



# The Case for Dank

Dominic Wise



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BREW  
SCHOOL**

# AGENDA

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- The case for DANK
- YCH Internal trial and results
- Hop sensory brewer data
- Chemistry data
- Key takeaways and next steps

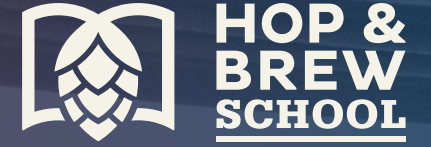


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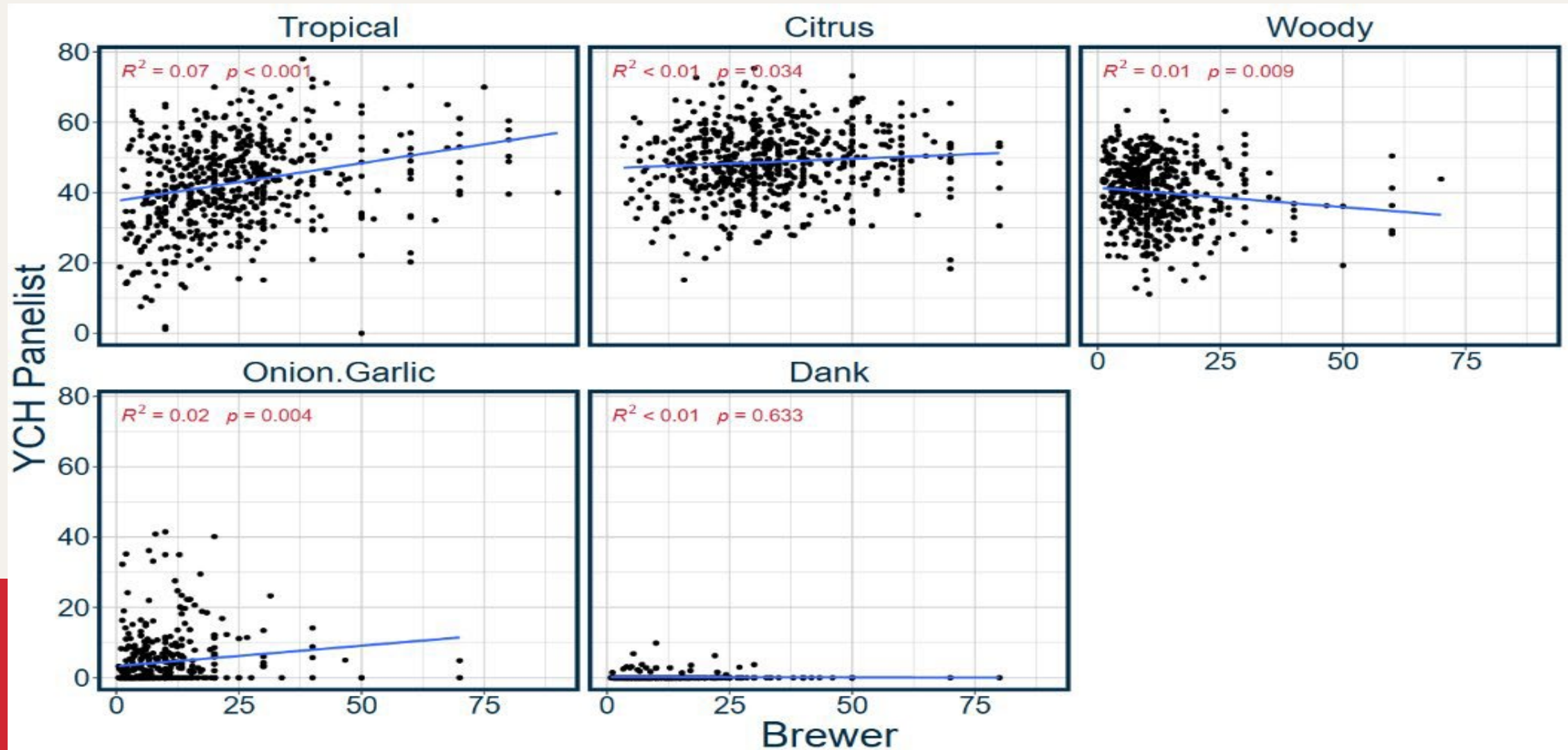


