

Maple Syrup Production



Beginning Farmer Webinar

Bob, Sue, and Addy Battel

Battel's Sugarbush, Cass City, Mich.

February 27, 2017

Topics



- Site and tree selection
- Tapping maple trees
- Collection and storage
- Evaporation

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“AND

JUSTICE

FOR ALL”

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Site and Tree Selection

- The best sites have sugar maple trees as the predominant specie.
 - Highest sugar content
- Red, black, Norway and silver maple also produce syrup
 - Red and silver maple bud earlier (shorter season)
- Get good ID info at tapmytrees.com, and many others
- Work with what you have!

Tapping Trees



Timing

- Tap when nighttime temp are $<$ freezing, and daytime temps are $>$ freezing
 - Sap flows strongest when daytime temps are $< 28^{\circ}\text{F}$ and $>40^{\circ}\text{F}$
- Generally late February – early April
 - Earlier in the southern part of the state, and later to the north.
- Most seasons are 4-6 weeks – the season ends when trees begin to bud.

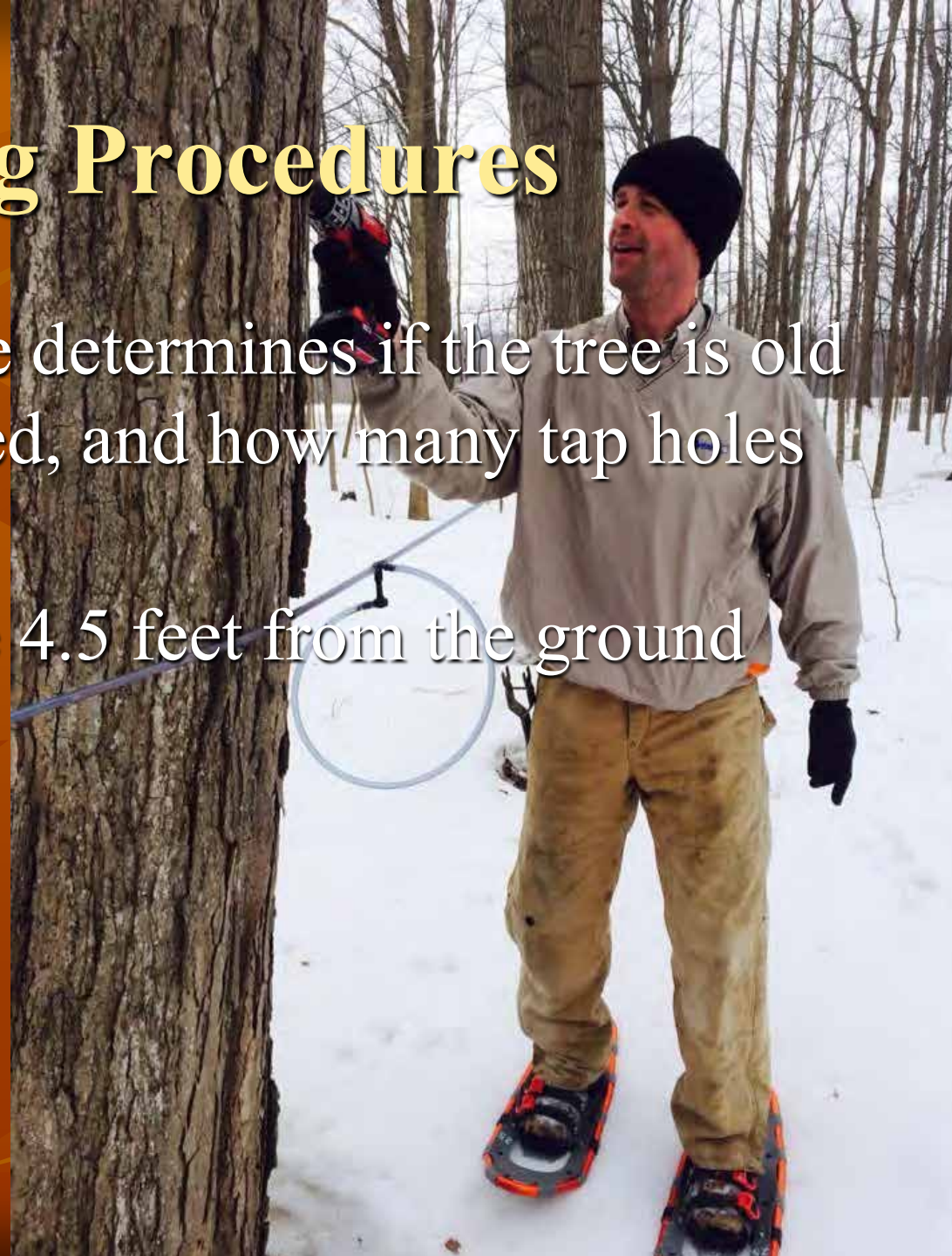
Tapping Procedures

- “Tapping” is the process of drilling a small hole into a maple tree, and inserting or “tapping” a spile, or spout into the hole with a mallet.
 - 5/16” or 7/16”
- Drill at a slight angle up



Tapping Procedures

- The size of the tree determines if the tree is old enough to be tapped, and how many tap holes should be drilled.
- Determine the size 4.5 feet from the ground
 - about chest high



Tree sizes

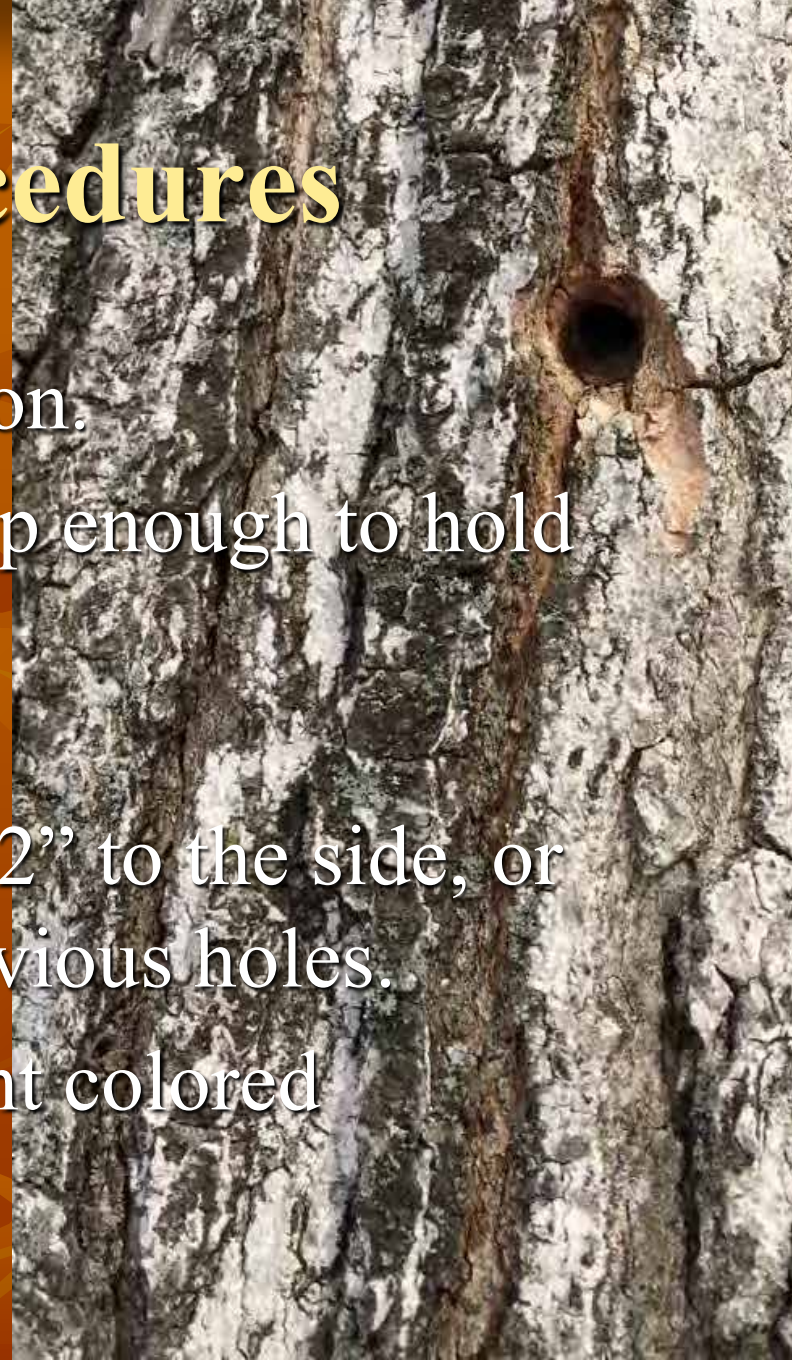
- Trees should be at least 12 inches in diameter to tap.
- 12"-18" – one tap hole
- 18"-32" – two tap holes
- +32" – three tap holes
 - Do not tap more than three times.





