



The taming of the brew

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AERONAUT Brewing Co.
AERONAUT LABS

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AERONAUT

STATS:

- Founded in June, 2014
- Brewery, taproom and “Foods Hub”
- Brewed 2000 BBL in 2016 (62,000 gal.)
- 6 production employees



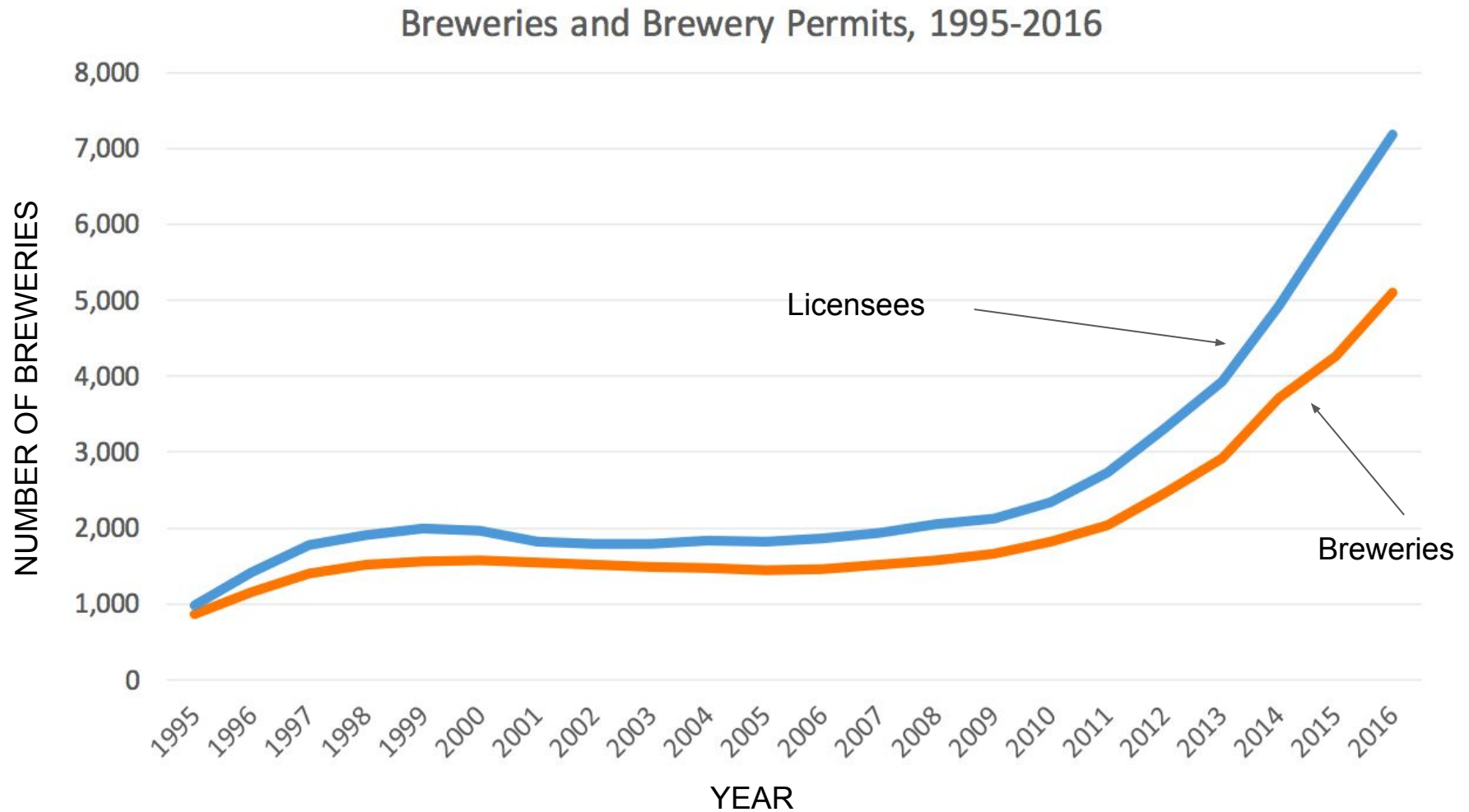
AERONAUT LABS



GOAL: Make exciting and innovative new beers

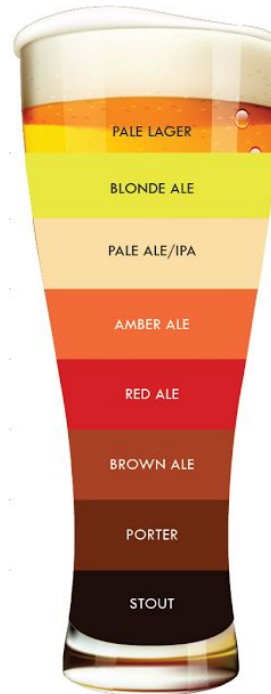
Craft brewing today

There are over 5000 breweries in the U.S.



How many beer styles are there?

Beer Style Guidelines



If 5000 breweries choose their styles exclusively from the 121 beers on this list, we end up with a very redundant beer market