# The Case for “DANK”





# YCH Panel vs Brewer



# MOSAIC: YCH Panel vs Brewer



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sweaty

citrus

tropical

dank

lychee lemon

catty bubblegum

stone\_fruit

blueberry

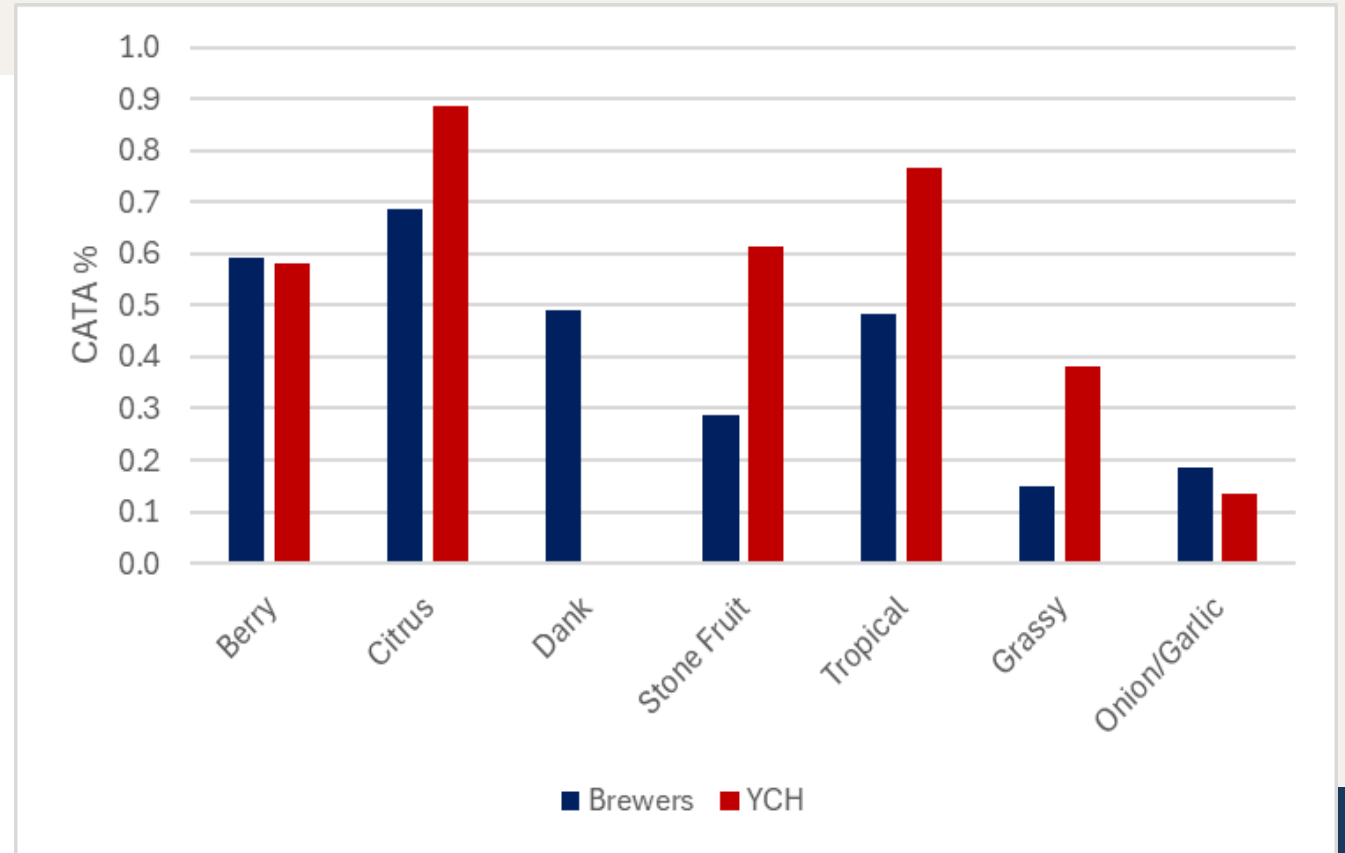
pine

earthy

floral grassy

herbal resinous

berry



# YCH Internal Trial



## AROMA



### DRIED FRUIT

Date • Dried Apricot  
Dried Fig • Raisin



### BERRY

Black Currant • Blueberry  
Grape • Raspberry • Strawberry



### STONE FRUIT

Apricot • Cherry  
Peach • Plum



### POMME

Apple • Pear



### MELON

Cantaloupe • Cucumber  
Honeydew • Watermelon



### TROPICAL

Banana • Coconut • Guava • Lychee  
Mango • Passion Fruit • Pineapple



### CITRUS

Grapefruit • Lemon  
Lemongrass • Lime • Orange



### FLORAL

Cherry Blossom • Geranium  
Jasmine • Rose • Soapy



### HERBAL

Black Tea • Dill • Green Tea  
Mint • Rosemary • Thyme



### VEGETAL

Cabbage • Celery  
Green Pepper • Tomato Plant



### GRASSY

Green Grass • Hay



### EARTHY

Barnyard • Compost • Geosmin  
Leather • Mushroom • Soil



### WOODY

Cedar • Pine • Resinous • Sawdust  
Tea Tree • Tobacco



### SPICY

Anise • Black Pepper  
Cinnamon • Clove • Ginger



### SWEET AROMATIC

Bubblegum • Caramel • Chocolate  
Creamy • Honey • Vanilla



### ONION / GARLIC

Garlic • Green Onion • Onion



### DANK

Cannabis • Skunky



### NUTTY

Almond • Peanut • Walnut



### BREADY

Biscuit • Dough  
Graham Cracker • Oatmeal • Rye



### ROASTED

Coffee • Dark Malt



### OFF-NOTES

Burnt Rubber • Cardboard • Catty  
