Sugar House Vocabulary

Maple syrup production has its own unique equipment, processes, and vernacular or language. The vocabulary resource will help you familiarize yourself with many of the terms used within a sugar house.

Bottler or Canner- Equipment that allows for syrup to be efficiently bottled or canned. Bottler/canners often have a heater which allows the sugarmaker to keep the syrup temperature at or around 180 F. This temperature ensures that maple syrup containers are sanitized and properly seal for shelf-stability.

Bulk tank- Stainless steel or food grade plastic tanks used for the bulk collection and storage of maple sap.

Concentrate- Sap which had been refined through reverse osmosis or evaporation to have a higher sugar density.

Concentrate tank- Tank that holds concentrated sap and is often gravity fed into the evaporator.

Defoamer- As making maple syrup causes chemical changes within maple sap, foam forms as these changes take place and solids begin to precipitate. Historically, many things were used to “defoam” the syrup from dairy products, salt pork, and even boiling hotdogs in the sap. Today, defoamers are made of plant oils such as vegetable, canola, and safflower.

Diatomaceous earth (DE)- Ground fossilized microscopic hard-shelled algae which is used as a filter medium to draw out impurities in maple syrup.

Draw-off valve- Valve at the end of the evaporator from the syrup pan at where finished syrup is drawn off. Automatic draw offs are available and can be preset to allow for syrup to be drawn off when it reaches a preprogramed temperature.

Filter press- Maple syrup equipment consisting of a pump which forces maple syrup through a series of frames and filter papers. Before filtering, DE (diatomaceous earth) powder is added to maple syrup which coagulates with niter and other impurities. Once forced through the filter, impurities cake

onto the filter leaving clear maple syrup which is pumped into canners or storage barrels.

Float box- A float box or multiple float boxes can be added to evaporators which allow for automatic movement of sap through an evaporator as syrup is evaporated or drawn off. As sap levels rise and fall in different parts of an evaporator, float boxes will automatically open and close allowing for more sap to be added to the system.

Brix- The predominate scale used in maple sugaring to measure the density of dissolved solids in a liquid.

Grade- USDA requires any maple syrup sold to consumers to be graded using the universal maple syrup grading system. Grades are grade A golden-grade A delicate taste, grade A amber-rich taste, grade A dark-robust taste, very dark-strong taste. Grades are determined by the amount of light which can pass through a sample of maple syrup. Syrup can be graded either using a syrup grading kit or photometer.

Finishing pan or Syrup pan- Smaller front part of evaporator where sap is finished into syrup. As sap gets denser through evaporation, a natural gradient is created with the introduction of less dense sap pushing denser sap forward in the evaporator. Finishing pans have alley ways which help maintain the density gradient of sap.

Flue pan- Larger back pan of an evaporator where sap is introduced. Flue pans have raised or dropped walls called flues. Flues allow for more surface area of metal pan to sap increasing the efficiency of evaporating sap.

Gravity filter- Synthetic or natural filter cone or cloth which is used to filter impurities out of maple sap and maple syrup.

Jack-wax- Maple taffy treat which is made by heating maple syrup to 230 F and 245. Once the syrup is at the proper temperature, it is drizzled on packed snow or ice quickly cooling the syrup and allowing taffy to form.

Maple sap or Sap- The sucrose (sugar), nutrient, and water mixture which is found in trees. Sap is used by trees to move energy through the tree from

roots to leaves. Sap from a maple tree is on average 2% sugar with other Acer or maple species being less.

Permeate- Processed water which is a by-product of the reverse osmosis process which contains little to no sugar or nutrients.

Permeate tank- Tank used to store bulk permeate from the reverse osmosis process. As permeate is purified water, permeate is often saved for washing/sterilizing in the sugar house.

Preheater- Device or area that allows for preheating of sap before being added to the flue pan or syrup pan to prevent boiling be interrupted by the addition of cold sap. Often, hobbyists might add a small pan over the top of their evaporator or wrap copper coils around the exhaust stack. Larger evaporators can have preheater units constructed or added to their evaporator.

Pump house- Covered structure used to house vacuum pumps used in vacuum sap line systems. Usually but not always connected to a sap house.

Refractometer- A density measuring device which contains a lens and allows the user to look through and observe how much light is passed through a small sample of maple syrup to be used to measure the density of maple syrup.

Sap density- The measure of the amount of sugar and other solids in tree sap. Sugar maple trees have the highest levels of sugar which is on average about 2%.

Steam away- Unit that goes over the flue pan. Steam away has a series of pipes that allow for cold sap to be preheated from the rising steam of the flue pan to slightly below boiling before it is introduced into the flue pan. Water that is condensed on the piping drips into troths below the piping and is collected for a hot water source in the sugar house.

Steam hood- Metal hood that goes over the evaporator allowing for direct venting of steam outside.

Sugar house or Sugar shack- Structure used to house and process maple sap usually found in or near a sugarbush.

Sugar sand or Niter- The natural accumulation of minerals, sugar, and other matter that is found in maple sap as the density of syrup rises and is filtered out in the filtering process. Sugar sand/niter is always present in the syrup making process and is edible but unpalatable/bitter.

Syrup density- The measure of the amount of sugar and other solids in tree sap that has been concentrated through processing. Legally under USDA and New York regulations, syrup must be between 66 and 68.9 Brix.

Syrup hydrometer- Instrument used to measure the density of dissolved solids (sugar and nutrients) within a liquid (water). The most common scale used for maple syrup density ratios is the Brix scale.