Tapping Procedures

- Drill a fresh hole each season.
- The hole should be just deep enough to hold the spile into the tree
 - 1 ½ - 2”
- The hole should be at least 2” to the side, or 12” above or below the previous holes.
- The shavings should be light colored





Collection and Storage



Collection

- There are options for collecting sap
 - Buckets with lids
 - Bags
 - Tubing
 - Vacuum
 - Gravity
- Choose food-grade, lead-free materials





Collection

- Collect only high quality sap
 - Turns yellow when contaminated with rain
 - Has an off smell when it becomes warm
 - Becomes cloudy after the tree has budded



Collection

- Sap should be collected daily, especially on warm days
- Your goal should be to keep the sap as cool as possible
- Bucket/Bag systems – will need to collect and transport to storage.
- The intermediate storage should also be food grade and lead-free

Storage

- Estimate two gallons of storage per tap hole
 - Err on the side of too much storage
- Also food-grade, lead-free
- Keep sap cool
 - Dairy bulk tanks work well
 - Food-grade and insulated

Storage

- Clean storage tanks regularly – every time they are emptied
- Recommendation is at least two storage tanks, so there is storage available when one tank is cleaned

Evaporation



Evaporation Equipment

- New equipment is expensive
- Look for good-quality used or home made
- Size dictates need
- Selling sap to a neighbor is also an option
 - Can also trade raw sap for a share of finished syrup
 - Or a combination cash/share agreement

Evaporation Equipment



- Heat source
- Pan
- Thermometer
- Filter (before and after evaporation)
- Hydrometer and cup
- Containers for syrup (food-grade, lead-free)

