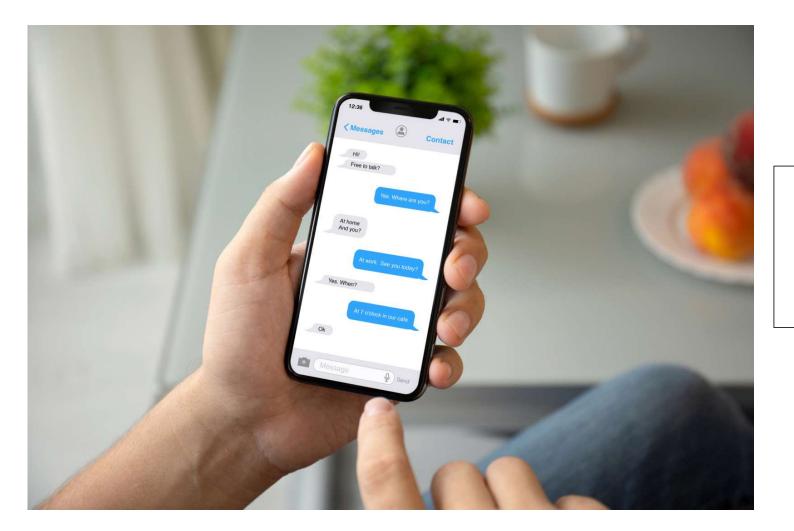
GROWERS OF AMERICA

HOP

2025 American Hop Convention | Coronado, CA Hop Merchant Panel

Juidelines

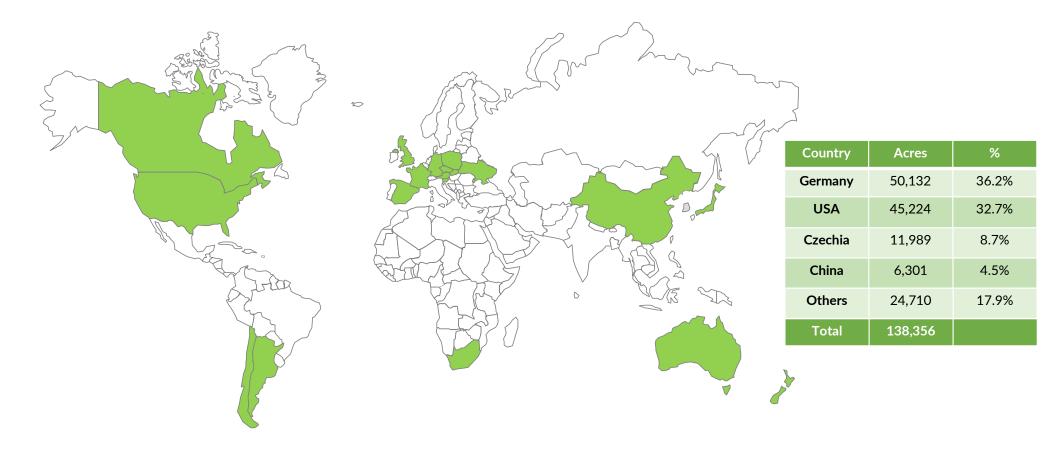
- The Hop Merchant Panel follows the general anti-trust guidelines, as established by the IHGC.
- Our discussions and slides are based on existing, published data.
- We do not discuss customers, pricing, quantities, confidential information, or future plans.
- We do not discuss any non-public future plans.
- Any preparation meetings for the Merchant Panel are done with an independent non-competitor present.
- During the Q&A portion of the Merchant Panel, disclosures may include forward looking or proprietary information. However, these disclosures will be heard publicly for the first time by all present in the room.