Cheesy • Diesel • Musty • Plastic/Waxy  
Smoky • Sulfur • Sweaty

\* Acetaldehyde • Butyric Acid  
Diacetyl • DMS • Lactic Acid  
Light Strike • Metallic

*\*Off notes occurring in beer*

## TASTE

BITTER

SALT

SOUR

SWEET

UMAMI

## MOUTHFEEL

ALCOHOL

Warming • Boozy

ASTRINGENCY

Drying • Grippy

BODY

Thickness • Fullness

CARBONATION

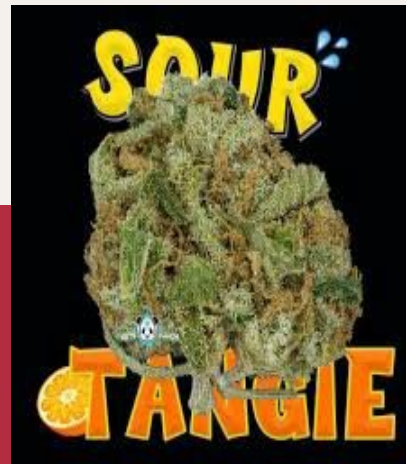
Bubble Size • Density

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# Internal Trial – Sensory & Chemistry

- Descriptive analysis (x2)
- Round table discussion
- Lexicon and reference standards
  - DANK lexicon development
- Descriptive analysis (x2)
- GCMS- SCD





# (TRIAL) DANK LEXICON & REFERENCE STANDARDS



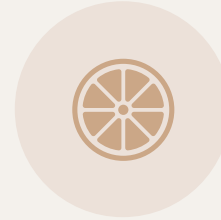
PINEAPPLE CANDY:  
PINEAPPLE, TROPICAL  
SKITTLES, CLEAR GUMMY  
BEAR



SWEET TROPICAL: GUAVA,  
FLORAL, PASSION FRUIT,  
"SWEET"



LEMONHEAD:  
LEMONGRASS, "TART,"  
LEMON CANDY



CITRUS CLEANER: PLEDGE  
FURNITURE POLISH,  
CHEMICAL



ROSY SOAP: SOAPY,  
GERANIUM, ROSE, FLORAL



DESERT SAGE: WOODY, LEMON-  
PINE, MINTY, EUCALYPTUS



MENTHOL: COUGH  
DROPS, TEA TREE, MINTY



COAL TAR: "ELDER" SOAP,  
MOUTHWASH, TEA TREE



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# Internal Trial Results

- The only samples rated as “dank” by panelists were Columbus Cryo and the samples spiked with GG4 (pre and post training)
- The YCH Sensory Panel had strong (negative) reactions to the cannabis samples indicating they may not align with some brewers.
- Inconsistent turnout. (Sensory trials during cold season is a bad idea.)





