

SAP INTO SYRUP



TIJ 10 – Green Industries

Storage



- ❧ When the sap has been collected, it can be boiled immediately, or it can be stored
- ❧ For a short period of time (1 to 2 days), sap should be stored in a cool place, as this prevents insects and other pests from affecting the post-harvest quality

Storage



- ❧ If the sap needs to be stored longer, it needs to be refrigerated or frozen
- ❧ If not, the sap can spoil, or turn sour
- ❧ You can tell if this has happened by the sour smell and taste, and the very cloudy appearance

Examine the two different storage methods on the following page. Identify pros and cons of each one.



Food Grade Barrels on Wagon	Refrigerated Bulk Tank
Pros more portable easy to build cheaper	Pros holds more refrigerated professional
Cons holds less doesn't look cool not refrigerated	Cons very hard to move expensive wiring

Two Storage Methods



Storage



❧ The sap that we have harvested has been frozen

❧ This is not a very efficient method, because:

* takes a long time to thaw

* takes a lot of space

* buy a freezer

Sap Composition



- ☞ Maple sap contains sugar, water and minerals
- ☞ It contains very small amounts of other compounds, such as organic acids, amino acids, proteins, vitamins,...
- ☞ Although all of the compounds provide flavour, the most important is the sugar content

Sap Composition



- ❧ The sugar content is usually 2%, although it can sometimes be as low as 1% and as high as 6%
- ❧ The higher the content, the more maple syrup is produced

The Rule of 86



∞ Used to determine how many litres of sap is needed to produce 1 litre of maple syrup

$86 \div \text{sugar } \%$

= amount of sap needed to make 1 litre

∞ Generally, 40 litres of sap = 1 litre of maple syrup

We have collected approximately 200 L of sap.
Use the Rule of 86 and the 40:1 ratio to estimate
the amount of maple syrup we will produce.



☞ Rule of 86, with 2% sugar content

$$86 \div 2 = 43 \text{ L of sap}$$

☞ Rule of 86, with 3% sugar content

$$86 \div 3 = 29 \text{ L of sap}$$

28.6 28.7

☞ 40:1 Ratio

$$\frac{200 \text{ L}}{40} = 5 \text{ L}$$