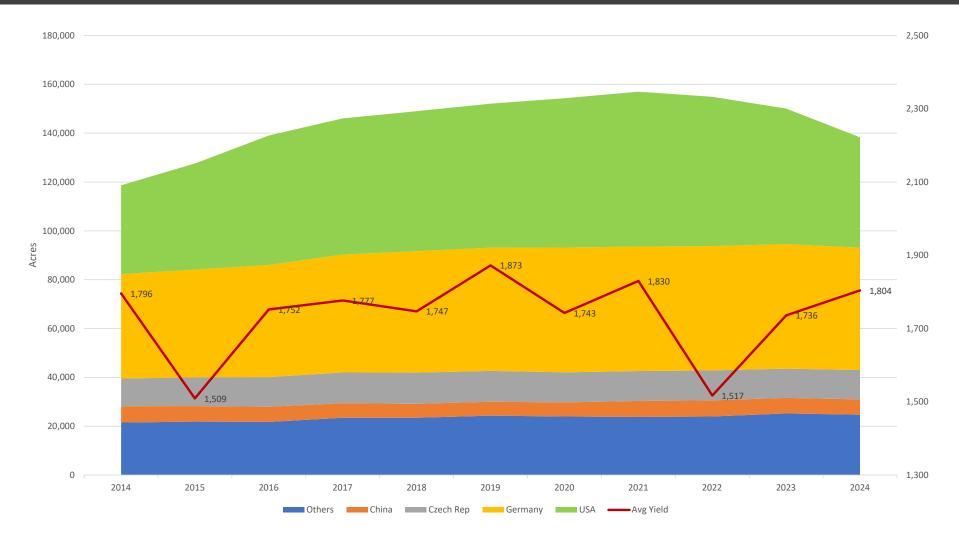
Text Questions Anonymously 509.506.2484

2024 Global Hop Crop Update

Global Hop Acreage – Crop 2024

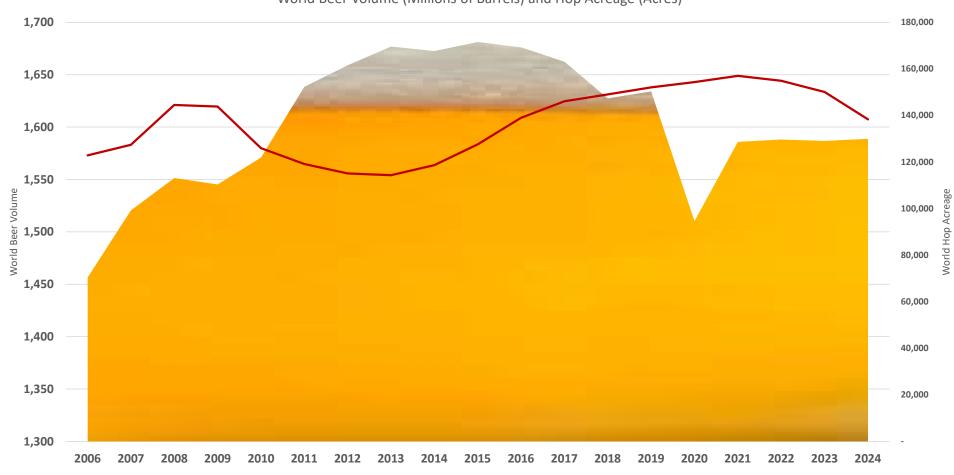


World Hop Crop – Total Acres and Avg Yield (lbs./acre)



Source: Hopsteiner Guidelines 2024

World Beer and Hop Acreage

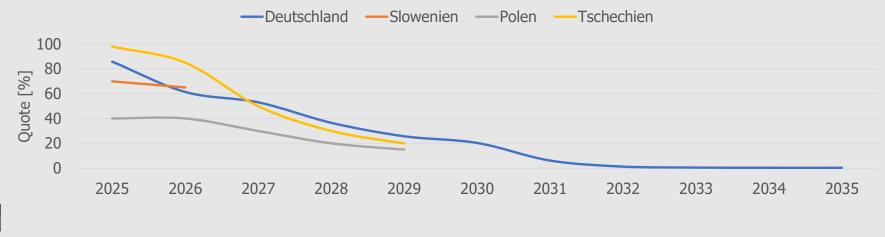


World Beer Volume (Millions of Barrels) and Hop Acreage (Acres)

Source: Hopsteiner Guidelines 2024

Pre-Contract Situation - Europe

Quote in %	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Germany	86	61	53	37	26	20	6	1,3	0,5	0,3	0,3
Slovenia	70	65									
Poland	40	40	30	20	15						
Czech Republic	98	85	50	30	20						