2015 BCJP guide lists
121 recognized styles

Redundancy in the marketplace

Beeradvocate®

Search

IPA

search

beer



Exclude "retired" beers from results

Whoa

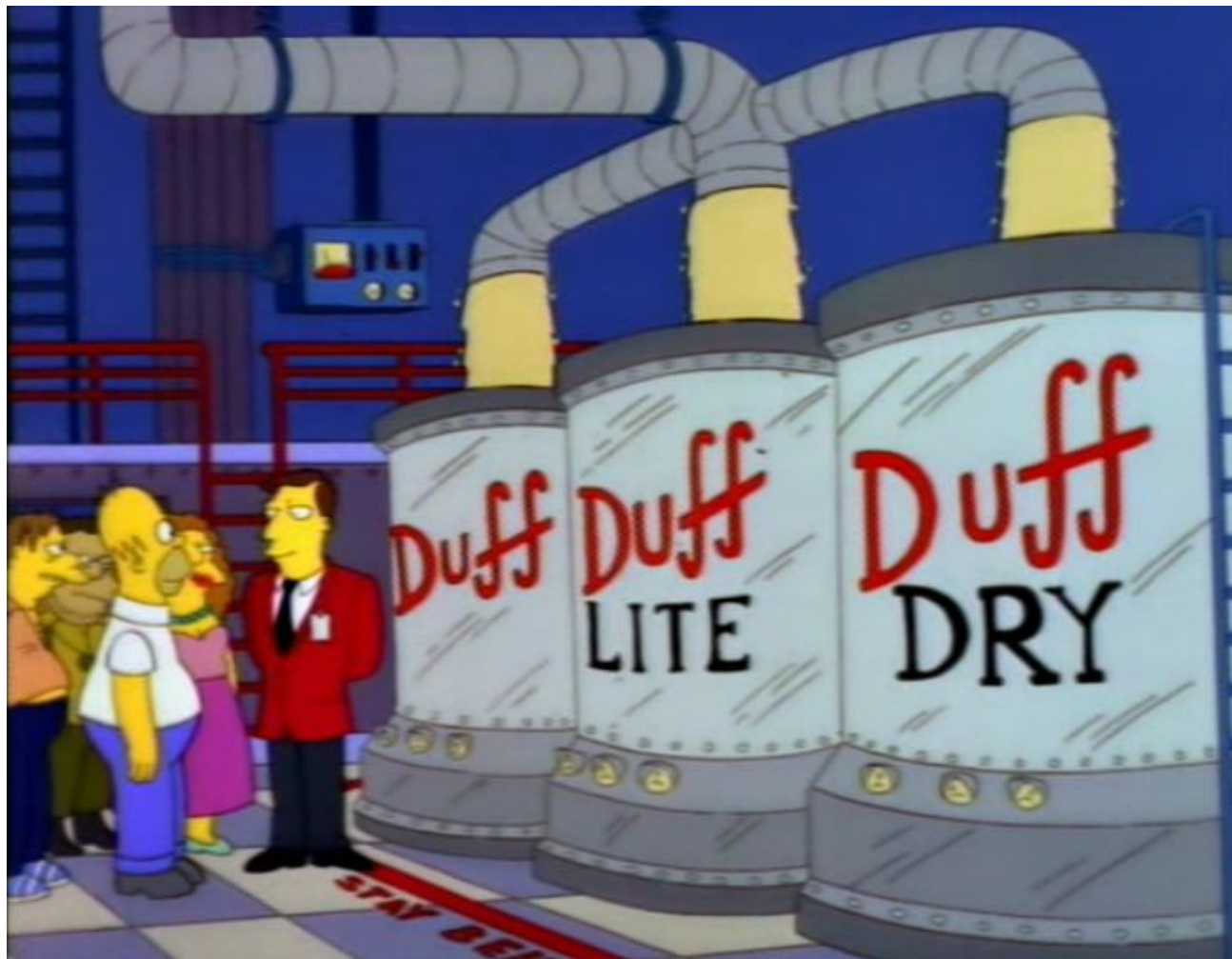
Found: 15156

- Not logged-in. Results limited to first 25 (or less) results.

- **90 Minute IPA**
Dogfish Head Craft Brewery | Milton, Delaware
- **Sculpin IPA**
Ballast Point Brewing Company | San Diego, California
- **60 Minute IPA**

How do we innovate?

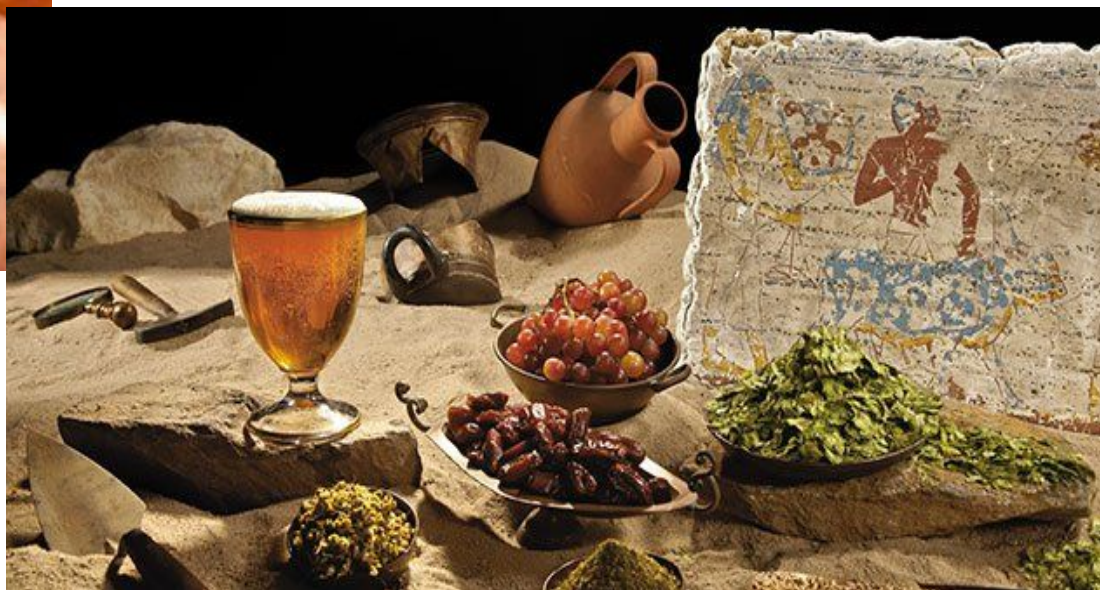
New branding



How do we innovate?



