Making great mead

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Mead: The Mjölniresque-Cycloptic Beverage

- Mead rules
- Mead checklist
- How to...or something or other
- Drinky, drinky
Simple Rules

- Water + honey = awesome
- Great mead is easy
- Crap mead is easy
Great Mead Checklist

- Honey quality
- Fermentation temperature
- Technique/Methodology
- Nutrients
- Yeast choice
- Mead age
- Mead service
Honey quality

- Great honey = great mead

- Character is dependent on source
  - Source is very important
  - Find a great source stick with it

- When a source isn’t ‘really’ a source
  - Many northern apiarists ‘winter’ their bees in the south
  - Crap honey = ‘dump’ honey
    - Easy meal
    - Consume sugar from what’s laying around = Fanta honey
Monofloral honey varieties

- ‘varietal’ honey
- Region specific
- Each with its own character
- ‘Wildflower’
  - Season specific
  - Example - Minnesota
    - early – ‘garbage’, clover, dandelion
    - late – trees, grasses, buckwheat
Where’s the info man!?

- CEP monofloral mead database
  - Wiki-based = member driven

- Very little monofloral honey info

- No centralized source for varietal knowledge in mead making.

- Resource for mead makers

- Get an idea of what things taste like before you drop for $200 on pumpkin blossom honey
Fermentation temperature

- Most faults are derived here
  - Boozy = alcoholic
    - Normal byproduct of fermentation
    - More honey = more booze
  - Hotness = higher alcohol
    - High temperature
  - Solvent = acetone, lacquer thinner
    - High temperature
  - Optimum temp = \(~60-75\)F
    - Lower = more fruit esters
Technique

- Very important
  - Various different ways of making mead
  - All have different pro’s and con’s
- More on this in a bit
Nutrients

- Honey lacks vital nutrients
- Need to be added

Amounts vary but...
- To little = slow, incomplete ferment
- To much = metallic, ‘vitamin’ faults

Defined by technique
Mead yeast

- ANY yeast can be used – beer, wine, cider
- All have different oxygen and nutrient demands
- My favs:
  - Lalvin 71B (aka Narbonne)
  - Lalvin R2 (Sauternes)
- Why
  - Both make sweet wines
  - Only two to produce own esters
  - High alcohol tolerance
  - Fast ferment
  - Reduces acid
  - Great young and old
Mead age

- T/F - You must (pun intended) age mead for it to hit its peak in quality

- Why this thought process?
  - ‘off’ characters smooth over time
    - Yes and no - ‘hot’ character and acid smooth over time...as do mountains.
  - Everything gets better with age, right?
    - Yeah, hows that 2005 Beujolai Neuvo aging?
  - Ego
    - It maybe be undrinkable now, just wait 10 years and then it will be great!!

- A 2 year old crappy mead will be a 10 year old crappy mead.
  - Do it right from the start!
Methodology

- **Traditional**
  - Honey, water, yeast
  - Mix, wait, wait some more

- **Modified traditional**
  - Honey, water, nutrient, yeast
  - Mix, wait

- **Methodé a la SPHBC**
  - Honey, water, nutrient, pure oxygen, yeast
    - Staggered nutrient additions, mix, mix and mix some more
  - Curt Stock – 2005 MMOTY
  - Steve Fletty – 2007 MMOTY
  - Thomas Eiber – 2005 & 2008 UMMO BOS
  - Myself – 2006 Dixie Cup BOS
How to treat ingredients

- **Honey**
  - Heat or no heat
  - Honey containers in warm water

- **Fruit**
  - Wash, chop and freeze

- **Herbs/spices**
  - Straight or tincture
Methodé a la SPHBC

- **Go-FERM**
  - Rehydration medium
  - Increases the activity and optimizes the health of the yeast

- **Staggered nutrient additions**
  - Split nutrients into different additions
  - Only so much nutrient can be used at once

- **Mixing**
  - Ensures yeast is roused
  - Displaces CO2 = increases yeast health
Method Comparison

![Graph showing attenuation over time for different methods: Traditional, Modified, SPHBC. The y-axis represents gravity (OG) and the x-axis represents time (days). The graph illustrates the decline in gravity over time for each method, with Traditional showing the steepest decline, followed by Modified and then SPHBC.](image-url)
What’s this all about pH then?

- pH drops as fermentation continues
- Low pH = unhappy yeast
- How can we change this?
Basically simple!