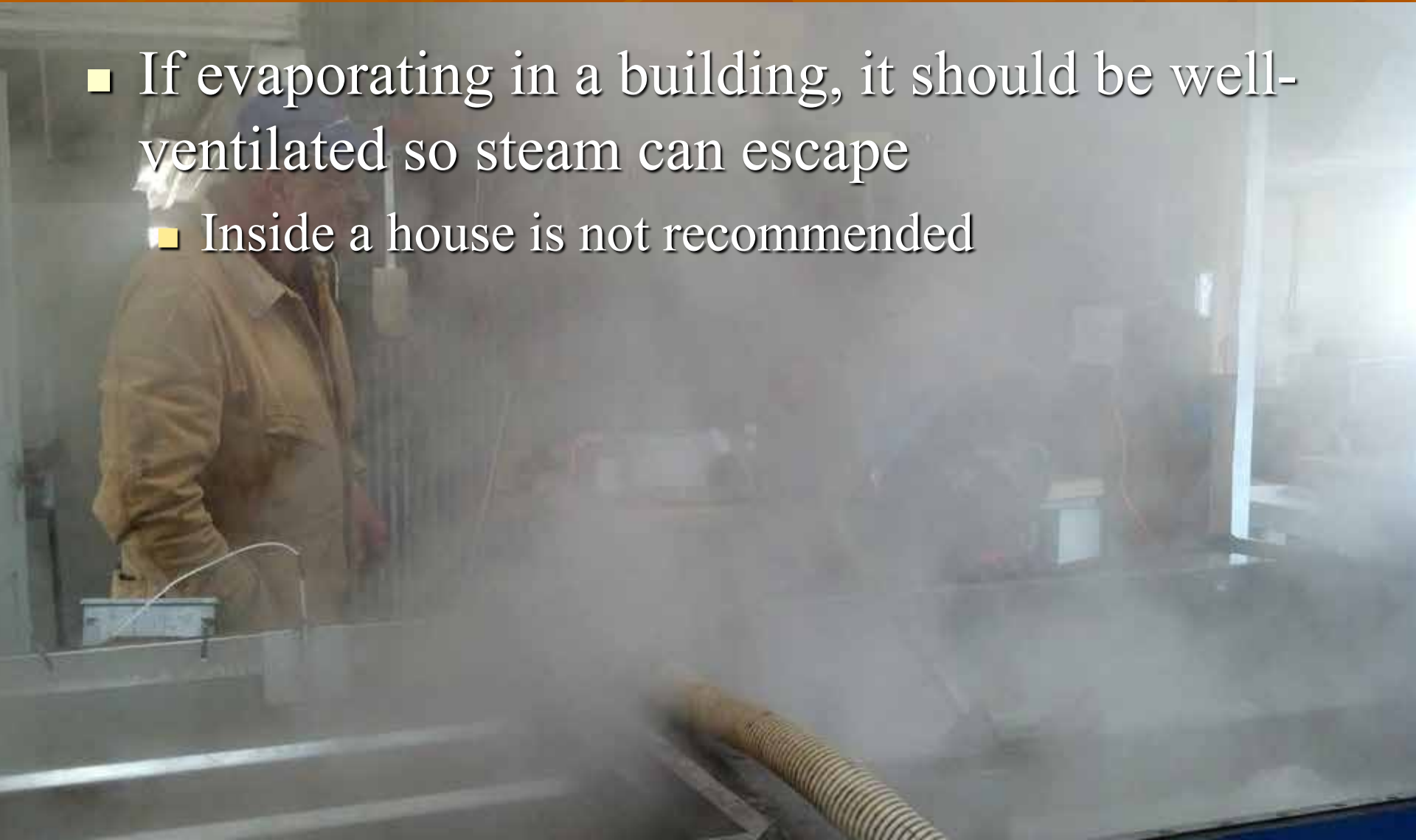
Evaporation - Arch

- An “arch” is wherever the heat is produced
- Purchase commercially
- Can build with fire brick
- Small scale – propane grill or turkey fryer