New ingredients



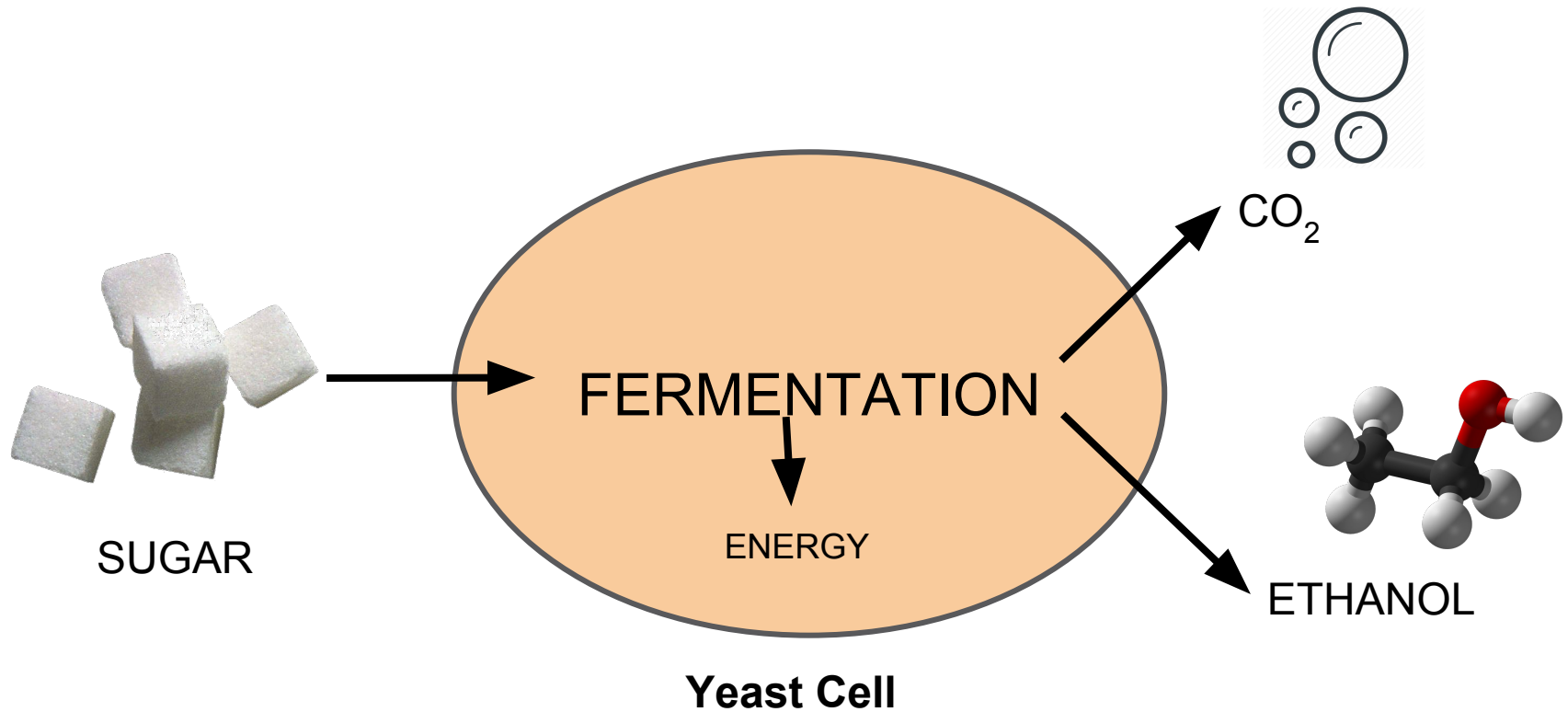
True innovation within the category

Focus on ingredients

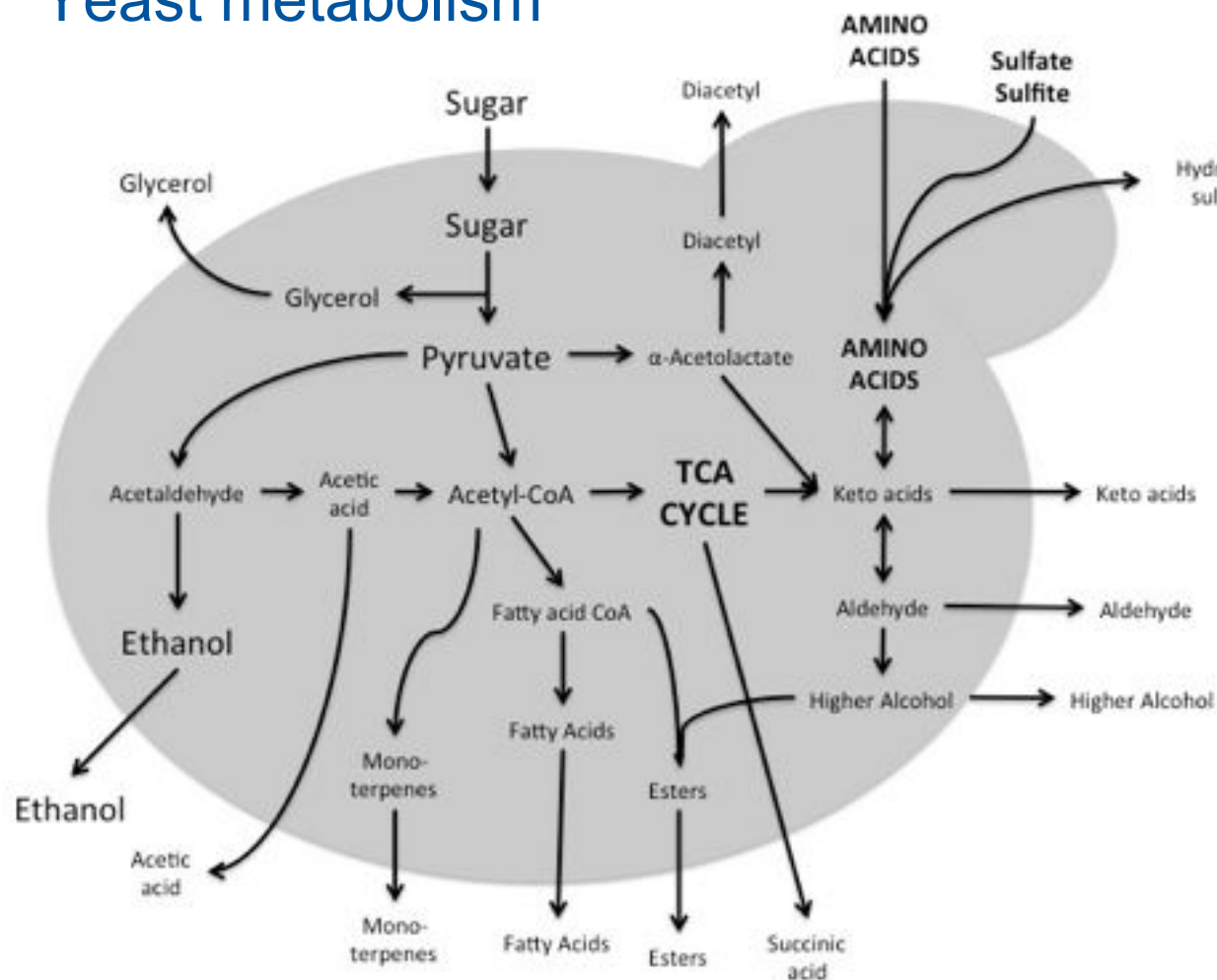








Yeast as a flavor engine

Fermentation



Yeast metabolism



<chem>CC(C)CCOC(=O)C</chem>	
Isoamyl acetate	
<chem>CCOC(=O)C</chem>	
Ethyl acetate	
<chem>CCOC(=O)Cc1ccccc1</chem>	
Phenylethyl acetate	
<chem>CC(=O)C(C)=O</chem>	
Diacetyl	
<chem>CC=O</chem>	
Acetaldehyde	
<chem>[H]S[H]</chem>	
Hydrogen Sulfide	

50-70% of beer flavors and aromas come from yeast.

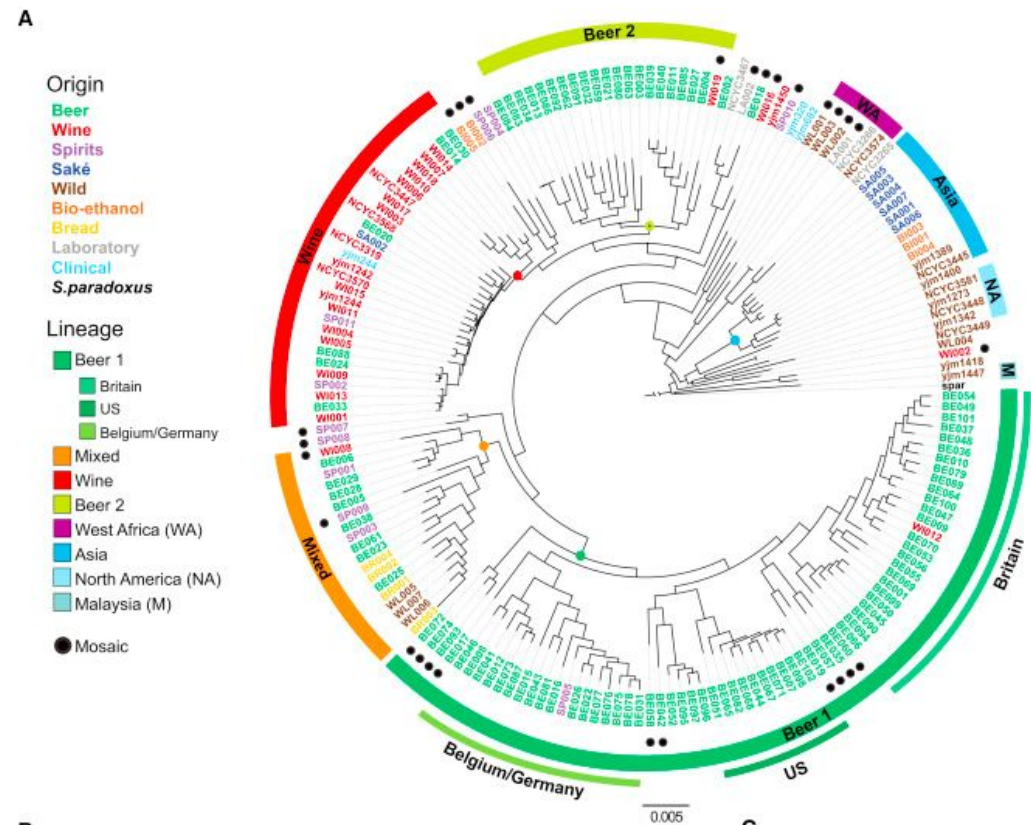
Yeasts used in brewing today

ARTICLE

Domestication and Divergence of *Saccharomyces cerevisiae* Beer Yeasts

Brigida Gallone¹¹, Jan Steensels¹¹, Troels Prah, Leah Soriaga, Veerle Saels, Beatriz Herrera-Malaver, Adriaan Merlevede, Miguel Roncoroni, Karin Voordeckers, Loren Miraglia, Clotilde Teiling, Brian Steffy, Maryann Taylor, Ariel Schwartz, Toby Richardson, Christopher White, Guy Baele, Steven Maere[✉], Kevin J. Verstrepen¹²[✉]

“the thousands of industrial yeasts that are available today seem to stem from only a few ancestral strains”

