Adding Fruits To Meads

Make mine a Melomel!
Intro / Bio

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- Prior speaker at WineMaker Magazine Conferences
- Trained/Certified Judge, amateur award winner (120+) for wines, meads, beers and ciders
- Author of articles in both WineMaker and Brew Your Own magazines
Topics

- Mead Fundamentals
- Using Fruit in Mead
- Fruit Processing
- Fruit in Recipe Management
- Fruit & Process
- Pairing Honeys & Fruits
- Fruit & Spices
- Q&A
- Resources
Mead Fundamentals

- Mead is fermented honey, with or without other ingredients
- Mead is an old and storied beverage, which makes exploring it fascinating!
- Honey is a hugely diverse ingredient with incredible artistic and creative potential!
- The fermentation process is similar to that of white wine, using a modern process with nutrients, temperature control, etc.
- Fruit meads have a name for their category/style, Melomel
- Melomel actually has a couple of words for sub-styles:
  - Cyser - apple fruit mead, apple melomel
  - Pyment - grape fruit mead, grape melomel
Using Fruit in Mead

- People often ask me what my favorite style of mead is, and I don’t really have one. I am captivated by meads that have balance from all of their components, ingredients and attributes.
- Fruit meads can really sing though, and some of my favorite meads are in fact fruit meads.
- Using the colors, flavors, textures, sweetness and acidity of fruit to make mead is the same art that grape winemakers enjoy.
- Like grape winemaking, there is also a healthy dose of science at work, and there are several process concerns to understand when working with fruit.
- **What formats of fruit can we work with?**
Formats For Fruit - Whole Fruit (Fresh or Frozen)
Formats For Fruit - Juice
Formats For Fruit - What Else?

- In addition to Whole Fruit & Juice (Fresh or Frozen) we can also find
- Concentrates
- Purees
- Dried/Dehydrated/Candied
- Gotcha: Wild fruits may not ripen the same way as the stereotype for that fruit, and they may have a much different balance of sugar and acidity
- Working with different forms of fruit sets up an interesting web of variables like initial vs. final volume, the potential impact of acidity on the fermentation and the amounts of captured tannins, other phenolics, etc
Fruit Processing

- At the 2012 conference I was on a fruit winemaking panel and we had a very vibrant group discussion about how to prepare and process whole fruit for use in wine-making. It was clear that there were many successful methods and experiences.
- We found that there truly is no one way to process fruit for use in winemaking
- As a club of excited winemakers we did agree on a couple key items:
  - Seek out good quality, unspoiled fruit
  - Clean it well, discard excessively damaged or spoiled pieces
  - If you are using the fruit immediately, storage is not a concern; I do recommend sulfiting fresh, unfrozen fruit
  - But, for later use, freezing whole fruit is the most widely used option
  - However, freezing means storage space is required
Fruit Processing Methods

- When working with whole fruit, there are several different methods to get the most out of the fruit
  - Freeze, steep, macerate/squeeze
    - Press instead of squeeze
  - Press and use the juice as initial volume (instead of water)
- Treating fruit & juice with pectic enzyme will help break down pectins and reduce their influence on clarity and texture in the result
- Using heat in any fruit processing method is generally warned against. Setting the pectins in fruit is very easy with heat, and that generally leads to permanently cloudy meads
- Other methods - steam juicing, juicing
Fruit Processing Methods
Fruit In Recipe Management - Volume

- We typically express the amount of fruit needed in pounds per finished gallon, but you quickly realize that the volume of the fruit is VERY critical detail.
- Fruit varies in size, even to itself season to season, so everything is a rough guide.
- It is true that the process for working with grapes for wine (crush, soak, press) applies to other fruits; but consider how to crush/cut/section some fruits.
- I often suggest that every 10# of fruit will require 2 gallons of volume, and may ultimately yield up to 1 gallon of liquid. Both lore and experience are combined here to provide a usable, however rough, guideline.
- Frozen fruit takes up more space than it will afterwards, and defrosting is a great way to achieve minimal initial volume; i.e. break down fruit.
Fruit In Recipe Management - Managing Volume

- When using whole fruit, a fermentation vessel, or more than one, that is significantly larger than your final volume will be needed.
- Why? Because 3-4 pounds of fruit per gallon is a good starting place, and more than that isn’t actually crazy!
- The more fruit, the more fermenting capacity that is needed, and the more mess to clean up too!
- When using whole fruit any initial readings of sugar content/gravity will not include the sugars in the fruit as they are not in must at the start.
- Most fruit doesn’t actually have a lot of sugar in it, so estimating the impact is straightforward, but this does blur the initial monitoring of a fermentation against recipe goals.
Fruit In Recipe Management - Acidity

- The acidity (or lack of) in fruit is a variable that needs to be accounted for in several ways
  - Any impact on the fermentation, i.e. pH too low
  - Long term stability, i.e. pH very high and not likely to be stable without acid
  - Sensory perception in the final result; flabby vs tight/sharp

- The tug of acidity pulls against other attributes like alcohol, sweetness and tannins. This is no different than in grape wines, especially reds

- You may find that an adjustment of one of these variables (or more) can remedy unbalanced acidity.

