

## Agenda

### Sorghum 4S: Seed, Stalk, Sap & Syrup

- Seed—Which Sorghum
- Stalk—Planting and Care
- Sap—Squeezing the Juice
- Syrup—Making Syrup

Go Do It!  
Squeeze  
Boil

Short  
Slide  
Show

## Great Lakes Staple Seeds

[www.GreatLakesStapleSeeds.com](http://www.GreatLakesStapleSeeds.com)

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# Seeds

There are 4 Types of Sorghum:

**Grain** sorghum seeds make nutritious porridge, pancakes, and alcohol.

**Grass** sorghum is grown for animal forage.

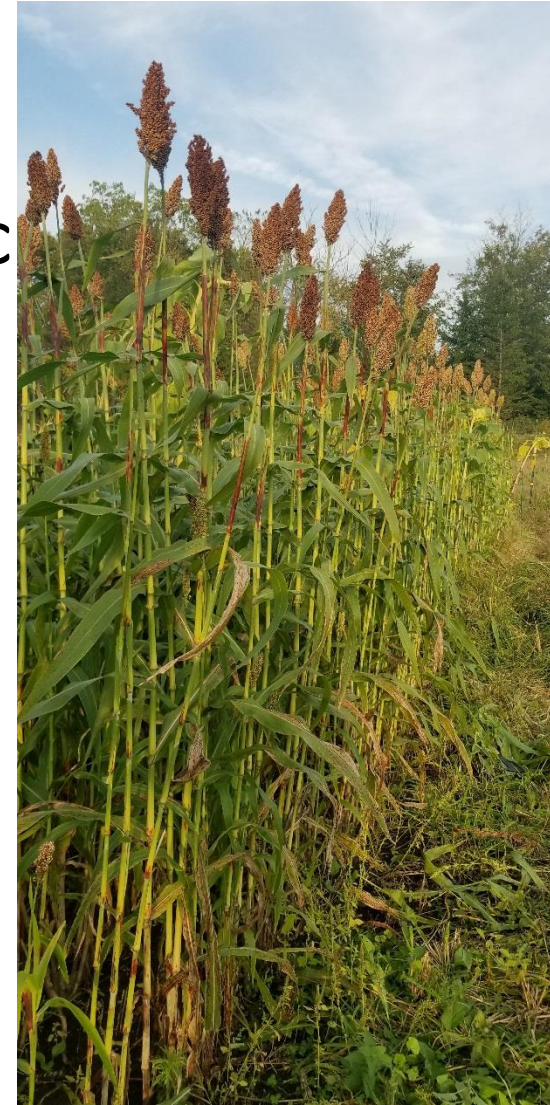
**Broomcorn** sorghum is used for making brooms.

**Sweet** sorghum is grown for syrup and silage.

# Seeds

Sorghum is a versatile crop and is historically grown as a sweetener, especially during times of economic hardship.

Rox Orange is a robust regional variety developed by the Wisconsin Agricultural Experiment Station for syrup



# Stalk

Grown like corn:

- Direct seed sorghum 1 inch deep in early June when the soil temperature is above 65 degrees.
- Thin to 2 to 3 plants per foot.
- Can be planted in a long single row, or, as a block. If a block, 2 to 3 ft between rows as spindly plants will get blown over!
- It takes ~10 gallons of boiled juice to make a gallon of syrup. (better than 40:1 for maple)
- Roughly, each 50 row feet may give approximate a quart of finished syrup. 1 ~1/3<sup>rd</sup> oz of seed



# Stalk

Control weeds like you would for sweet corn.  
This year I tried mulching with grass clippings.