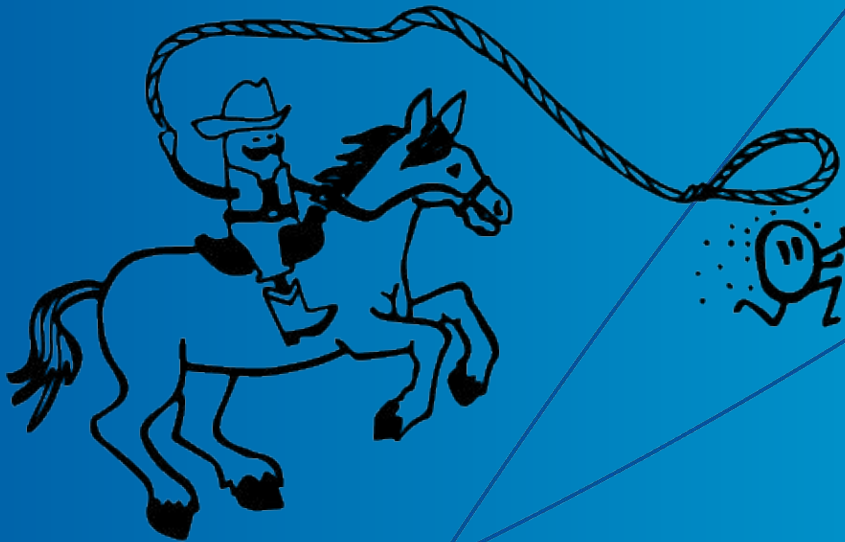


Nature has untold troves of flavor-active molecules



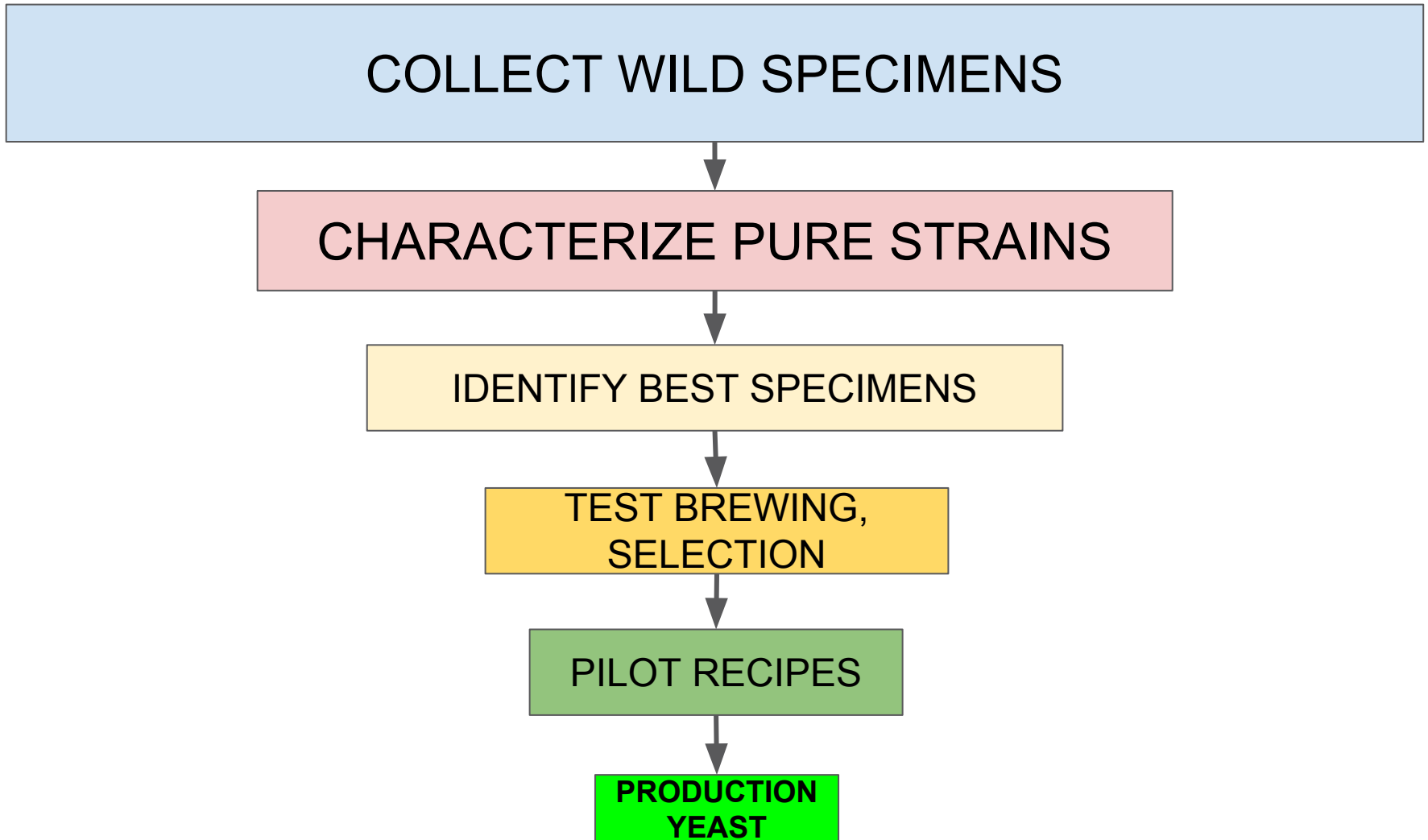
At AERONAUT LABS, we cultivate wild microbes to find new beer flavors.