- Need a base to bring the pH up.
- Which?
  - Two choices
    - Potassium Carbonate – (KCO3)
      - Safe
      - Raises pH but weakly
      - K is good for yeast
      - CO3 is left 😞
    - Potassium Hydroxide – (KOH)
      - Nastier stuff
      - Raises pH strongly
      - K is good for yeast
      - OH is left = ok
Curts Article
Even-Speed-Mead... no not that speed hippie

- Take on the SPHBC method
- Additions at 0-2-4-6 = Even
- Need:
  - Fermaid-K
  - Go-Ferm
  - DAP
  - Potassium hydroxide (careful now)
Breakdown

- **Day 0 - Start mead**
  - 4.5g Fermaid-K
  - 2g DAP
  - Yeast - 2x 71B
  - 28g Go-ferm
    - dissolve in 110F water
    - add yeast once at 104F
    - incubate 15-30 min and pitch

- **Day 1, 3, 5, 7, 8**
  - stir mead
  - careful, do it slowly = volcano

- **Day 2, 4, 6**
  - stir
  - 4.5g Fermaid-K
  - 2g DAP
  - 50ppm KOH (10ml of 2M solution)
## Even-Speed-Mead Chart

<table>
<thead>
<tr>
<th>Day</th>
<th>Fermaid K</th>
<th>DAP</th>
<th>2M KOH</th>
<th>Stir</th>
<th>Temp</th>
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<tbody>
<tr>
<td>0</td>
<td>4.5g</td>
<td>2g</td>
<td>-</td>
<td>Yes</td>
<td>70F</td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>70F</td>
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<tr>
<td>2</td>
<td>4.5g</td>
<td>2g</td>
<td>10ml (50ppm)</td>
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<td>70F</td>
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<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>70F</td>
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<tr>
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<td>2g</td>
<td>50ppm</td>
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<tr>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>70F</td>
</tr>
<tr>
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<tr>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>70F</td>
</tr>
</tbody>
</table>
Sweet mead comparison

![Graph showing attenuation over time for different mead types]

<table>
<thead>
<tr>
<th>Time (days)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
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</thead>
<tbody>
<tr>
<td>Gravity (OG)</td>
<td>1.160</td>
<td>1.140</td>
<td>1.120</td>
<td>1.100</td>
<td>1.080</td>
<td>1.060</td>
</tr>
</tbody>
</table>

Legend:
- Traditional
- Modified
- SPHBC
- Speed
Fermentation speed

- Lots of bad info

- Biggest keys
  - Health of yeast
  - Temperature
Drinking mead

- Constituents
  - Carbonation
  - Serving temperature

- Can make or break the mead

- Depends on mead character and ‘style’
  - E.g. Sweet can handle higher carb levels
Pure enjoyment

- Don’t forget to make what you like
- Get experimental
- Use common sense; don’t be a Dumas
- Technique
  - Ferment things together
  - Ferment things separate
  - Blend various meads
  - There is no wrong way
Good Examples

- **Mixed drinks**
  - Manhattan
  - Cosmo
- **Blend with any wine**
  - Vermouth
  - Saké
- **Desserts**
  - Raspberry cheese cake
  - Key lime pie
  - Smores
- **Technique**
  - Port
  - Tokaj
  - Methodé Champanoise
- **Herbs**
  - Lavender
  - Thyme
  - Saffron
- **Spices**
  - Szechuan peppercorn
  - Smoked paprika
- **Oak/barrel-aged**
  - Brandy barrel
  - Bourbon barrel
- **Other**
  - Flanders red/brown
  - Belgian strong dark
  - sludge
Bad Examples

- Roasted celery and celery salt
- Dill pickles
- Sautéed garlic
- Clam juice
- Spontaneously fermented tomato
More info on mead

- Schramm’s book
- Curts article

Careful on the interwebs
  - Too many experts
  - Too much wiki-ality
Samples

- **Blackberry blossom**
  - Curt Stock
  - Med, Petillant
  - 18#, 5gal, FG1037
  - sweet

- **Mesquite**
  - Curt Stock
  - 16#, 5gal, FG1007
  - Dry, boozy

- **Gewürtz. OB**
  - Steve Fletty
  - Fermented separate
  - Combined, back sweetened FG1016
  - acidic

- **Raspberry Lemon-aide**
  - 3 weeks old
  - Fresh rasp, lemon zest, wf
  - OG1090, FG1015

- **Sludge #12**
  - Pom, Rasp, Blackberry, OB, Dandelion, Mesquite, spring wf, late summer wf,
  - Open aged
  - FG1009

- **Fortified**
  - OB pomegranate, Tawny port, Hungarian Hazipalinká
  - FG 1020, ~32%abv