8

Alpha Acid Balance – Craft Effect

Production Year	World Acreage (Acres, prior year)		o World Beer Prod. (Mio. Barrels)		Alpha Dosage (gr. alpha/Brrl)	Alpha Demand (1,000's Lbs Alpha)		Alpha Prod. (1,000's Lbs. Alpha)	Alpha Balance	
i cui	(Acies, prior year)	(1,000 3 103.)	(no. Dunc		(Br. alpha) birry	(1,000 3 200		(1,000 3 103. Alpha)	
			Mainstream	1,547.9	97.48%	4.5	15,365.4	78.15%		
2022 157,017	157 017	287,378	US Craft	23.7	1.49%	64.7	3,377.1	17.18%	27,706	8,045
	137,017		Other Craft	16.4	1.03%	25.4	918.5	4.67%		
		Total:	1,588.0	=	5.6	19,661.0				
2023 154,909	235,011	Mainstream	1,547.1	97.47%	4.4	15,123.1	76.92%	21,390		
		US Craft	23.4	1.48%	61.9	3,195.5	16.25%		2,147	
		Other Craft	16.7	1.05%	25.2	924.3	4.70%			
			Total:	1,587.2		5.5	19,242.9			
		260,445	Mainstream	1,550.3	97.57%	4.5	15,273.6	77.68%	23,859	4,599
2024* 150.050	150.050		US Craft	22.4	1.41%	62.6	3,090.2	15.72%		
2024	2024 * 150,059		Other Craft	16.2	1.02%	25.0	896.4	4.56%		
		Total:	1,588.9	_	5.5	19,260.2	_			
2025* 138,356		249,607	Mainstream	1,562.8	97.68%	4.5	15,506.6	78.87%	23,420	
	120 256		US Craft	21.5	1.35%	63.9	3,035.0	15.44%		4 022
	138,350		Other Craft	15.6	0.98%	24.8	855.3	4.35%		4,023
			Total:	1,600.0		5.5	19,397.0			

*Estimates

Source: Hopsteiner Guidelines 2024

THE GOOD, THE BAD THE GOOD, THE BAD AND THE UGLY

Hop Growing Costs 2025



Thank you to our 2024 Merchant Panel Participants:

View the 2024 Convention Presentation

- Tom Davis, John I. Haas
- Louis Gimbel IV, S.S. Steiner
- Ryan Hopkins, Yakima Chief
- Blake Crosby, Crosby Hops



2024 Review

https://americanhopconvention.org/archive

Recap From 2024 Merchant Panel Discussion







AVERAGE 2023 ESTIMATED GROWING COSTS WAS \$12,748.28 PER ACRE VARIABLE COSTS ~55% OF TOTAL COST, FIXED COST ~45% OVER 40 HOURS IN AGRICULTURE REQUIRES OVERTIME PAY IN WASHINGTON STATE



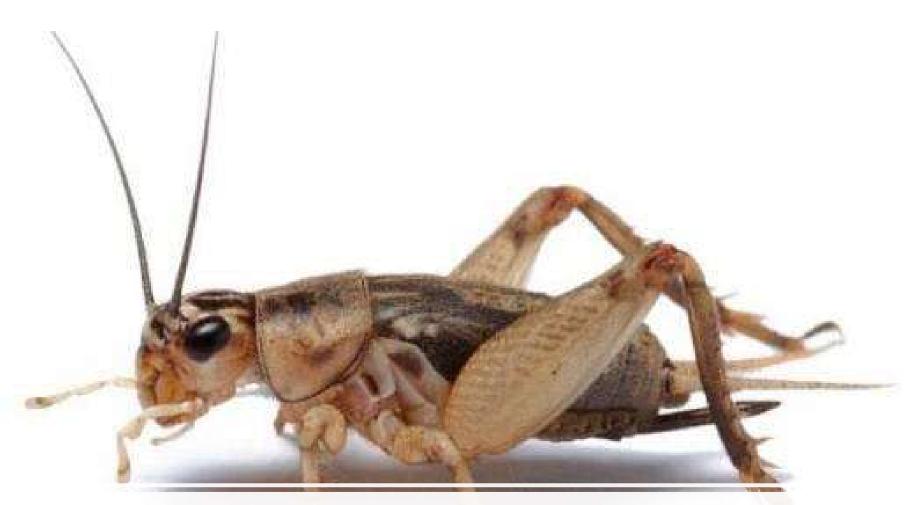
- Minimum wages increasing in WA and OR*
- November CPI indicates a 2.7% inflation from 2023-2024, bringing estimated cost to \$13,092.48/Acre
- · Tariffs could mean material impacts on raw materials**

Potassium Imports and Impacts of Tariff on Prices



*https://www.lni.wa.gov/workers-rights/wages/minimum-wage, https://www.oregon.gov/boli/workers/pages/minimum-wage.aspx
** https://www.canr.msu.edu/news/what-are-tariffs-and-how-could-they-impact-farm-prices