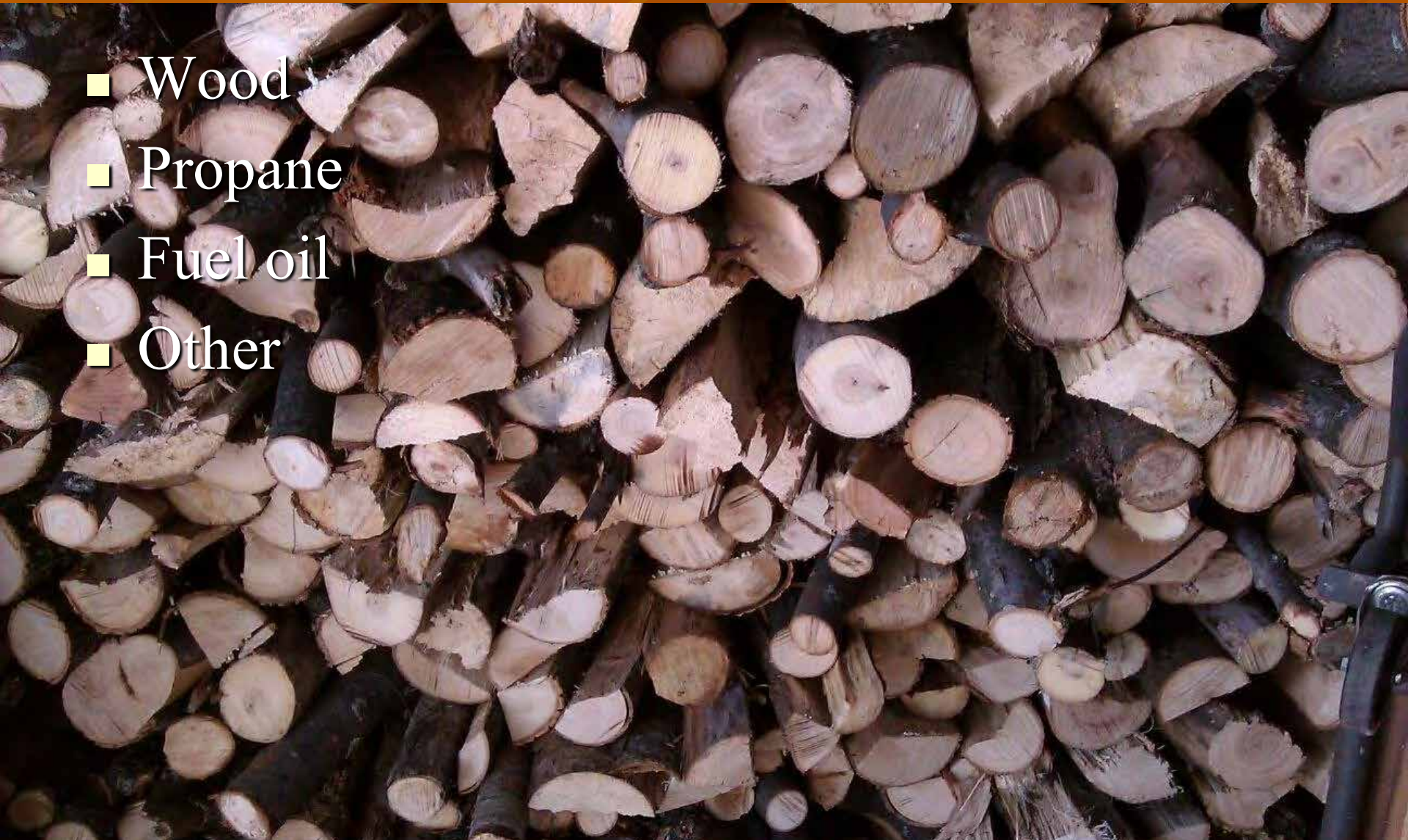
Evaporation

- If evaporating in a building, it should be well-ventilated so steam can escape
 - Inside a house is not recommended