Wrangling wild yeast

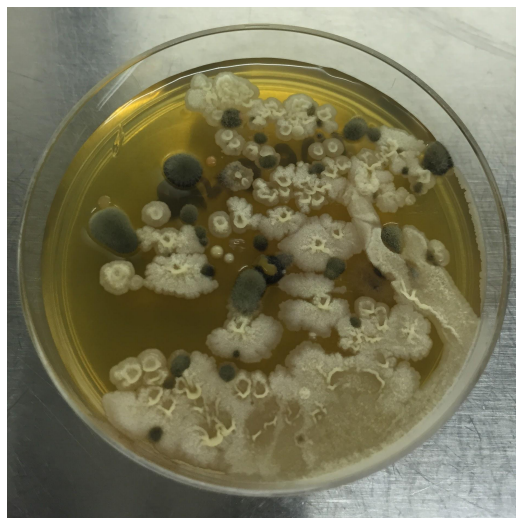
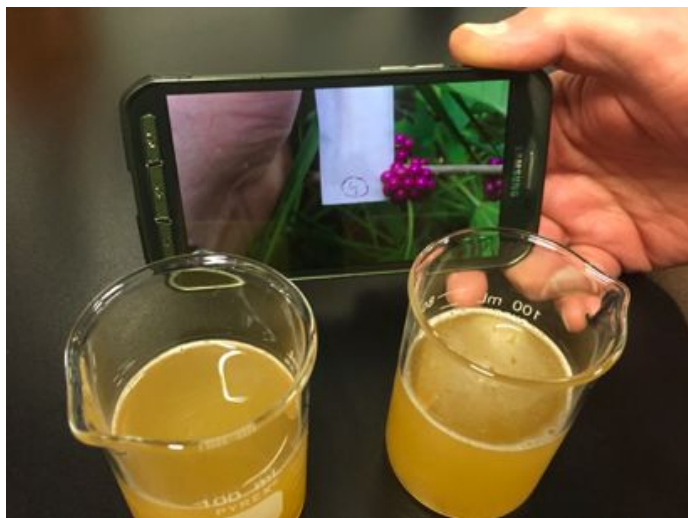


PIPELINE SCHEME

From wild yeast to production

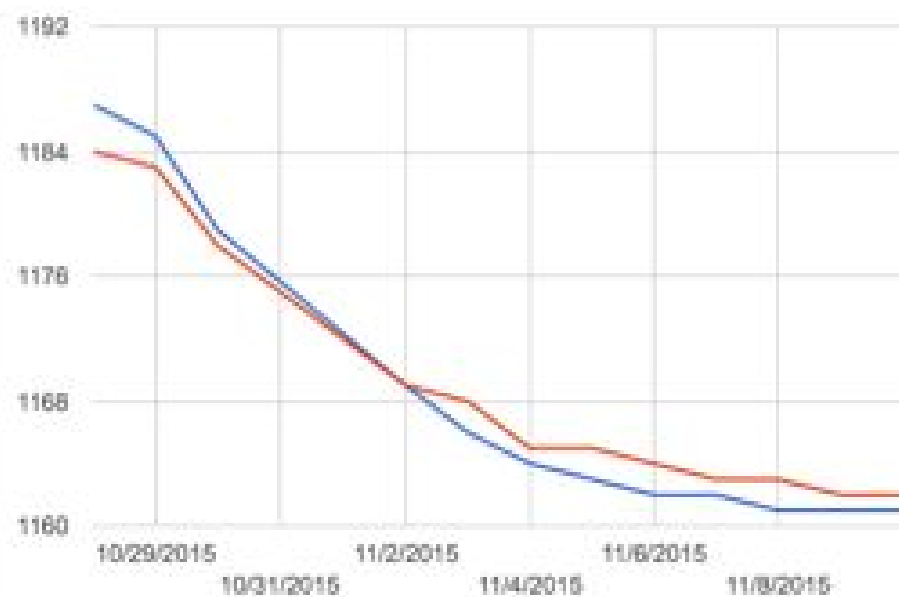


Step 1: Collection



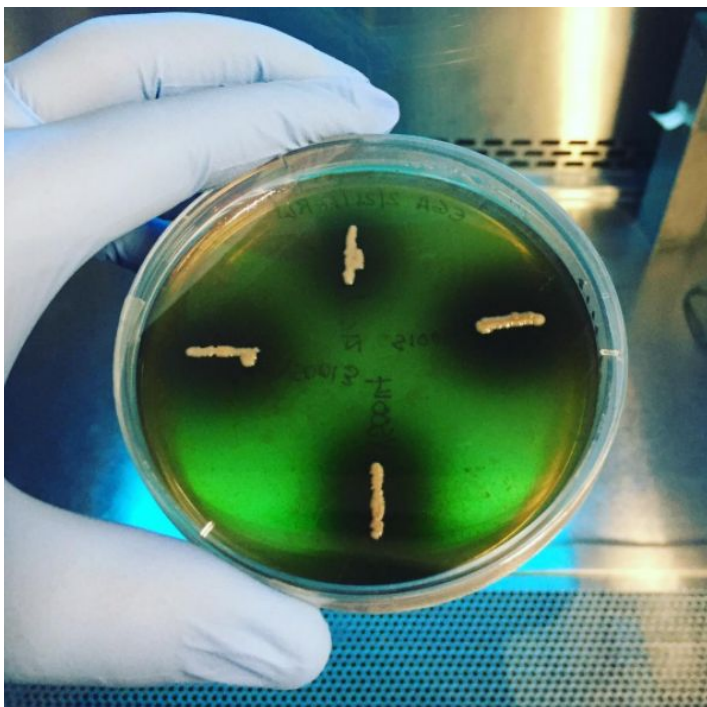
Step 2: Characterization

“The Fermentor”



