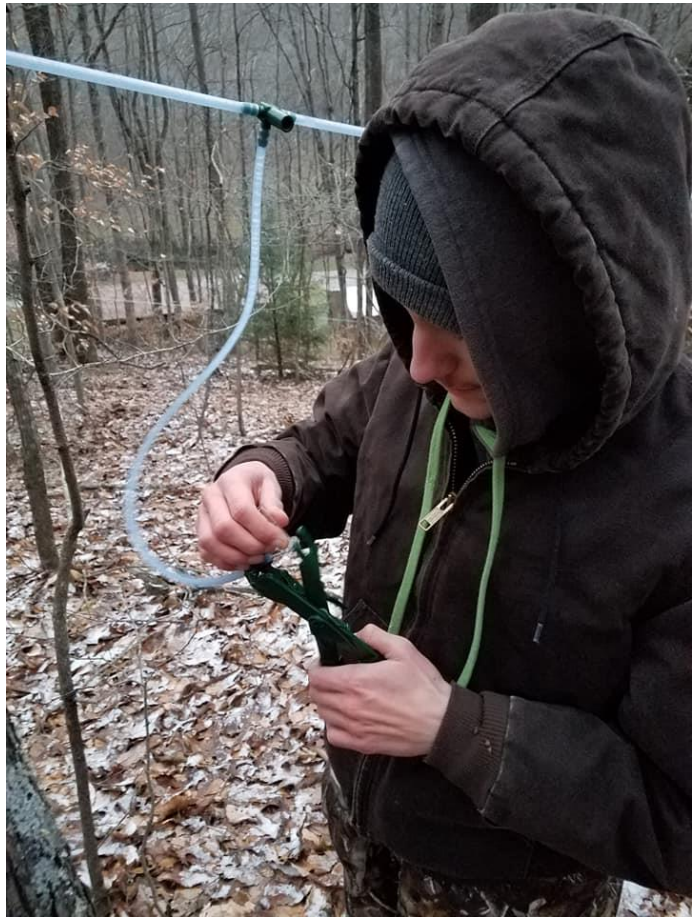
Collecting sap

- Low start-up: $0.19 plastic spouts, recycled buckets
- 5/16-inch drill bit
- Slight downward angle
- ~2 inches deep
- How many taps per tree?
- Install mid-Dec to mid-Jan (for SW Virginia)
- Freezing-thawing cycle
- 10-15 gallons sap per tree