# Stalk

High sugar in the juice is when the seeds are just getting hard





# Stalk

2 weeks before pressing day—remove seed heads

Day before—strip off the leaves

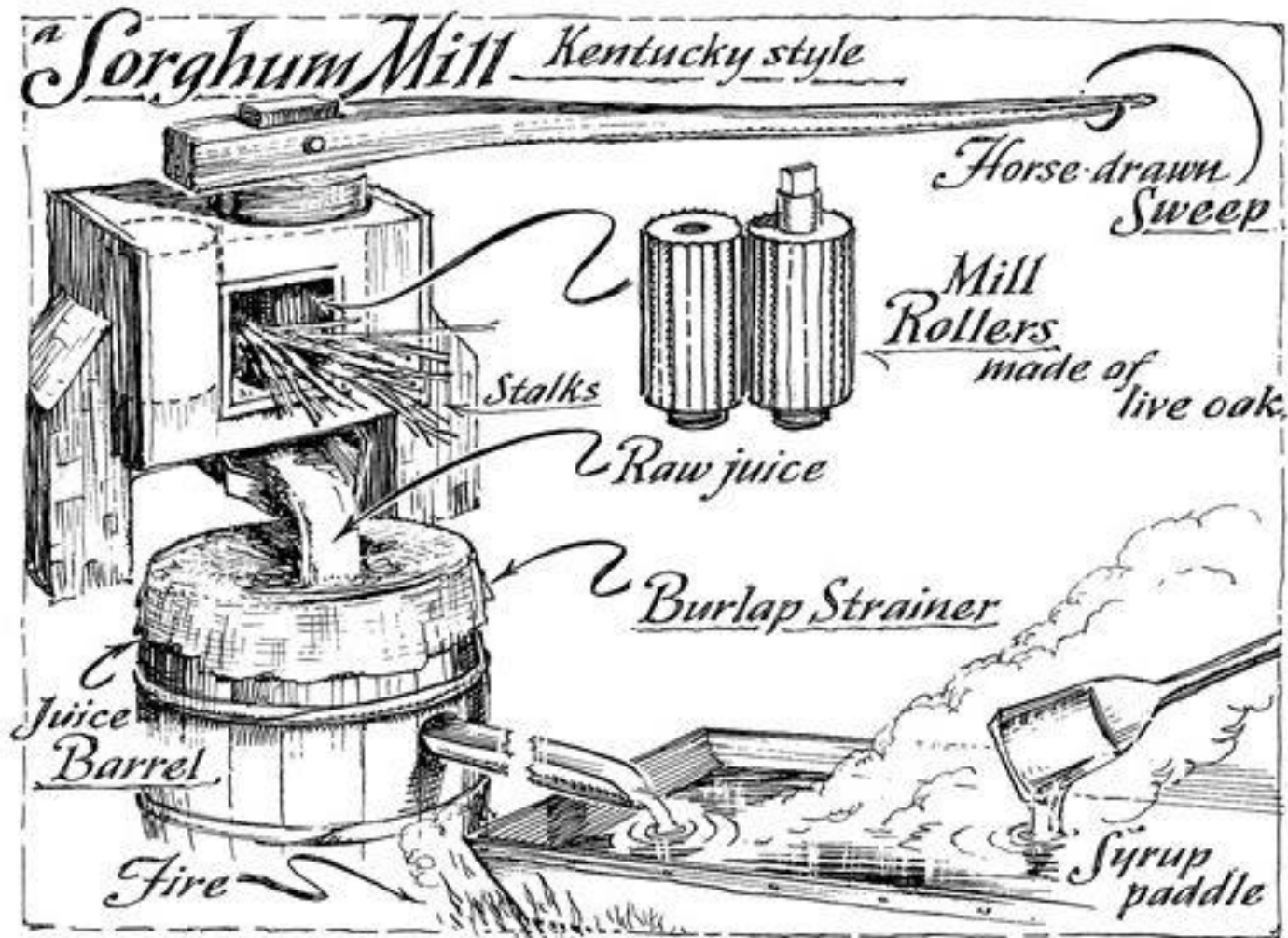
Morning of—cut & stack stalks



# Sap

Roller pressing:

- Stalks are run between 2 or 3 metal rollers to squeeze the juice
- Strain the juice and let it settle





# Sap

In the past 150 years or so, the press was driven by animals:





# Sap

Then driven by flat belt from steam engines & tractors:





# Sap

And then by the PTO shaft of farm tractors



# Sap

For the home scale:

- Mop wringer
- Electric 'juicer'
- Manual cane squeezer
- Electric cane squeezer
- Grainmaker sorghum press





# Sap

Filter after pressing to remove any 'solids'

- I like to use 'honey strainers' that fit into 5 gal buckets



# Sap

Let the juice 'settle' for a few hours

- I usually press on one day
- Store the buckets in a fridge overnight
- Boil on another day





# Syrup

Traditionally boiled in large flat pans



# Syrup

For large quantities, filtered juice slowly flows, cooking thru the winding channel until it is finished.





