



Homebrewing Sour Beer

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Terminology

Sour Beer:

Acidic, tart beer with inclusion of lactic acid

Wild Ale:

A beer fermented by microbes other than traditional brewers yeast

Funky:

Fruity, barnyard, horse-leather notes derived from Brett fermentation

Acetic:

Vinegar like flavor - results from acetobactor in presence of oxygen

Spontaneous Fermentation:

Fermentation without pitching controlled samples of microbes

Roles of Ingredients

Microbes:

Yeast & bacteria responsible for fermentation, sourness and funkiness.

Grist:

Provides food for microbes. Unmalted grains are often used to provide complex starches to be consumed after initial fermentation.

Hops:

Used at low bitterness level, often with aged hops. Commonly used to inhibit lactobacillus in spontaneous fermented beers.

Water:

Not a key ingredient for sour beers.

Microbes (the main players)

Sacharomyces:

Yeast responsible for primary fermentation in most beers

Brettanomyces:

Yeast that creates funky flavors - may take over a year to develop

Lactobacillus:

Bacteria responsible for creating clean lactic acid tartness (think yoghurt). Is inhibited by hops.

Pediococcus:

Bacteria that creates lactic acid and other byproducts. Produces diacetyl - not recommended for use without Brettanomyces.

Acetobactor:

Bacteria that converts ethanol to acetic acid (vinegar) with oxygen.