THE POUND

Photos by Chris Allgyer

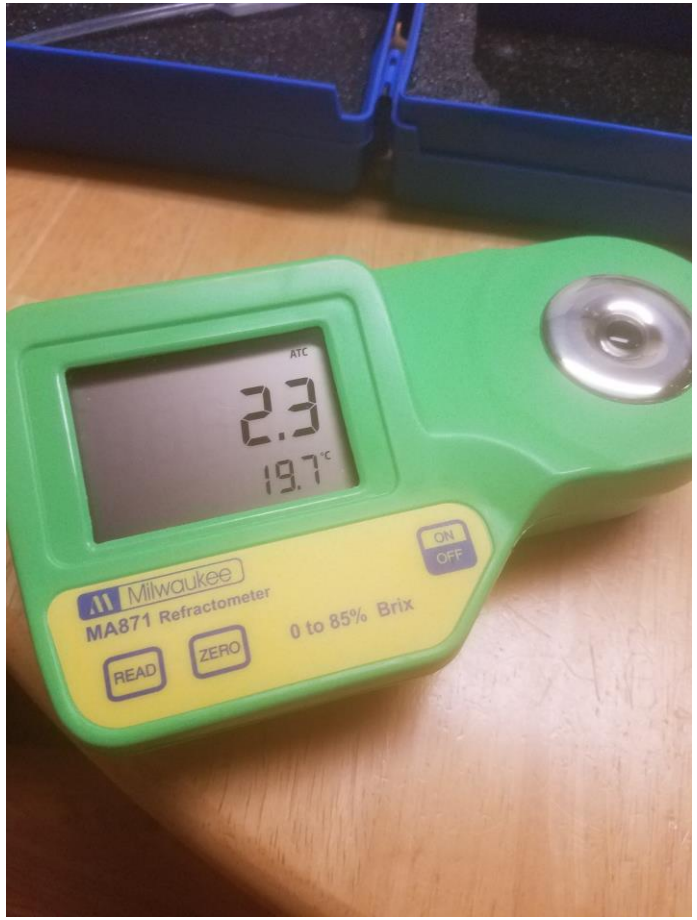
Buckets to tubing



- 5/16-inch vs. 3/16-inch
- 800 ft. of 3/16-inch tubing = $50
- With 3/16, drop in elevation = vacuum
- So…steep terrain is your friend.
- Lines left up
- Spouts removed at season’s end


Brill
MAGI-GLAZE

Sap to syrup



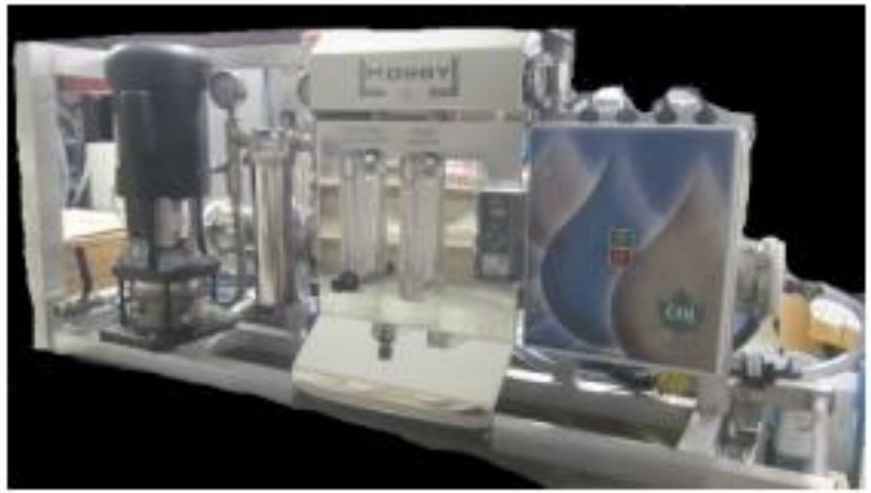
- Sap = ~ 2% sugar (Brix)
- Syrup = 66 % sugar
- Refractometer
- Hydrometer
- Candy thermometer
- ~ 1 gallon of finished syrup for every 8 taps

Land leasing

- U.S. Forest Service
- Private woodland owners
- Opportunity for sap-based business

Reverse osmosis

- 30 gallons of syrup per hour, as opposed to 10 gallons per day



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CDL 125 GPH Horizontal RO Machine

Item Number ROE125CDL

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Quantity [ ] Add to Cart

Photo from SoulyRested blog (soulyrested.com)


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SAP RO BUCKETS

(Click for RO Kits)

We offer three assembled, ready-to-use Sap RO Buckets (no assembly required) and three do-it-yourself Kits (assembly required). For comparisons and pricing, see below.

	 RB5	 RB10	 RB15
Price	$300	$415	$525
Ideal Tap Number	1-35 taps	35-75 taps	75-150+ taps
Capacity	5-8 Gallons of sap/hour	10-12 Gallons of sap/hour	15-20 Gallons of sap/hour
Concentrate Production	4 gallons/hour	6 gallons/hour	10 gallons/hour
Number of Membranes	1 (400 gallons/day total)	2 (800 gallons/day total)	3 (1200 gallons/day total)
Pump Rating	10 gallons/hour	40 gallons/hour	40 gallons/hour
Power Consumption	50 watts @24V DC 110V Transformer included	75 watts @ 24V DC 110V Transformer included	75 watts @ 24V DC 110V Transformer included
	Purchase details	Purchase details	Purchase details

Managing the sugarbush

- “Sugarbush” is the term for a forest that is used primarily for maple syrup production.
- Healthy sap-producing trees should have room for the crowns to grow. You may need to remove some competing trees.
- Funding through NRCS?
- Research into fertilization is on-going but promising depending on cost


Hood


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DRINK SIMPLE
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