

Yes, Funky Sour Meads



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Founder & Head Mead Maker
Moonlight Meadery LLC

About Michael

- Home brewing for 19 years
- Lifetime Member of AHA
- Over 70 different meads, produced commercially.
- One of the worlds best craft mead makers.
- Invited to guest lecture at UC Davis Robert Mondavi Center
- Invited to present at Australian National Homebrewers Conf.
- Founder of Mead Free or Die



What's the topic?

- The sour beer world has exploded, but what about sour meads?
- In this seminar you will learn the usage of lactobacillus, Brettanomyces and other funky tricks to make specialty meads that tart and dank.
- It's a peek into the research going on behind the scenes at Moonlight Meadery.

Red Tape

- NONE of the meads you are about to try today are meads that we are making commercially at Moonlight Meadery. These are meads that were created in my basement.
- I had planned on having WAY more than 2 for you to try but I was informed that only two meads would be allowed.



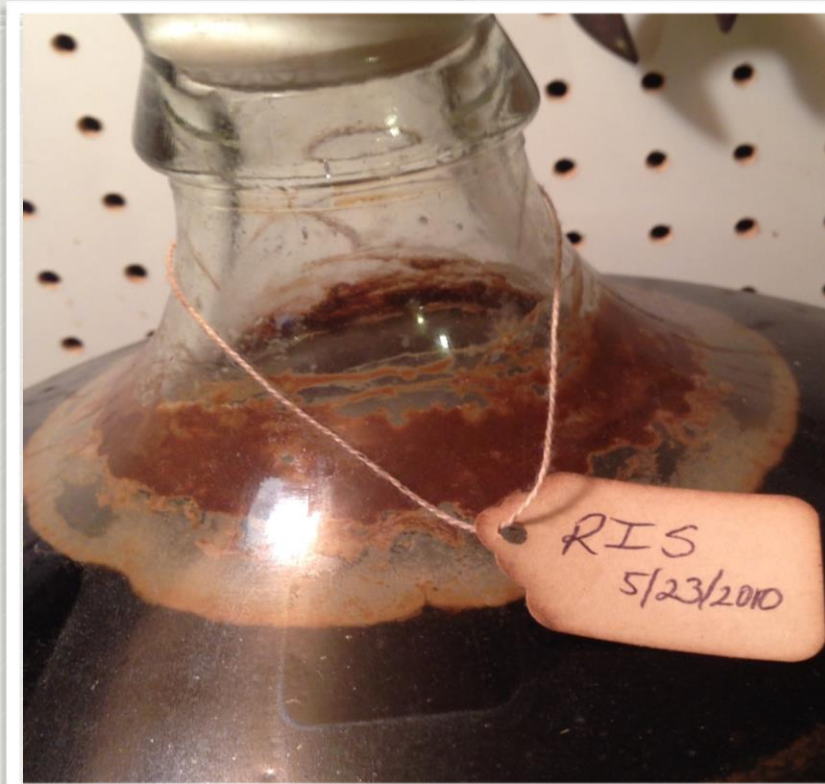
FIRST MEAD



Tall Dark Stranger...

- ✿ **Funky Russian Imperial Stout Braggot**
- ✿ Specifics: Started this back in May 2010
OG: **1.160** FG: **1.036**
Funk Source; Wood Chips from NHC 2006
Orange Blossom Honey
- ✿ This mead was put in kegs in May 2014
- ✿ Originally debuted at BNA8 in June 2013

It's still alive...



What is Funk?

- A deep tartness, that pulls at the salvia glands leaving a tart sensation, while finishing dry and refreshing.
- It's magic, it's art, it's not easy, it requires extreme patients.
- It's a fusion of elements.

Where to get it?

- Brettanomyces
- Pediococcus
- Lactobacillus
- Acid
- Fruit

Brettanomyces

- ✿ Oxidative yeast; consumes available oxygen, produces acid.
- ✿ Many strains: *B. Anomalous*, *B. Bruxellensis*, *B. Lambicus*, *B. Claussenii*
- ✿ Can metabolize the sugars (cellobiose) from the oak barrel.
- ✿ Can even metabolize complex polysaccharides (dextrin)
- ✿ Susceptible to pH lower than 3.4

Lactobacillus

- ✿ Mostly for Flanders styles of beers.
- ✿ Metabolizes sugars aerobically and anaerobically
- ✿ Lighter on the palate and is more tart and tangy than sourness derived from *Pediococcus*.
- ✿ *Lactobacillus delbrueckii* produces both lactic acid as well as carbon dioxide as a by product of fermentation.
- ✿ *Lactobacillus* will cease to reproduce at a pH of around 3.8

Pediococcus

- ✿ Bacteria that produces lots of lactic acid.
- ✿ Metabolizes glucose into lactic acid without producing CO₂
- ✿ Gram-positive, in the family of Lactobacillaceae
- ✿ Normally considered a beer or wine spoiler.