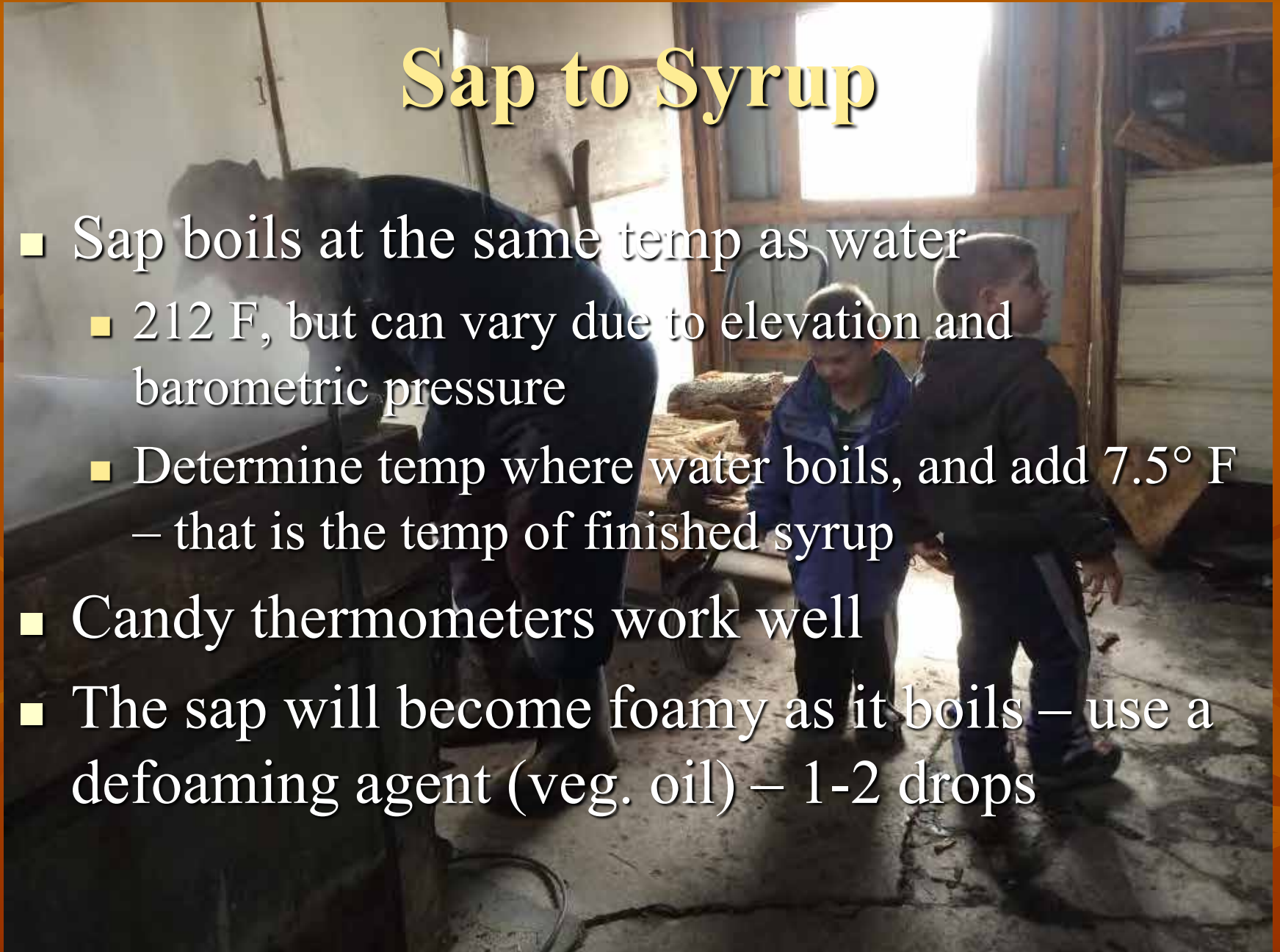
Evaporation – fuel sources

- Wood
- Propane
- Fuel oil
- Other



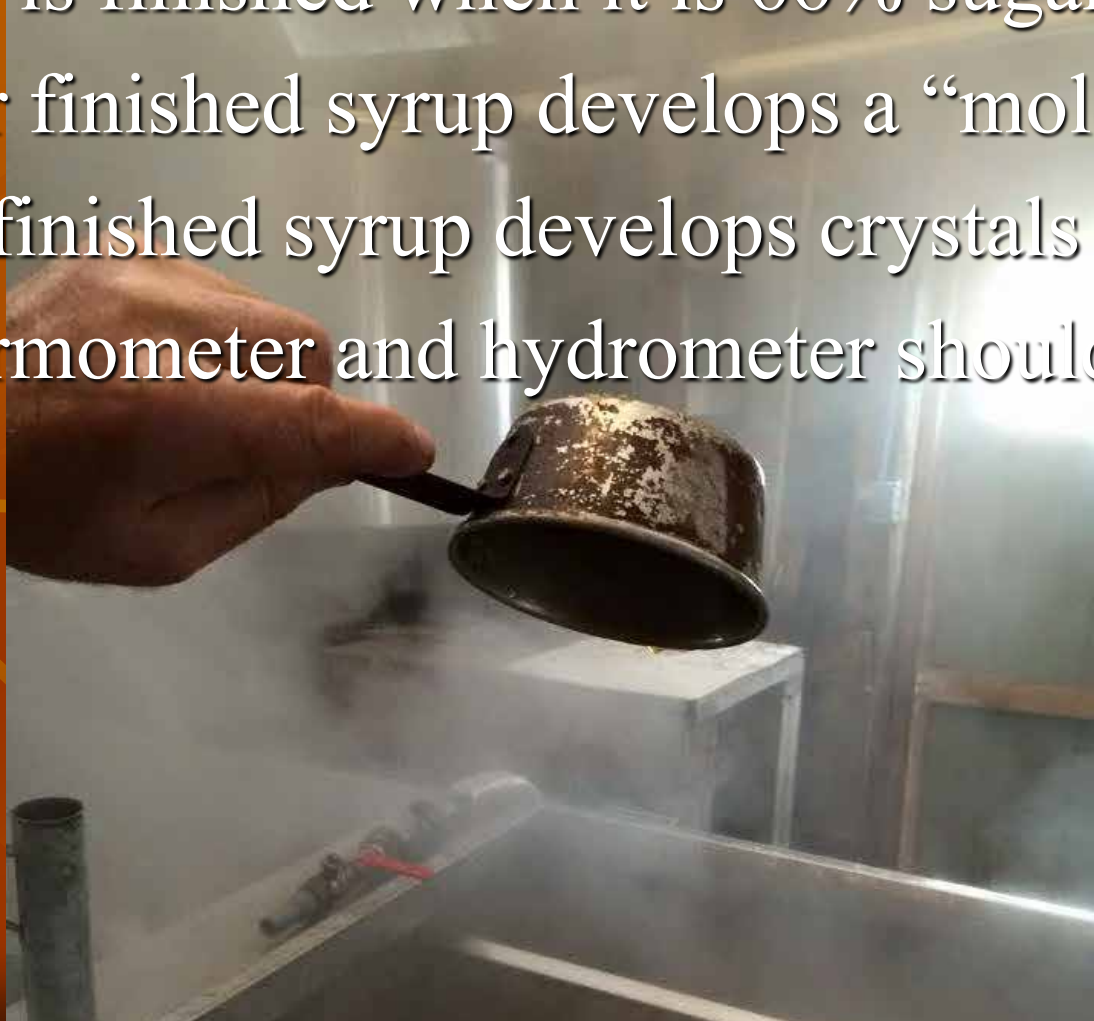
Sap to Syrup

- Sap boils at the same temp as water
 - 212 F, but can vary due to elevation and barometric pressure
 - Determine temp where water boils, and add 7.5° F – that is the temp of finished syrup
- Candy thermometers work well
- The sap will become foamy as it boils – use a defoaming agent (veg. oil) – 1-2 drops



Sap to Syrup

- Syrup is finished when it is 66% sugar
- Under finished syrup develops a “moldy” yeast
- Over finished syrup develops crystals
- A thermometer and hydrometer should be used





A Look at the Bottling and Marketing of Maple Syrup

Sue Stuever Battel

*Sue Stuever Battel Public Relations
and Battel's Sugar Bush, L.L.C.*

Bottling your syrup

- Hot pack 180-190°F
- Plastic vs. glass vs. metal
- Hot cap
- Cool
- Keep batch samples/code



Our filter and canner setup



Container caveats

- New or sterilized
- Careful of recycled container contents
- Store properly



Michigan Maple Syrup Licensing Exemption

- Not Cottage Food Law, but an exemption to Michigan Food Law
- <\$15,001 sales
- Still must meet Michigan Food Law requirements: including sanitation, building construct and design, hygiene, etc.
- May wholesale including retailers who will resell, as long as correctly labeled
- **Check with MDARD**

Labeling pure maple syrup

- *“Made in a facility not inspected by the Michigan Department of Agriculture & Rural Development.”*
- Product name
- Producer name
- Physical address
- Ingredient
- Net weight imperial and metric



Labels