# Hop Sensory Brewer Trial



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# Samples Used In Study



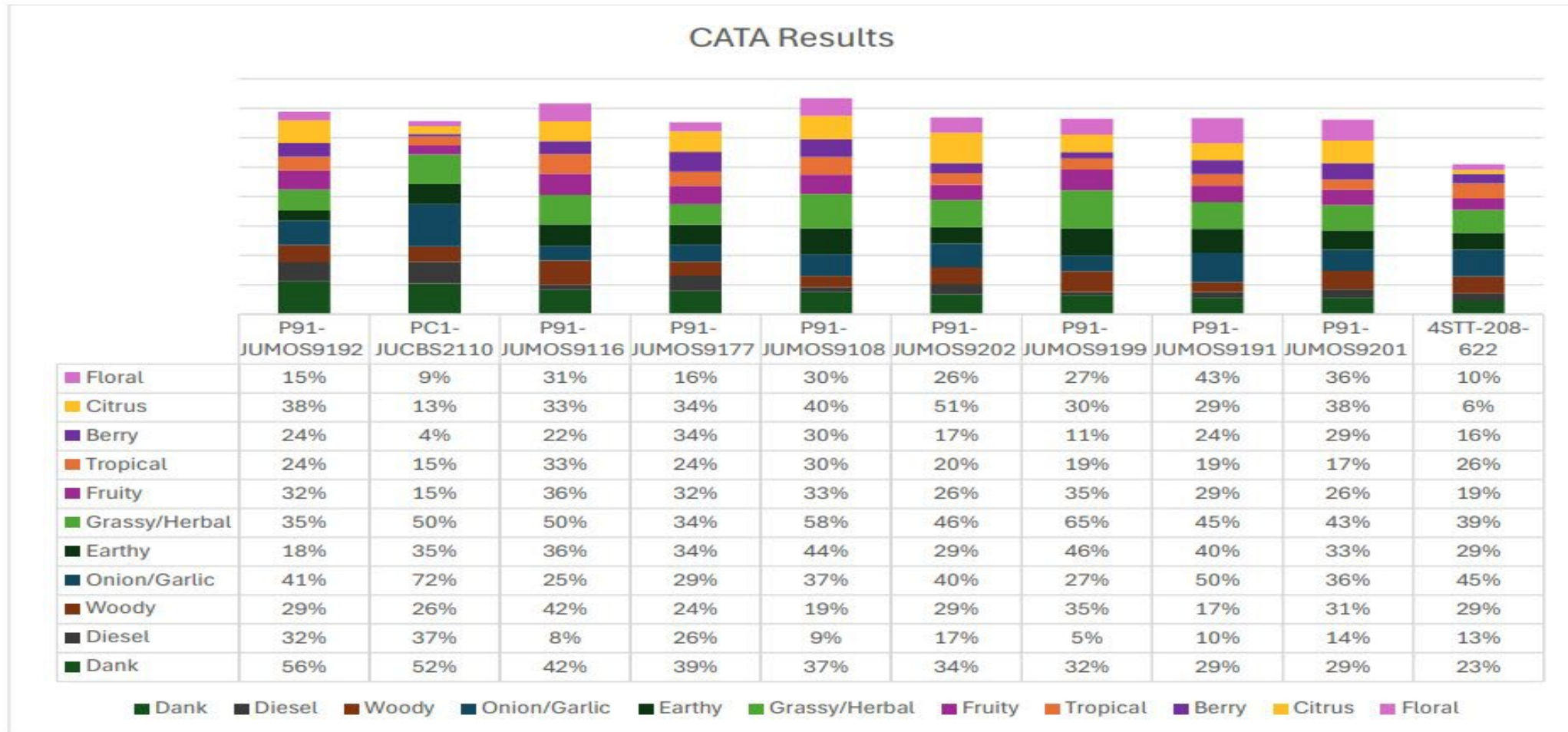
Sample ID	Variety	Farm Lot	Pellet Lot	Harvest Date	Alpha	Beta	Total Oil
199	MOS	24-OR205-312	P91-JUMOS9108	9/10/2024	14.1	4.9	1.9
203	MOS	24-OR297-021	P91-JUMOS9177	9/14/2024	13.5	4.3	1.7
641	MOS	24-ID102-062	P91-JUMOS9192	9/13/2024	12.9	4.1	2.0
402	MOS	24-ID102-072	P91-JUMOS9202	*9/17/2024	13.3	4.3	1.7
564	MOS	24-WA313-036	P91-JUMOS9116	9/13/2024	13.7	4.3	1.9
358	MOS	24-WA445-026	P91-JUMOS9191	*9/17/2024	10.6	3.8	1.4
746	MOS	24-WA397-029	P91-JUMOS9199	9/15/2024	14.7	4.7	1.6
915	MOS	24-WA397-039	P91-JUMOS9201	*9/19/2024	15.6	5.1	2.1
337	CBS	BLEND	PC1-JUCBS2110	N/A	26.3	9.1	5.7
498	STT	Unavailable	4STT-208-622	N/A	13.5	6.1	2.2