Acid*

- Lactic Acid (88%), to replicate lactic acid profile of a Gueuze you would need ~2.4 oz of food grade lactic acid in 5 gallons.
- Acetic Acid (7%), to replicate the acetic acid profile of a Gueuze you would need 5.5 oz of distilled white vinegar in 5 gallons.

* I haven't tried these myself, yet...

Fruit

- Black Currant
- Rhubarb
- Cherry
- Cranberry

* THESE WORK GREAT FOR MEAD

NEXT MEAD



Old Funky Braggot

- A blend of
 - 33% Brew Free or Die Club Brew: Belgian Wild - Barrel Aged (brewed in 2009).
 - 33% Orange Blossom - Barrel Aged (we tossed the book at this one, commercial funk, home grown funk)... result really good mead, just not funky.
 - 33% Black Currant Melomel

What's Important

- Time
- Patience - LEAVE IT ALONE, NO I MEAN IT.
- When you can't wait no longer, keg it up for a 1,000 of your home brewing brothers and sisters.
- Sensory Analysis
 - Taste, Smell, Adjust, repeat... recommend trial size adjustments, don't back sweeten with raw honey.

Challenges?

- Honey is Anti-Microbial.
- Honey is Anti-Oxidant.
- Ph can be too low.
- Alcohol can be too high.
- Funky critters just don't take hold.

Conclusions

- The pH is difficult to get the bugs to even take hold.
- The problem with most of those additional bugs is that they want to ferment everything, if you get the pH right.
- A dry and acidic mead is pretty horrible.
- We haven't tried the acid approach

Conclusions

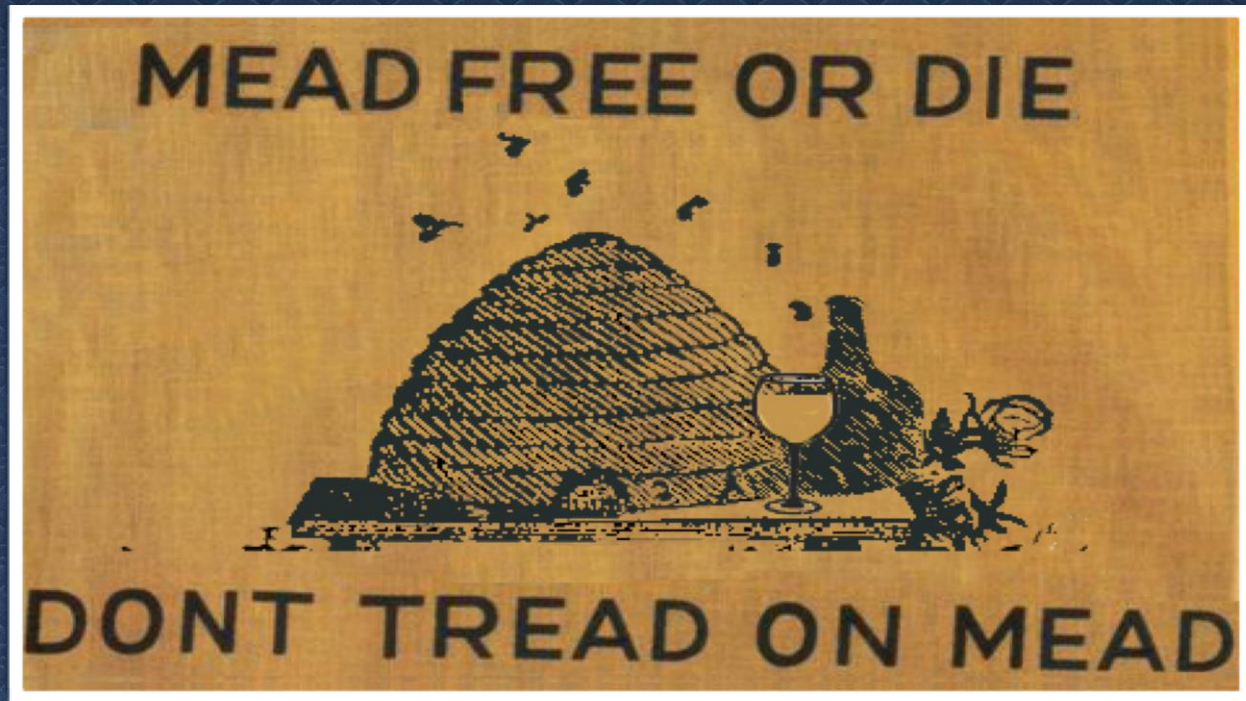
- The honey notes add a nice element to a funky base beer.
- Braggot is by far the easiest.
- We get our funk mostly from fruit... seek Red Dress, Fling, Embrace, and Flame to name a few.

Questions

- Feel free to contact me:

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www.meadfreeordie.com