Estimated Cost Decreases

-



A Harsh Reality

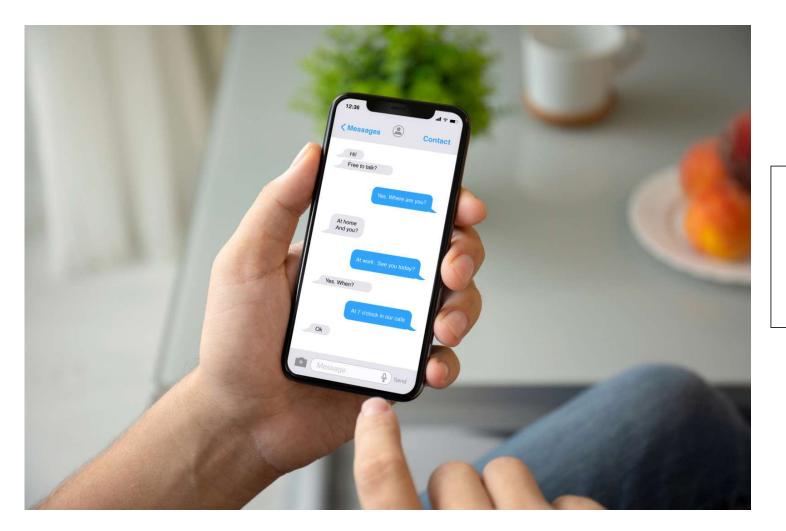
US Acreage*

- 2022-60,113-Assume Full Capacity
- 2023-54,318 (-10%)
- 2024-44,224 (-26%)

Cost Survey Plus Inflation Estimate**		
Cost Per Acre	\$ 13,092.48	
Variable @ 55% of Total Cost	\$ 7,200.87	
Fixed @ 45% of Total Cost	\$ 5,891.62	
	At Capacity	At 74% Capacity
Productive Acres	60	0 444
Variable Cost	\$ 4,320,519.57	\$ 3,197,184.49
Fixed Cost	\$ 3,534,970.56	\$ 3,534,970.56
Total Cost	\$ 7,855,490.14	\$ 6,732,155.05
Cost Per Acre	\$ 13,092.48	\$ 15,162.51

*https://www.nass.usda.gov/Statistics_by_State/Regional_Office/Northwest/includes/Publications/Hops/2024/HOP06.pdf

** https://www.usahops.org/growers/cost-of-production.html



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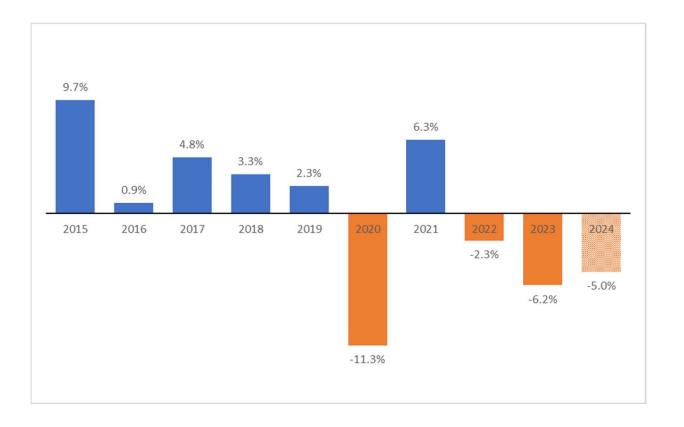
N.A. Market

IPA Share of Craft Sales (\$) by State August 21, 2023 - August 20, 2024



Annual Change in <u>US Craft Beer Growth</u> Rates

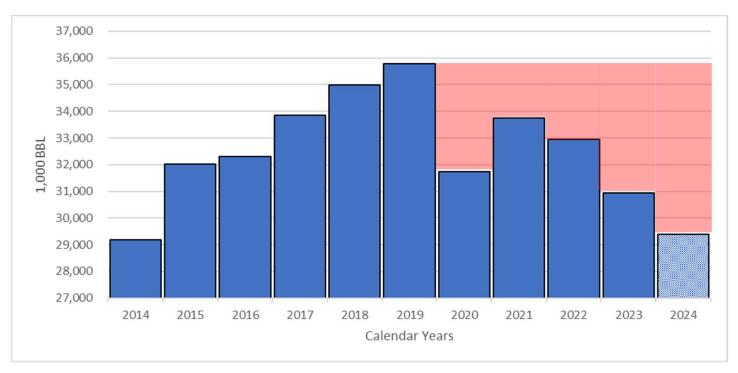
WE ARE EXPERIENCING A DECLINING MARKET.