**Table 1. Hop samples assessed by Minnesota MBAA members on 2/20/2025. Alpha, beta and total oil analysis from pellet lots.**

\*Picked outside of the Yakima Chief Ranches recommended harvest window.

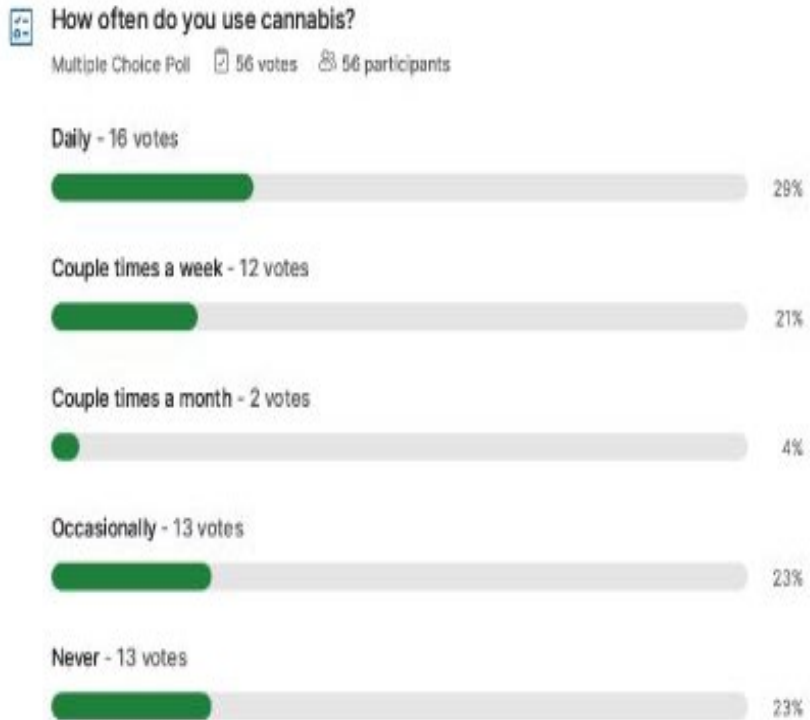


# CATA Sensory Results



**Figure 2. CATA results collected from MBAA members in Minnesota on February 20, 2025. The number of assessors varied across samples.**