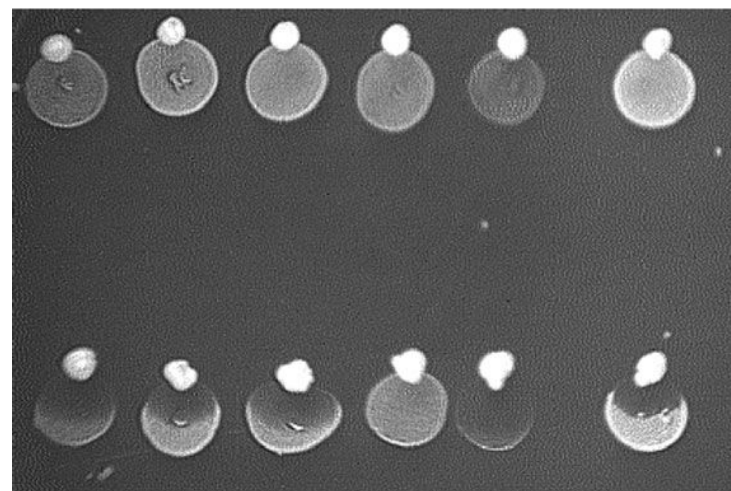
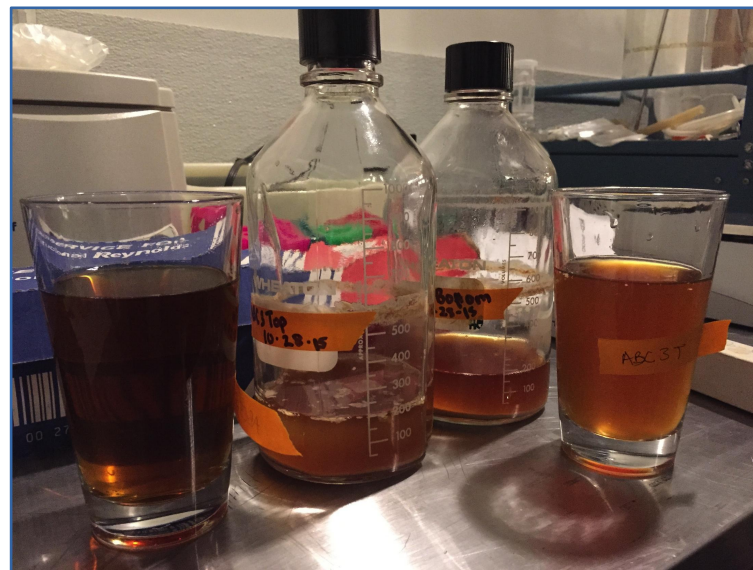
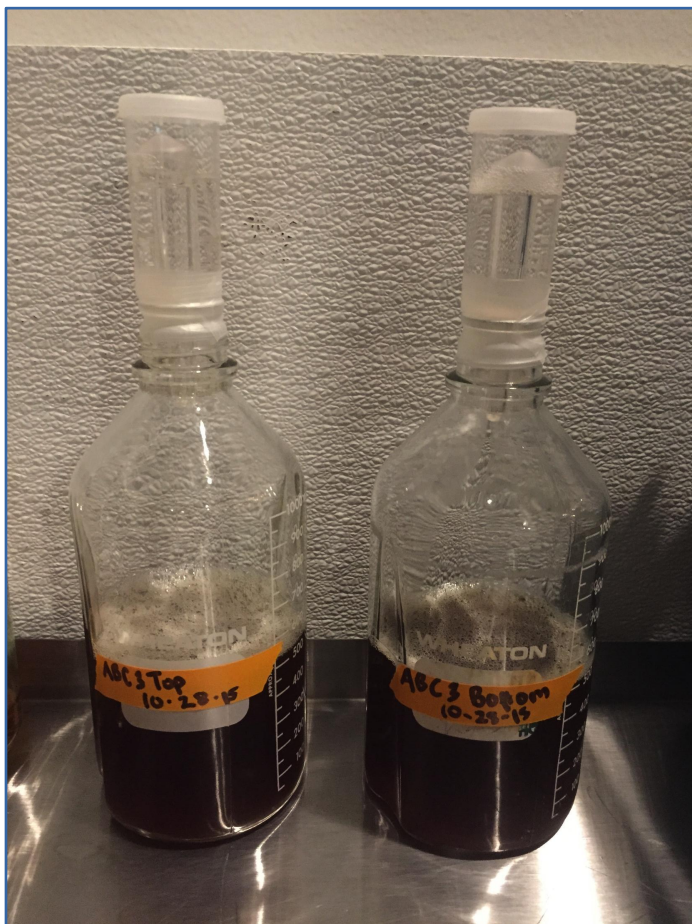
Step 2: Characterization