- Following 10 years of growth, US Craft has been declining since 2016.
- For 2024, US Craft is projected to post declines between 2% &- 5%.
- Brewer's Association estimated -2% based on their mid-year survey, but scan data has been trending less positive.

Source: BA, incl. Macro craft

US Craft Beer Volume (bbl) Development



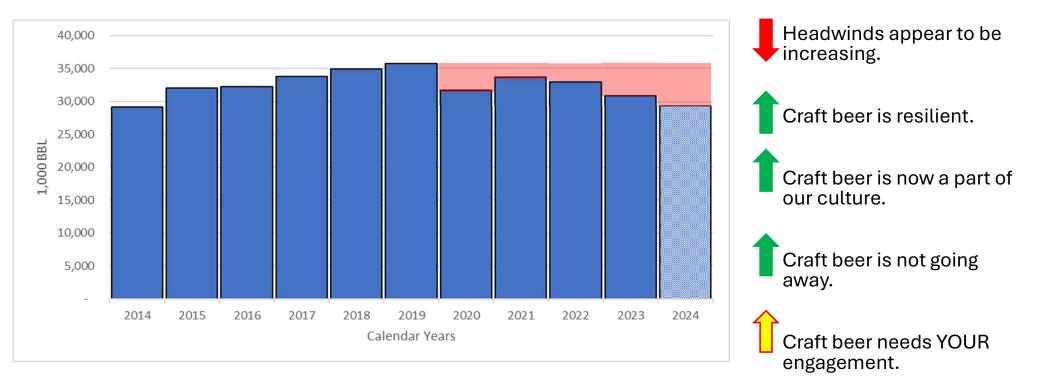
IS THE SKY FALLING?

- US Craft beer production dropped by ~2M barrels in 2023.
- US Beer shipments have been declining since 2016.

Source: BA, incl. Macro craft

US Craft Beer Volume (bbl) Development

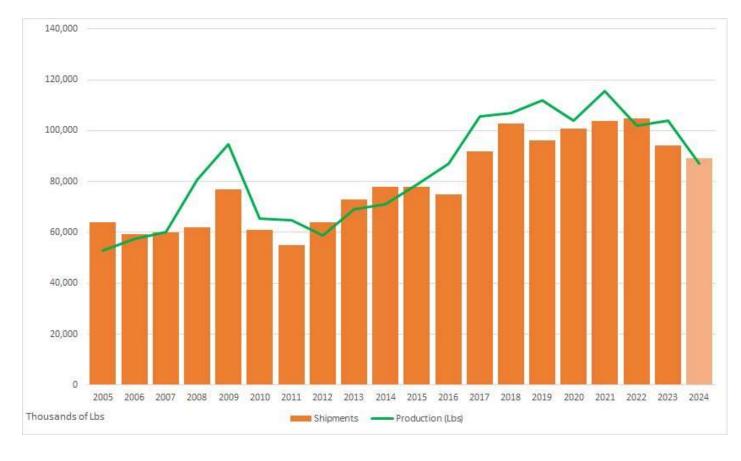
WE HAVE REACHED OUR PEAK.



Source: BA, incl. Macro craft

Hop Production vs. Shipments (in 1,000 lbs)

HAVE HOPS ADJUSTED TO THESE CHANGES?

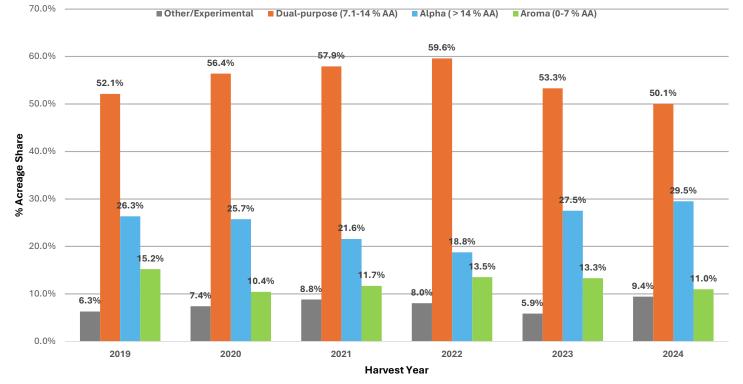


- In 2023 the US Shipped 94M lbs. of hops.
- 16K acres have been reduced since 2021.
- 28.5M lbs. of Production has been reduced since 2021.

Source: USDA NASS

Changes in US Hop Acreage Trends

ARE WE CHANGING IN THE RIGHT WAYS?