# "How often do you use cannabis?"

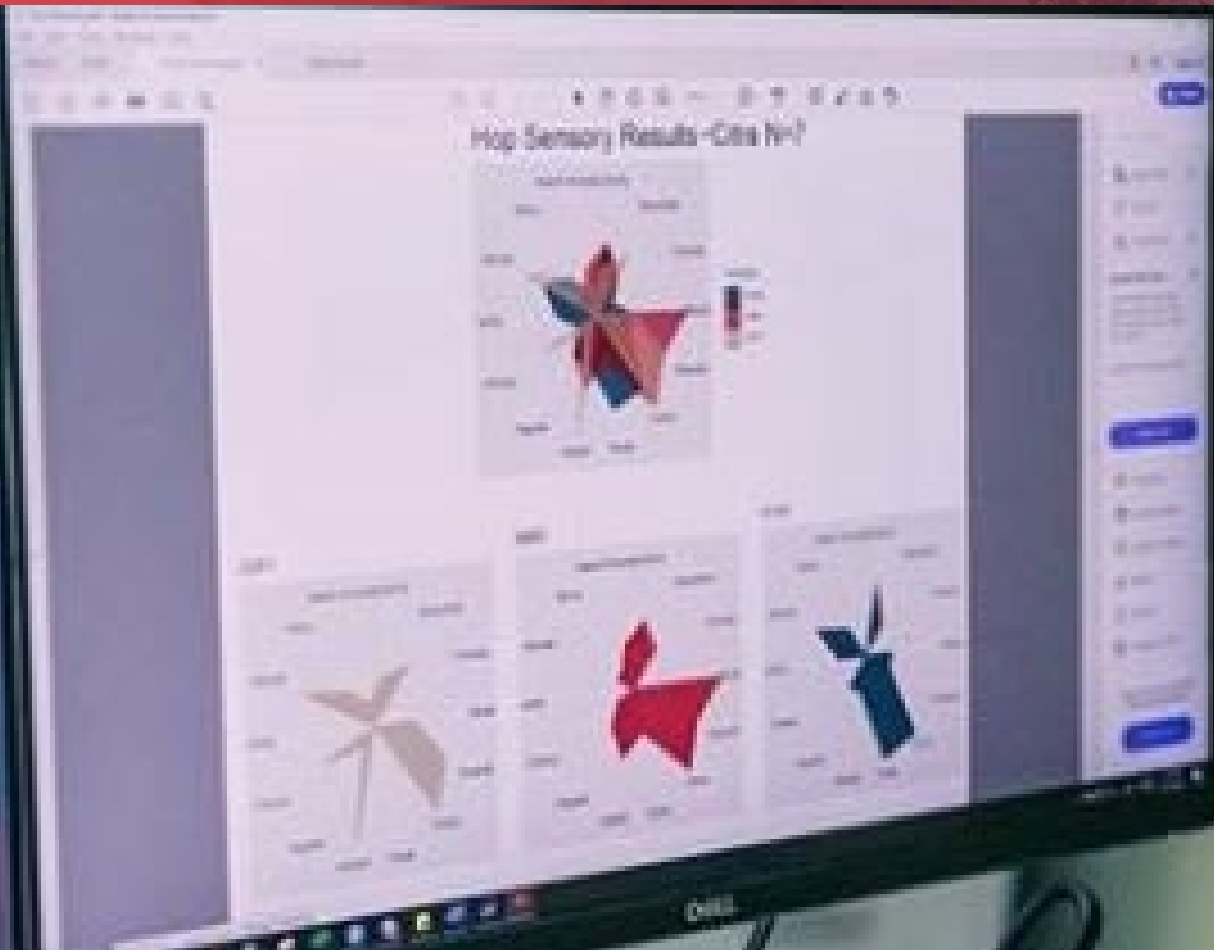


- Of the 56 brewer/industry participants who responded 77% reported they are at least occasional cannabis users.