Metabolism and sensory

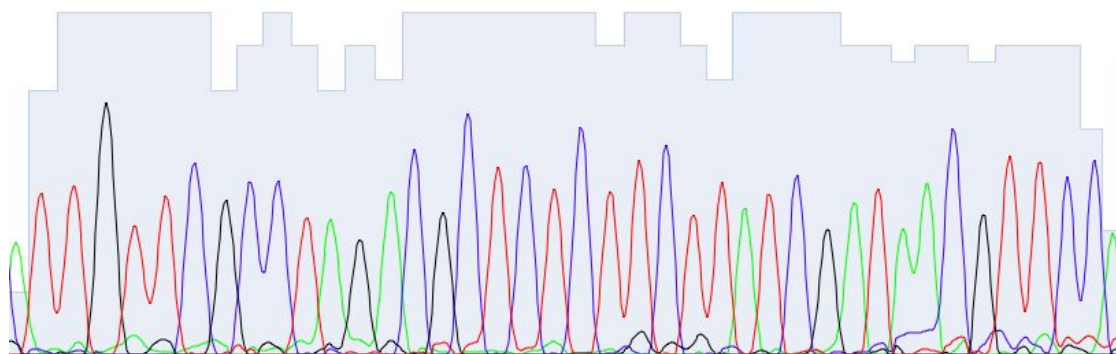
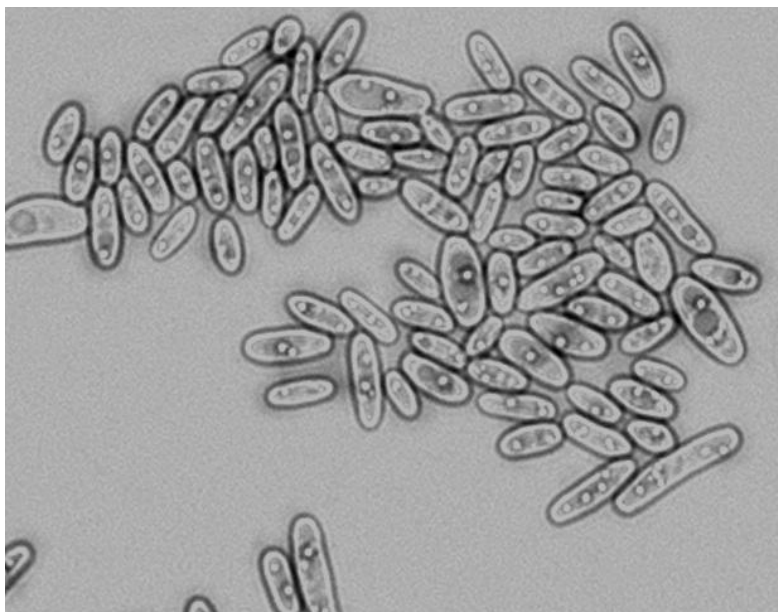


Step 2: Characterization

Flocculation, killing, etc.



Step 3: Identification



Step 4: Selection, prototyping and recipe design

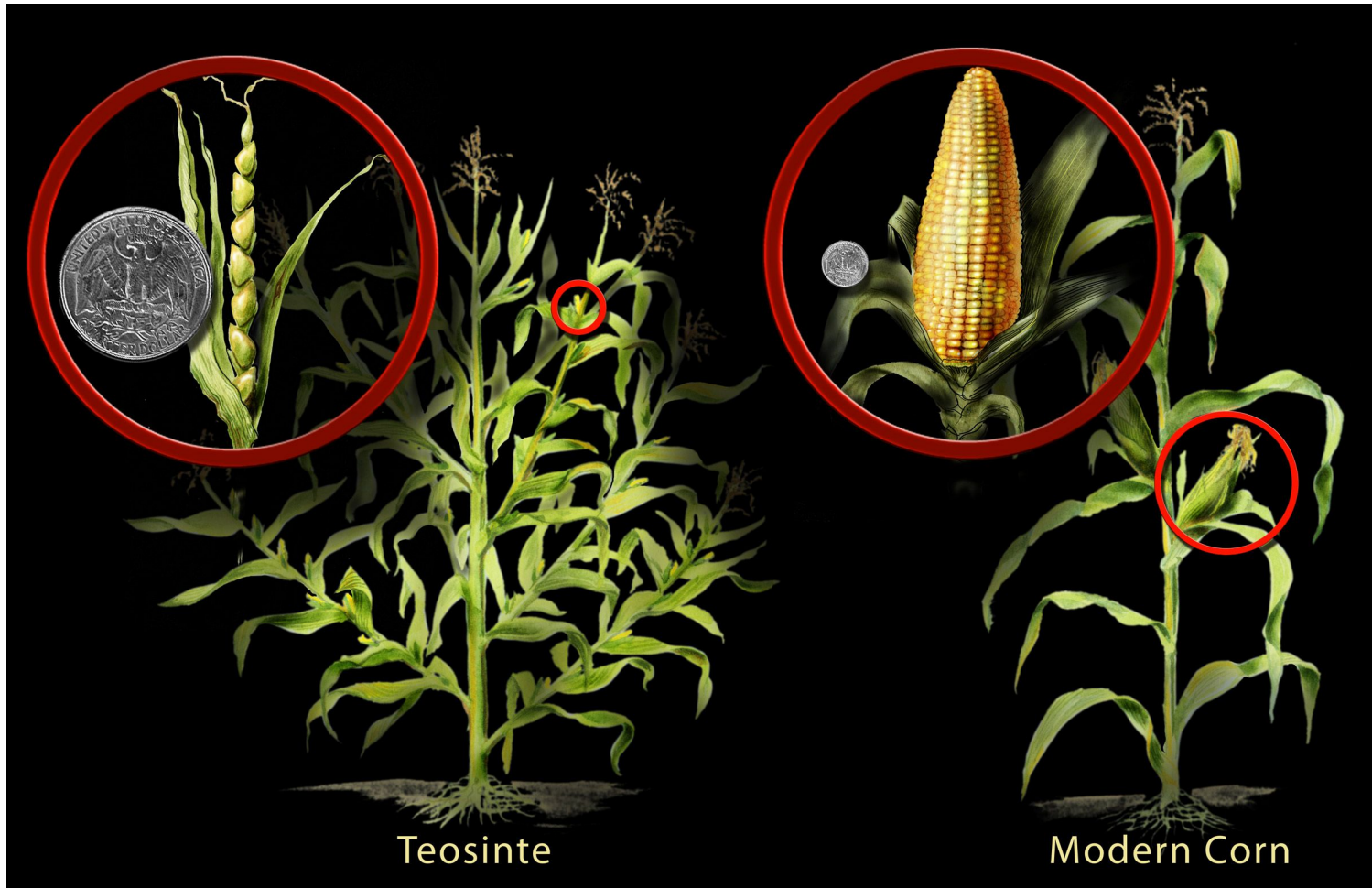


Production



Future work

Breeding and selection to enhance desirable attributes



Questions?

Please use the microphone indicated so our recording includes audio of your question

For further information, please contact
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Or check out our blog at:

<http://www.aeronautbrewing.com/blog/>

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