% Share of Acreage harvested (2019-2024)

- Decrease in acreage share of aroma and dualpurpose varieties in recent years.
- Increase in acreage share of alpha varieties in recent years.
- Recent increase of other/Experimental acreage share in 2024.

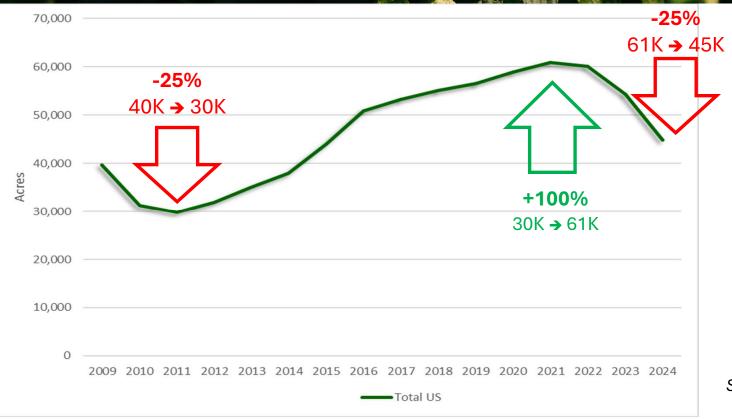
Source: https://quickstats.nass.usda.gov/results/DE C1A7D3-5790-3EBD-B1A8-261D012FBCA6



SHRINKING IS NOT AS FUN AS GROWING.

CHANGE IS THE NEW NORMAL.

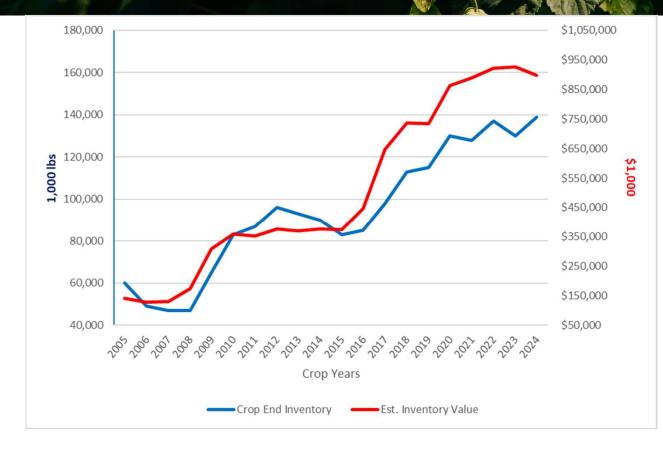
US Acreage Development



- US industry responds aggressively to changing markets
- ~\$750M invested in past decade
- Creates significant financial benefits, but also burdens

Source: HGA Stat Pack

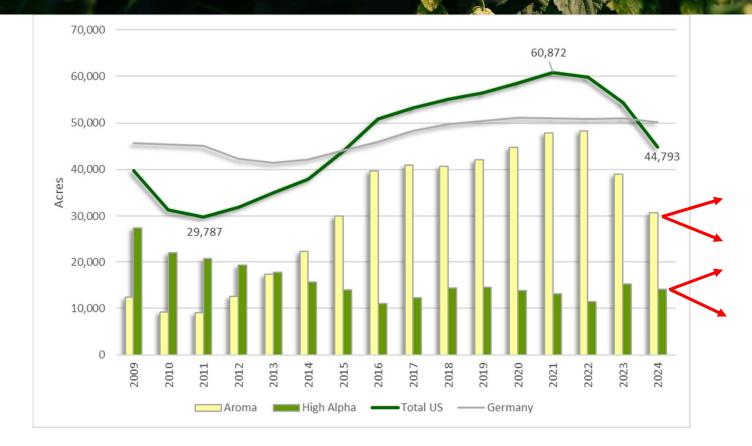
Cost of Accumulated Inventory



- Prior year inventory:
 - ~ 139M lbs
 - ~ 16 months of demand
 - ~ \$900M, +240% since 2015
- Just prior to new crop
 - \$446M Farm Gate
- ~\$1.3B in total Inventory
- ~\$70M in annual interest on carryover stocks
 - In addition to new infrastructure and current crop

Source: USDA, HGA Stat Pack

US Acreage Development - Outlook



Acreage Outlook for Crops 2025 and 2026+ ???



- Beer down (global, US, craft)
- Hop stocks remain high, despite deep US cuts
- Hop industry feeling the pain globally (markets, inflation)
- We are all in this together!

