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**

o Are you considering historic Freeze/Thaw cycles in your area to help determine when to tap? (wetherunderground.com)

o Are you looking at the weather forecast before beginning tapping?

o Depth of taphole (1/75-2 inches)

o Stop on drill

o Spacing of previous tapholes

o Tapping zone (reasonable overhead)

**Woodlot Assessment**

o Stand composition

40-80 maple trees/acre

Species composition/diversity

Diameter distribution

Density (26 ft between trees)

o Tree health

Broken or dead tops

Bark damage at the base

Tree form – single or multiple stems

o Understory

regeneration – present/absent

excessive ferns

o Site conditions

Slope

Aspect

Access ( repairs and sanitation)

**Sap Collection system**

o Mainlines

tight (no sags)

slope (3% minimum- Unless you live in Ohio)

clean

connectors (plastic or SS)

End line guages

o Bucket Collection system

Food grade plastic

No galvanized or solder repaired buckets

Lids (with collection indication system)

o Gravity systems

Tightness of lines (no sags)

Number of taps/ lateral (20 – 25)

Repairs

Sanitation – evidence of mold buildup

o 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)

o 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)**

o Volume (2 gal/tap)

o Cleaning procedure

Sanitation

Periodicity

o Cooling measures

**Sugarhouse**

o Consistent with Best Management Practices/Inspection guidelines or regulations (WV Facilities review manual)

o Inspect for possible lead contamination (brass is a no no, mostly)

o Ergonomics and sap flow efficiency

o Head tank location

o Record keeping

Dates and

Sap volume

Sap brix

Dates and

length of time boiling

volume of syrup produced.

**RO Operation**

o Brix

o Pump pressure

o Permeate volume \_\_\_\_\_ Concentrate volume \_\_\_\_\_

o Frequency of desugaring

catching sugar from desugaring

o Frequency of soap wash

o Acid wash

oMembrane storage

oPermeate conductivity (less than 10 ms/cm)

**Filtering and Bottling**

o Brix (66 – 68)

o bottle at 185 degrees F

o Sediment and Clarity

o Sanitize tops (on their side)

o Taste (absolutely delicious)