- Don’t compensate without also using sensory skills to make sure it is drinkable
Fruit Acidity Varies!
Fruit In Recipe Management - What Else?

- Phenolics
  - Non-grape fruits still have many of the same components
  - **Tannins**, **anthocyanins**, other **flavanoids**
  - Some fruits contain tannins in spades, and understanding the potential balance and impact in the final result is important
  - Pigmentation is partly caused by reactions of tannins and anthocyanins
  - **Non-flavanoids** like **vanillin**, which may be pre-present and then amplified with oak
  - Most others don’t have a sensory impact, or are also **astringent** like tannins; also can be anti-oxidant

- While this is a presentation about using Fruit in Mead, it is worth mentioning that making fruit wine by swapping some, or all, of the honey out for another sugar source like more of the same fruit, white or red grape juice, maple syrup, brown/white sugar, etc is all up for grabs.
Fruit & Process - When You Use Fruit

● Fruit can be added in primary, secondary or both. The results will all be different, but not always in hugely distinct ways; and when it is it isn’t something that you can always control
● Contact time of whole fruit impacts all aspects, including color
● Bagging whole fruit helps keep pulp and seeds manageable
● Adding fruit post fermentation is just like adding honey, sugar, etc. If their is the potential for re-fermentation, you’ve just increased it
● But is there a best way? Well...
Fruit & Process - When You Use Fruit

- My friend Carvin Wilson performed an experiment using the same fruit in the same mead, but at different points in the process. He shared the results at the AMMA Conference in March, 2018.
- There were four (4) different fruiting regimens:
  - All Primary
  - Both Primary & Secondary
  - All Secondary
  - Staggered During Primary (⅓ at Start, 48 Hours and 70% complete)
- From the tasters responses no correlation to the method was found
- Preferences varied, and this is the point, they will be different vs. better
- At a minimum this means all the methods are worth trying!
Fruit & Process - Closer Look At Methods

- We just saw an example with four different fruiting regimens, what is different, and what is the same?
  - All Primary
  - Both Primary & Secondary
  - All Secondary
  - Staggered During Primary
- The resulting meads very obviously varied in clarity and color
- The flavors and aromas varied, but this is also preference influenced
- **Same**
  - All the fruit was fermented
  - Temperature and nutrition schedule was controlled
- **Different**
  - When fruit was added
  - Contact time ← **this is the key**
Fruit & Process - Gotchas

- **Over Pressing**
  - Don’t over press fruit with seeds or non-flesh material
  - You increase chances of more bitter/off flavor outcomes

- **Fermentation Inhibitors**
  - Benzoaic acid, common in cranberries and ligonberries
  - Juices that contain potassium sorbate, benzoate

- **Oxidation**
  - Fruit meads are much more prone to oxidation than only-honey meads, and this should be factored in during processes that could introduce oxygen/air, use sulfite

- **Rot**
  - Contact time for fruit needs to be carefully monitored
  - Some fruits, like melon and pineapple, can begin to rot very quickly; this will create off flavors and aromas
Fruit & Process - Gotchas

Apple Cider
100% fresh, sweet cider. No preservatives added. Not pasteurized. Refrigerate to preserve quality.

Gould Hill Farm
www.GouldHillFarm.com
656 Gould Hill Road Hopkinton, NH 03229
603-746-3811 gouldhillfarm.com

This product has not been pasteurized and, therefore, may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune systems.
Pairing Honey & Fruit

- In general melomels are fruit forward and the honey is less prominent
- While both will be perceptible in the best versions, knowing that fruit can overpower honey allows us to suggest that any honey will work for a melomel; and a commonly available honeys may be the best all-around choice
- Some immediate examples would be Orange Blossom, Wildflower and Clover
- Mesquite Blossom honey is both earthy and fruity, and adds its own interesting “musk” to a fruit mead
- Blends of honeys, and other sugars, can create “perfect” environments for fruit; this is much like using a blend of grains to make beer
Blends of Fruits

● Using just a single fruit to make mead is but one way to combine honey and fruit
● Mixed-fruit meads open up of a world of potential
● There are a couple different themes
  ○ Opposing attributes, like citrus and berries
  ○ Complimentary attributes, like peach and white grape or blackberry, blueberry and black cherry
  ○ Something a bit more specific, like using black currant to enhance the tannins in the last concept above
  ○ Using elements to influence the nose, but less so in the flavor/texture
Fruit Blend Example - Raspberries & Lemon!
Fruit & Spices

- It doesn’t feel right to not mention using spices along with fruit in mead, but the use of spices is really a session all to its own
- Vanilla is huge in fruit meads these days, and often much more of it than a typical barrel treatment might lend
- We also love ginger!
- More IS NOT always better!
Fruit Meads With Vanilla!
Ginger Is Great In (Fruit) Meads!
Q&A

Let’s make some melomels!

Thank you!

Jason Phelps

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Resources

● GotMead Recipe Calculator - http://gotmead.com/blog/the-mead-calculator/
● MeadMakr Tools - https://www.meadmakr.com/the-meadmakrs-toolbox/
● BJCP Mead Documentation - https://www.bjcp.org/mead.php