- Personalized from syrup supplier



- Make your own



- Custom made



Grading

- Michigan does not have a grading standard
- Old grades (A, B) vs. new IMSI standard
- Blending



Old Grade

New Grade

Grade A Fancy

Grade A Medium Amber

Grade A Dark Amber

Grade B

Grade A

Golden With Delicate Taste

Grade A

Amber With Rich Taste

Grade A

Dark With Robust Taste



Marketing opportunities

- On-farm
- Retail
- Wholesale
 - Sap
 - Bulk syrup
 - Resale bottles
 - Private label
- Farmers markets and festivals
- Online
- Social media

Our marketing strategy



Our social marketing plan

- Facebook page
- My personal Facebook updates
- Twitter feed
- Web site
- Next will focus on Pinterest and Instagram

Tell them about your syrup

- No hard sales pitches
- What you're up to
- People want to hear your story!
- If you don't start the conversation, no one else will
- People love the story of maple — homey, down-to-earth, reminds them of times past, sounds like fun!



Now is the time

- You're not selling snake oil — people want real maple syrup!
- Local food, slow food and organic food movements are not going away
- Foodies are here to stay

What can you tell them?

- Your activities
- Recipes
- Interesting facts about maple

They need to be able to find you

- Web site
- Other online listings (MMSA, LocalHarvest, MichiganMarketmaker)
- Phone
- E-mail and signature line
- Online calendars of events, travel sites, Chamber

Turn those contacts into sales

- Have products and prices readily available
- Respond to their comments
- Draw them out to the sugarbush
 - Once you see and smell fresh syrup, you want it!

