

Acer 2021 Enriching Maple in Appalachia Sugaring Operation  
Assessment Checklist

Sugaring operation:

Location:

Operators:

Assessment conducted by:

Date of Assessment:

Description:

Operators Goal(s):

Operator expectations from this process:

**Tapping**

- Are you considering historic Freeze/Thaw cycles in your area to help determine when to tap?  
(wetherunderground.com)
- Are you looking at the weather forecast before beginning tapping?
- Depth of taphole (1/75-2 inches)
- Stop on drill
- Spacing of previous tapholes
- Tapping zone (reasonable overhead)

**Woodlot Assessment**

- Stand composition
  - 40-80 maple trees/acre
  - Species composition/diversity
  - Diameter distribution
  - Density (26 ft between trees)
- Tree health
  - Broken or dead tops
  - Bark damage at the base
  - Tree form – single or multiple stems
- Understory
  - regeneration – present/absent
  - excessive ferns
- Site conditions
  - Slope
  - Aspect

Access ( repairs and sanitation)

### **Sap Collection system**

Mainlines

- tight (no sags)
- slope (3% minimum- Unless you live in Ohio)
- clean
- connectors (plastic or SS)
- End line gauges

Bucket Collection system

- Food grade plastic
- No galvanized or solder repaired buckets
- Lids (with collection indication system)

Gravity systems

- Tightness of lines (no sags)
- Number of taps/ lateral (20 – 25)
- Repairs
- Sanitation – evidence of mold buildup

3/16 Tubing System “natural vacuum” - Gravity

- slope appropriate.
- taps per 3/16 line (slope dependent)
- Tap and dropline replacement schedule
- Dropline length
- Evidence of mold
- Repairs
- Top of line gauges
- Sanitation system (chemical or water)

5/16 Tubing system “pump and releaser”

- proper Slope and no flat spots that might interfere with sap flow
- Tubing condition (animal chews, age deterioration)
- Number of taps per lateral (5-7)
- Loop at mainline (leak check)
- Plan for replacement
- Pump sizing (NYS Tubing Manual)
- Evidence of mold
- Dropline length
- System sanitation method (chemical, dry vac, water)

### **Sap Storage (woods and sugar house)**

- Volume (2 gal/tap)
- Cleaning procedure
  - Sanitation
  - Periodicity
- Cooling measures

### **Sugarhouse**

- Consistent with Best Management Practices/Inspection guidelines or regulations (WV Facilities review manual)
- Inspect for possible lead contamination (brass is a no no, mostly)
- Ergonomics and sap flow efficiency
- Head tank location
- Record keeping
  - Dates and
    - Sap volume
    - Sap brix
  - Dates and
    - length of time boiling
    - volume of syrup produced.

### **RO Operation**

- Brix
- Pump pressure
- Permeate volume \_\_\_\_\_ Concentrate volume \_\_\_\_\_
- Frequency of desugaring
  - catching sugar from desugaring
- Frequency of soap wash
- Acid wash
- Membrane storage
- Permeate conductivity (less than 10 ms/cm)

### **Filtering and Bottling**

- Brix (66 – 68)
- bottle at 185 degrees F
- Sediment and Clarity
- Sanitize tops (on their side)
- Taste (absolutely delicious)