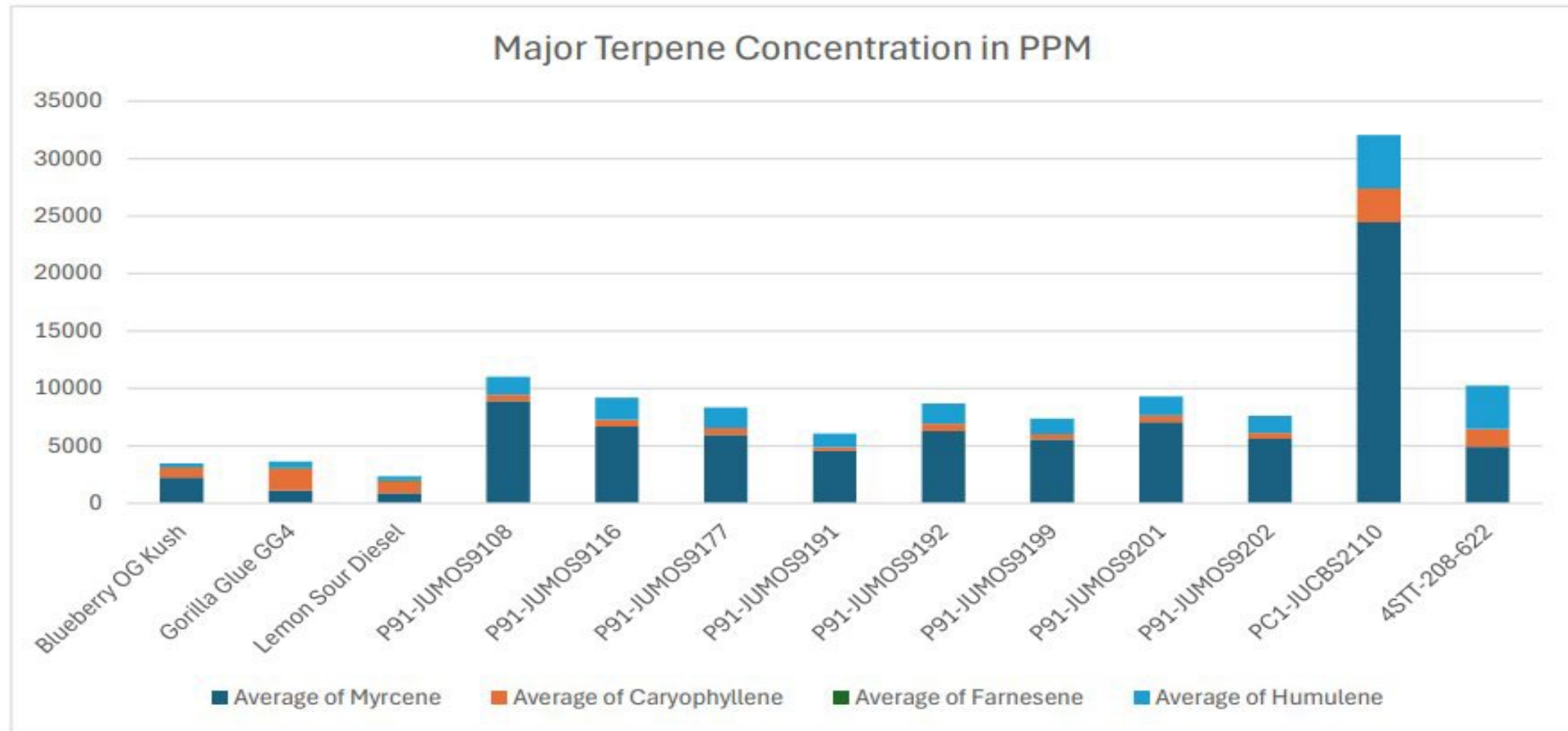
Figure 5. Number of participants responding to the question, "How often do you use cannabis?"



# Chemistry Results – Hop & Cannabis Samples



# Major Terpene Concentration in ppm



**Figure 5. Concentrations of Major Terpenes in various hop lots in comparison with three cannabis terpene oils reported in parts per million (PPM).**