Our annual events

Maple Syrup Day

for Homeschoolers
at Battel's Sugar Bush

just off M-53 • Cass City, Michigan
Friday, March 20, 2009 • 10 a.m. and 2 p.m. tours
FREE

Experience the history of sugarmaking and learn the craft hands-on as you earn your own Junior Sugarmaker badge.

- ★ Learn the history of sugaring.
- ★ Try your hand at tapping a maple tree.
- ★ Gather your own sap.
- ★ See a demonstration of boiling the sap to make syrup.
- ★ Taste the finished product.
- ★ And more!



Sue and Bob Battel are 5th generation sugarmakers who homeschool their children. They are eager to share the maple syrup experience with you. They'll be dressed in 1882 period clothing, as their ancestors did when the sugar bush was started. Feel free to dress in pioneer type clothes if you'd like.

For more information, directions
or to sign up (number attending):

Visit our web site at
<http://BattelSyrup.weebly.com>

E-mail BattelSyrup@gmail.com

Call Sue at (810) 310-0480

7964 Daus Rd. • Cass City, MI 48726



1st Annual Maple Syrup Saturday at Battel's Sugar Bush

7964 Daus (Ritter) Rd. • Cass City, MI
Saturday, March 21, 2009 • 10 a.m.-3 p.m. • FREE

Experience the making of fresh maple syrup. The Battel family has been sugaring in their woods northeast of Cass City in the Thumb since 1882, just after the Great Fire. They're eager to share their tradition with you.

- ★ Try your hand at tapping a maple tree.
- ★ See how sap is gathered and boiled.
- ★ Taste the finished product.
- ★ Take a guided tour.
- ★ Kids participate in a special scavenger hunt.
- ★ Pancakes with fresh maple syrup provided.

Easy to find, just 1 mile off M-53. Come rain, snow or cold — building is warm.

Put Maple Syrup, Pure Maple Cream and Taste Maple Candy on sale!



For more information:

Visit our web site at
<http://BattelSyrup.weebly.com>

E-mail BattelSyrup@gmail.com

Call Mark & Diane at (989) 872-2621

Call Bob & Sue at (810) 310-0480

4-H, Scouts and other groups, contact Sue to set up a free Junior Sugarmaker tour for Friday or Saturday. Your group is also welcome to the open house without sign-up.





Why pure maple syrup?

- Taste!
- Natural sweetener
(never mind beet sugar also is)
- Minimally processed
- Connects them to tradition, nature
- A local food
- Grew up with it
- Perceived health benefits

Is this your product?



This is the product



How to turn customers off

- Send them to a retail store because you're too busy in the woods
- Look too commercial (lighted sign vs. quaint)
- Being a faceless product
- Making them feel like a transaction
- Poor quality

Where do we go from here?

- Tap those trees!
- Use us as a resource
- Join Michigan Maple Syrup Association
 - October fall tour
 - January annual conference



Other good resources

- Syrup equipment dealers
- Forums: Sugarbush.info and MapleTrader.com
- North American
Maple Syrup Producers Manual
- Maple universities:
 - Cornell University Maple Program
 - University of Vermont
Proctor Maple Research Center



How to find Battel's Sugar Bush

- Web site: www.BattelSyrup.weebly.com
- E-mail: BattelSyrup@gmail.com
- Facebook: <http://companies.to/syrup>
*or look for **Battel's Sugar Bush** page*
- Twitter: www.twitter.com/BattelSyrup
*or look for **@BattelSyrup***
- LocalHarvest:
www.localharvest.org/farms/M22706



Small-Scale Sap Gathering

Addy Battel

County Line Kids Pure Maple Syrup

Collecting from the taps

▶ Buckets



▶ Sap bags



▶ Gravity tubing



Holding sap

▶ Buckets

▶ Barrels

▶ Bulk tank



Moving sap

- ▶ Manual transfer
- ▶ Bilge pump



Hauling sap

- ▶ 60-gallon barrels on Ranger



- ▶ 300-gallon truck-mounted



Sugarmaking with low startup

- ▶ Rented trees
 - ▶ Pay with syrup



- ▶ Boiling agreement
 - ▶ 50/50 shares of finished syrup
 - ▶ We buy containers