# Syrup

For small quantities, I boil and skim in a stock pot on propane, and do the final finishing in a jam cooking pot on electric pot:



# Syrup

When to slow and stop boiling?

Same concept as making jam or maple syrup:

- Too soon, it will be runny and not store well
- Too thick, burnt!



# Syrup

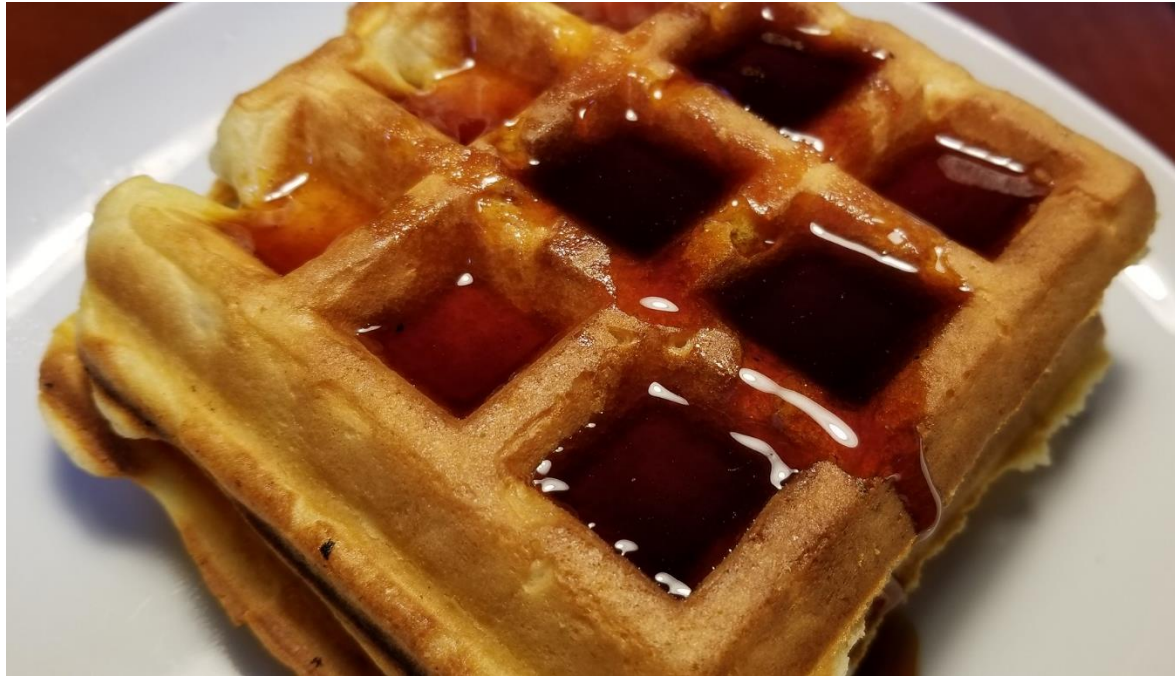
- Use a brix gauge (TSC sells them for maple syrup) to 80 brix, or
- The “look” of the drips (old timers), or
- We tend to stop around 229 F





# Syrup

We usually store the bottles in the fridge.





# Things to Bring

- Several seed heads, jar of seeds
- Fully intact stalk (clean the dirt from roots)
- Pre-boiled sap
- Mill, drain fitting, drain tubing, small bucket
- Roller cart, 4 support & 2 spacer blocks , 2 ratchet straps
- Storage buckets, sap filters, lids
- Brix measurement and graduated cylinder
- Thermometer, finishing pot, ladle, funnel & crate of jugs
- Electric heater element and heavy extension cord
- Propane tank, burner, lighter, pot, skimmer, bucket with water, fire extinguisher
- Syrup bottles for drawing