Cantillon Spontaneous Fermentation Production



Wort Brewing



Open Air
Wort Cooling



Barrel
Fermentation

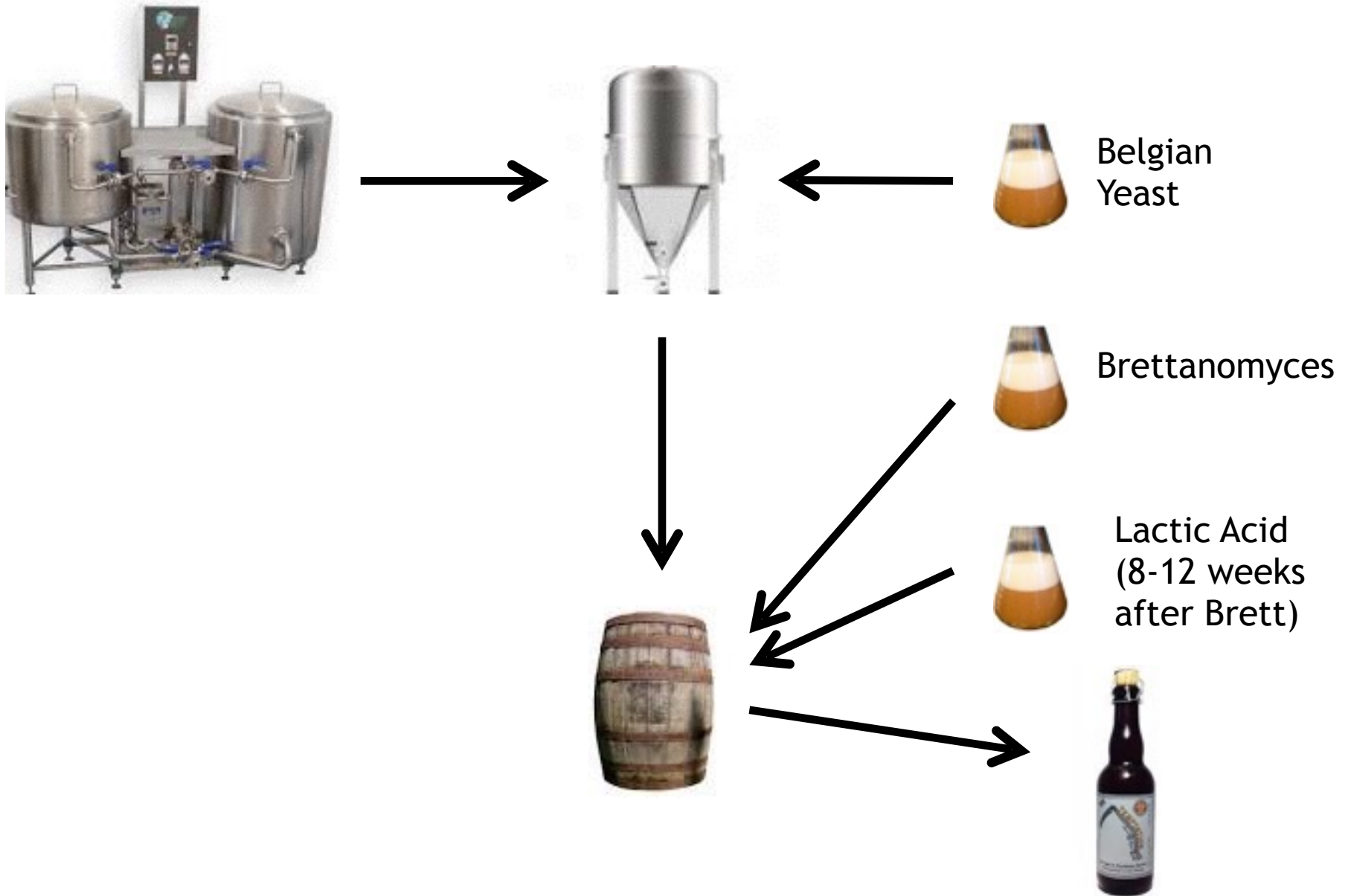


Blending or Fruiting



Bottling

Russian River Wild Ale Production



Société du Lambic Production Process

Group Homebrew