# Survivable Compound Concentration in ppm



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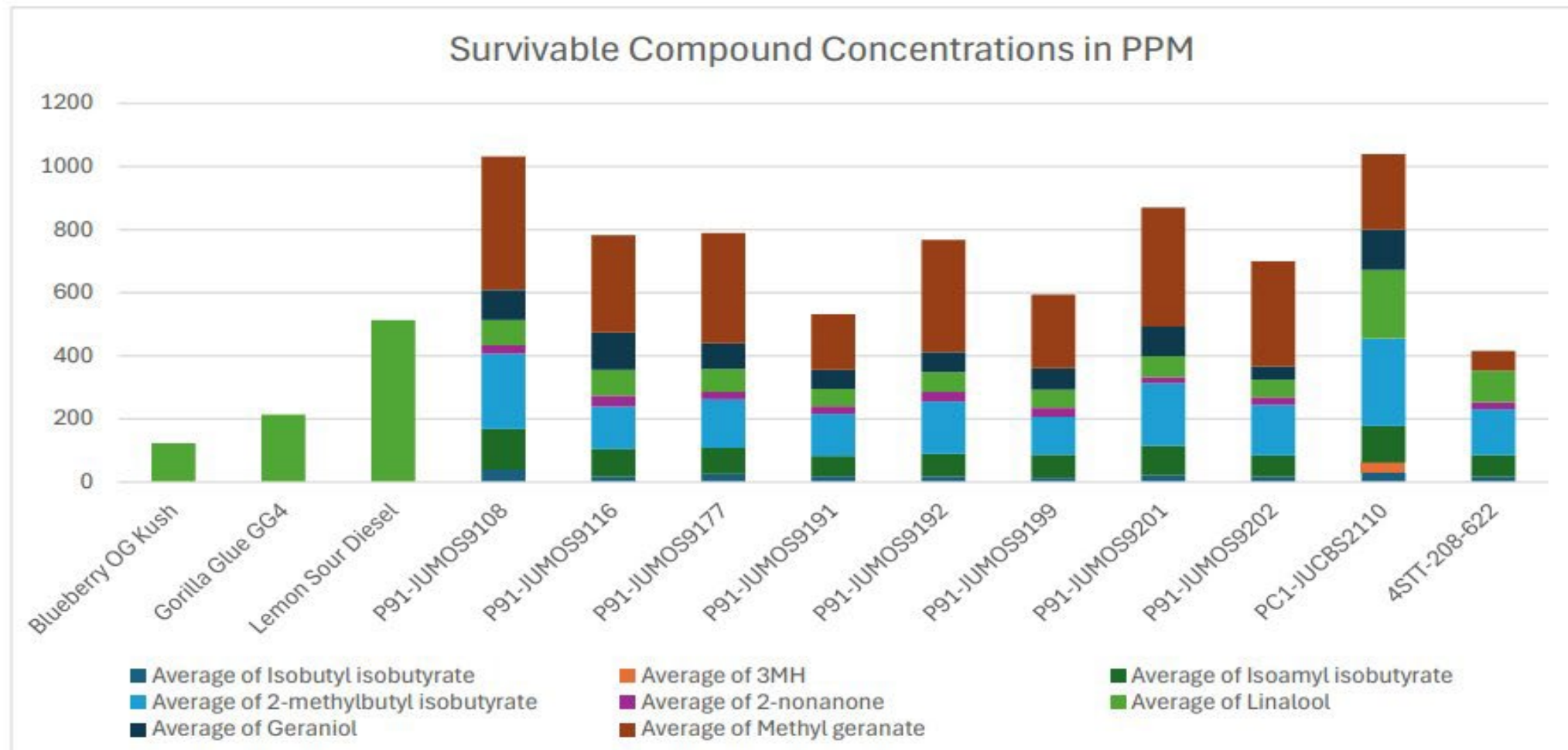


Figure 7. Concentration of Survivable Compounds in various hop lots in comparison with three cannabis terpene oils reported in PPM.



# Key Takeaways & Next Steps

- Cannabis and hop samples contain overlapping aromatic compounds, but concentration levels and overall aroma intensity are significantly different between the two product types.
- Compared to brewers polled, the YCH Sensory Panel appears to have limited experience with cannabis.
  - Inexperience + limited reference standard may explain why panelists struggle to identify hops as “dank”.
- Correlate internal sensory results with dank ratings to generate a “dank prediction index”
- Collect additional data from larger group(HBS) and include non-dank samples to better identify baseline “dank” rating hops



# THANK YOU!

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Please stop by the hop station to participate in a hands-on sensory activity for the DANK project!



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