MAPLE SYRUP-101-The Basics
2017 Sinsinawa Maple Conference

Eric Randall
North American Maple Syrup Council
2016-2017 President
Randall’s Maple
10307 Smithley Rd, Alexander, NY
randall-maple@msn.com
Stainless Steel Spiles
Tree Tapping

• Only in White Wood, tree ought to be 10” dbh, new tap hole each year. Make sure that it is a maple—also helps if the tree is alive.

• Clean the Tap Holes

WARNING! Para-formaldehyde pellets may NOT be used!
Number of Taps per Tree

- Old rules, 7/16” spiles---1 tap/10-17” tree; 2 taps/18-24” tree and 3 taps over 25”
- New rules---5/16” Health spouts, ¼” and micro spouts—current thinking is ‘one tap/tree’ especially if on vacuum.
- Crown diameter
- Tree spacing---70/acre
- Frozen wood
Pipelines, Tubing and Conduit

• DOWNHILL, STRAIGHT AND TIGHT" is a slogan to keep in mind when installing tubing
• Gravity, single line vacuum/sap, wet & dry line system
• Sizing mains, branch and laterals 2", 1 1/2", 1 ¼", 1", ¾-
  DON’T USE ½
• Blue, black, white, orange or striped?
• Soft, rigid or semi-rigid
• Tight, empty, and shortest distance
• 3-5 Perfect, 7 maybe, 10 trouble
Clean Tubing and Quality

• Clean water/air mixture can be forced through the sap lines. The turbulence of the air mixed with water is an effective cleaner and leaves no chlorine residue.
Single main...no sags.....wet and vacuum together
Gravity … No vacuum.… Places where milk tanks go to die
Sap Collection

• Timing is Important
  Faster is better in everything maple

• Sap Gathering Pails
  no AT or hydraulic oil pails
  ALL FOOD GRADE

• Sap Ice
  To heave or not to heave? Little sugar in ice, but keeps the sap cold
Galvanized soldered

English Tin / Terneplate
Acceptable Sugarbush Lead
Doesn't taste like wax

Fiona Rose Geraghty, 1 ½, eats jackwax at Randall’s Maple Products on Smithley Road in Alexander during last weekend’s Maple Weekend. Jackwax is syrup that’s been heated to a soft ball stage and then poured over fresh snow and eaten. For a full page of photos from Maple Weekend, see page A-8.
Processing Sap

- Prompt Processing
- Reverse Osmosis
- Defoamer  Be careful what you use. Some people are allergic to dairy products, peanut oil. Lard, bacon, and pork are not kosher
- Use food grade sealed transfer pumps
Processing Sap

- Evaporator Pans: No lead
  - Flat, short, raised, drop
  - Preheaters, Steam-away,
  - Air-injection, Hoods
  - Cross flow, reverse flow
  - Manual and automatic draw off
Sap Tanks

• **Keep Tanks Clean Throughout the Season**
  Don’t use your manure spreader as a sap trailer

• **Keep it Cool and Covered**
  Don’t let sap sit in gathering tanks for extended periods

• **Storing Sap**
  Don’t. If you must, keep it cool, clean and in stainless. No chlorine residue.
OLD and NEW
Syrup Density -66.5 Degrees Brix

NEEDED

• Thermometer
• Hydrometer and cup
• Refractometer-Optional
• Temporary Grading Kit
• Permanent Grading Kit (Optional)
Brass Pumps
Pressure Filters
Grading Syrup for Retail Container
Syrup Packing

• TEMPERATURE:
• Packing syrup closer to the date of sale reduces the possibility of grade change

• For small producers, five gallon cans offer similar advantages to the 30 gallon barrel.
FOOD GRADE

Food Grade Stainless Steel

NOT Food Grade Galvanized
Packing in Bulk

- More bulk syrup is downgraded or ruined by storage in drums which are in poor condition than by any other single storage cause.

- Use clean stainless steel, food grade, drum with a tight seal for long term storage 15,20,30,40,55 gal drums. Pack hot and full.

- Galvanized syrup drums should be your next burn barrel.
Sanitizers and Maple Quality

WARNING! HOUSEHOLD DETERGENTS and SOAPS which have any fragrance, and IODINE-BASED DAIRY SANITIZERS SHOULD NOT BE USED for sanitizing maple production equipment.

Both have ruined the flavor of large quantities of syrup, rendering it totally unfit for sale.
One part **UNSCENTED** household chlorine bleach (such as unscented Clorox) 

To 

twenty parts of clean water may be used 

**BUT--**

flushing afterwards with clean, clear water is essential
Quality Begins for the Next Season

• It is recommended that all equipment be cleaned as soon as possible at the close of the maple season.

• Animal proof your supplies, equipment and tubing. Squirrels eat year-round

• Don’t leave sap or water in evaporator pans

• Drain and freeze-proof valves and pumps

• Flue pans should not rest in ashes

• Purchase new evaporator and RO for spouse’s Christmas present

• Find new place to sleep
Be creative but not dumb

Safety First and Always