Session



Multiple yeast &
bacteria
cultures



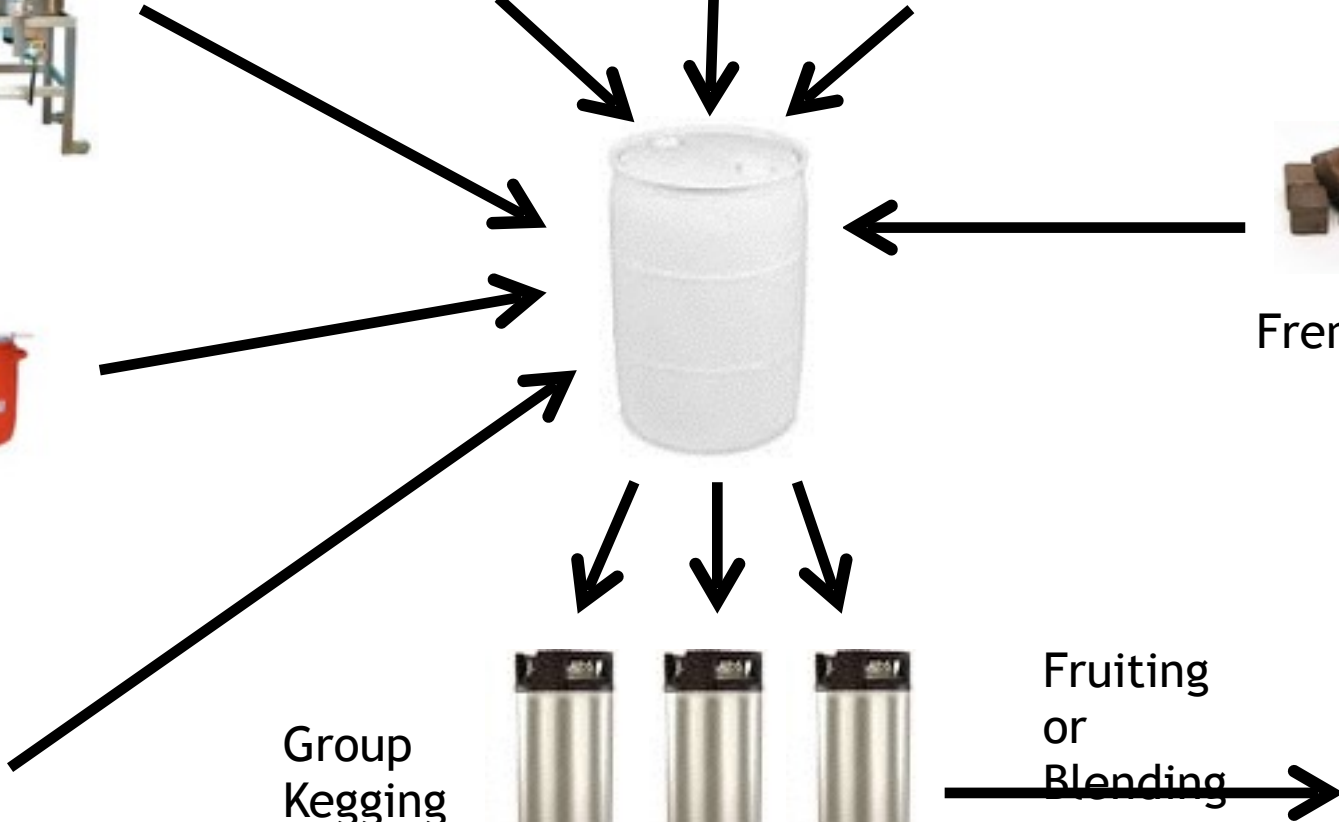
French oak



Group
Kegging
Session



Fruiting
or
Blending



Société du Lambic 2016 Recipe

12 Gallon Brew:

16lb Great Western Premium 2 Row (70%)

7lb Flaked Wheat (30%)

4 oz aged hops

Filtered water

Microbes: Wyeast Roeselare, Yeast Bay

Amalgamation Brett Blend, White Labs

Brett-L, White Labs Brett-B, SdL house
blend, select commercial beer cultures

Société du Lambic 2016 Process

Mash @ 156-158F for 1 hour

Sparge @ 190F

Boil for 1 hour

Chill to 75F

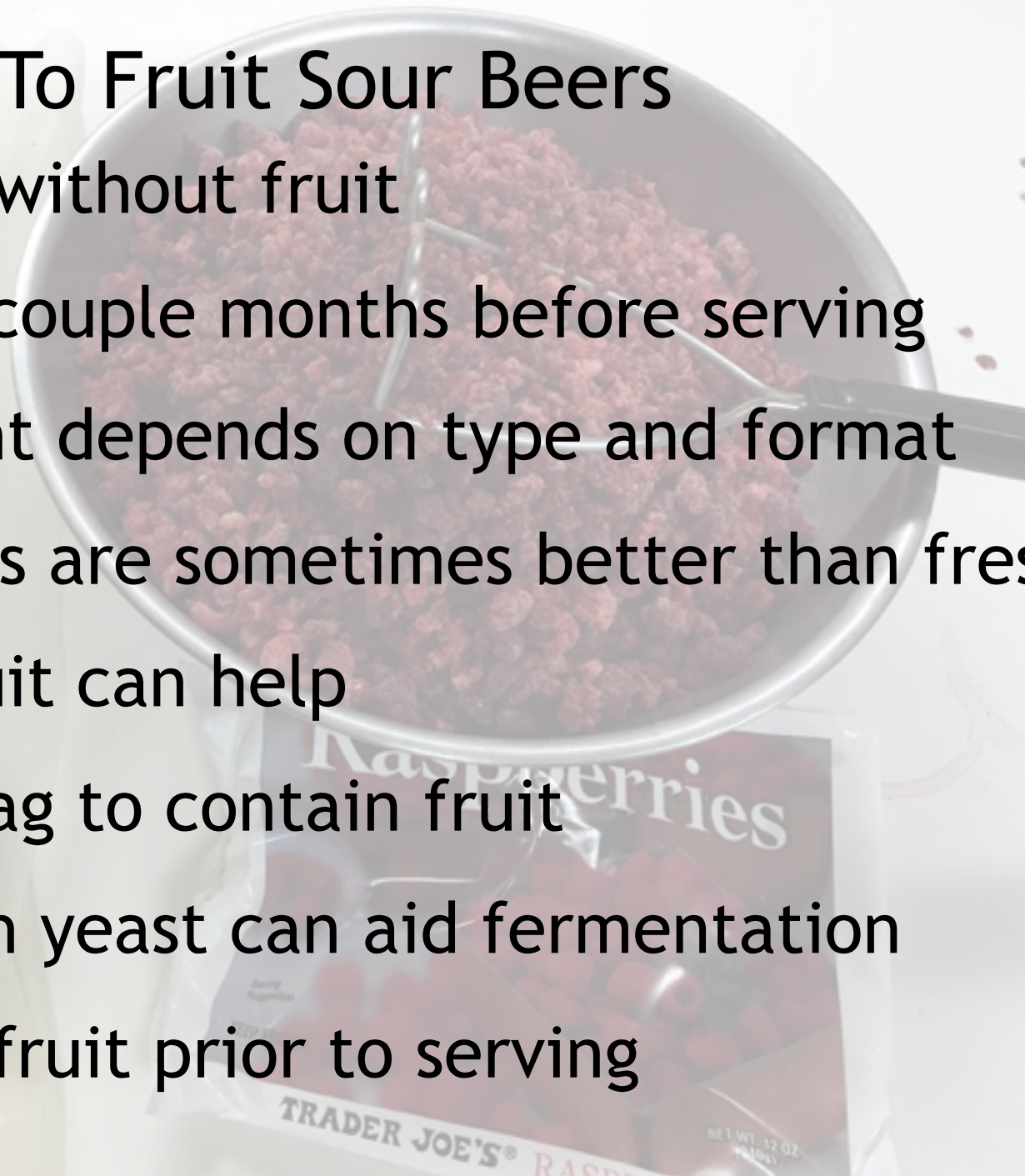
Toast oak at 200F for 30 min

Pitch yeast & bacteria

Ferment for 6 months

Tips To Fruit Sour Beers

- Age lambic without fruit
- Add fruit a couple months before serving
- Fruit amount depends on type and format
- Frozen fruits are sometimes better than fresh
- Crushing fruit can help
- Use mesh bag to contain fruit
- Adding fresh yeast can aid fermentation
- Rack off of fruit prior to serving



Gamelin Fruiting Process

Crushed
Frozen
Fruit



Fresh
Yeast



4 weeks

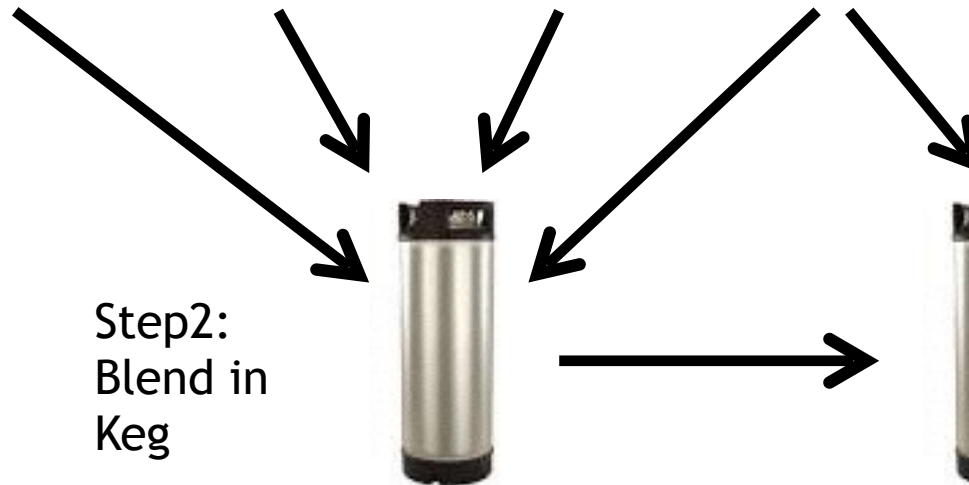
Racked
Beer



Gamelin Blending Process

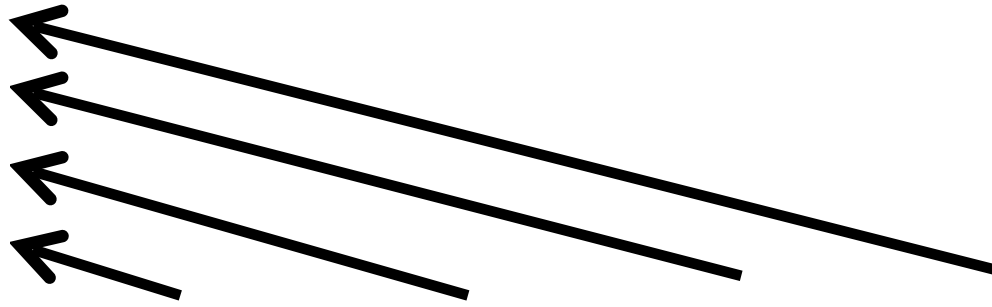


Step1:
Blend in
Glass



Step2:
Blend in
Keg

Step3:
Chill,
Carbonate,
& Adjust



References

American Sour Beers: Michael Tonsmeire

WildBrews: Jeff Sparrow

Lambic Classic Beer Style: Jean-Xavier Guinard

SBE Presentation Blending Beers: Andy Gamelin

www.milkthefunk.com

www.themadfermantationist.com