



2023 STATISTICAL REPORT

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PRESENTED BY HOP GROWERS OF AMERICA

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EDITOR'S NOTE:

For 2023, the U.S. Hop Acreage chart on pages 7-9 includes estimates for 26 additional states, in addition to the three Pacific Northwest states where commercial hops have traditionally been grown. Data for Oregon, Washington and Idaho were provided by the USDA National Agricultural Statistics Service from annual grower surveys. Estimates for the remaining states were provided to Hop Growers of America by a network of growers, researchers, extension specialists, brewers, and hop marketers. Special thanks to members of the Great Lakes Hop Working Group and Hop Growers of America Small Grower Council for their assistance in estimating acreage for many of these additional states.

Conversions used while compiling the data presented in this document:

1 hectare = 2.4711 acres
1 acre = 0.404686 hectares
1 kilogram = 2.2046 pounds
1 pound = 0.4536 kilograms
1 metric tonne = 2204.6 pounds
1 hectoliter = 26.417 gallons
1 zentner = 110.23 pounds



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EXECUTIVE SUMMARY

In 2023, the U.S. hop industry navigated currents of change. Marking a divergence from recent trends, growers shifted to idling yards and replacing aroma and dual-purpose varieties with super high alpha cultivars. The season served as the first period in 12 years with a substantial decrease in acreage, accruing to a 10% total reduction in the Pacific Northwest. Despite the acreage reduction, yields climbed 13% above the 10-year average to 1,915 pounds per acre in the Pacific Northwest, hastening a total U.S. production of 104.9 million pounds.

In response to a long inventory of aroma hops, in 2023 acreage of these varieties decreased 18.5%, exhibiting a sizeable correction to address the oversupply. While achieving a market balance may not be realized in one year, the cut signifies an important step towards resolution. In 2022 the top two varieties Citra® HBC 394 and Mosaic® HBC 369 commanded nearly a third of hop acreage, and their 26% and 19% respective decreases this year together constitute a considerable proportion of the aroma reduction. Citra® HBC 394 remains dominant with 8,856 acres harvested. Mosaic® HBC 369 dropped to third place with 5,276 acres. Cascade shifted down to 4th place with 4,484 acres, and Simcoe slid into 5th place with 4,206 acres.

As the proportion of aroma acres diminished to balance inventory, alpha acreage jumped 36.7%. Super Alpha CTZ increased nearly 40.6% to reclaim second place, amassing a total of 6,354 acres. HBC 682 rose 30% to 2,226 acres, clinching 7th place. Newcomer Helios™, a recently released super high alpha variety, catapulted to tenth place with 1,509 acres in the first year of widespread commercial production.

Last year in the Pacific Northwest aroma and dual-purpose varieties encompassed 82% of acreage, with super high alpha varieties representing 18%. In 2023 74% of total acreage was dedicated to aroma varieties and alpha varieties accounted for 26%.

In 2023 total production increased 2% to herald 104.9 million pounds, which includes an estimate for farms not counted by USDA-NASS. NASS only surveys the PNW – Washington, Oregon, and Idaho – as they grow the majority of the US crop and are the modern traditional home of the US commercial hop industry. HGA's network of contacts across the country provided estimates for acreage and yields – this year the survey calculated an estimate of 1,392 acres outside of the PNW yielding 900,000 pounds.

Washington production represented 74% of the Pacific Northwest, followed by Idaho with 16% and Oregon with 10% States outside the Pacific Northwest experienced fair growing conditions with optimal precipitation, controlled pest pressures, and above-average yields.

TOP 10 PACIFIC NORTHWEST HOP VARIETIES (WITH ACREAGE)

	2018	2019	2020	2021	2022	2023
1	Citra®, HBC 394 (6,652)	Citra®, HBC 394 (9,035)	Citra®, HBC 394 (10,997)	Citra®, HBC 394 (11,981)	Citra®, HBC 394 (12,044)	Citra®, HBC 394 (8,856)
2	CTZ (6,102)	CTZ (6,539)	CTZ (6,286)	Mosaic®, HBC 369 (6,417)	Mosaic®, HBC 369 (6,501)	CTZ (6,354)
3	Cascade (6,009)	Cascade (5,280)	Mosaic®, HBC 369 (5,496)	CTZ (5,569)	Cascade (5,107)	Mosaic®, HBC 369 (5,276)
4	Centennial (4,864)	Simcoe®, YCR 14 (4,365)	Simcoe®, YCR 14 (4,113)	Cascade (4,328)	CTZ (4,518)	Cascade (4,484)
5	Simcoe®, YCR 14 (3,916)	Mosaic®, HBC 369 (4,225)	Cascade (4,038)	Simcoe®, YCR 14 (4,007)	Simcoe®, YCR 14 (4,462)	Simcoe®, YCR 14 (4,206)
6	Chinook (2,839)	Centennial (3,680)	Centennial (2,933)	Centennial (2,342)	Centennial (2,424)	Centennial (2,489)
7	Mosaic®, HBC 369 (2,768)	Amarillo®, VGXP01 (2,369)	HBC 682 (2,208)	HBC 682 (2,114)	Chinook (2,075)	HBC 682 (2,226)
8	Amarillo®, VGXP01 (2,734)	Chinook (2,368)	Amarillo®, VGXP01 (2,149)	Amarillo®, VGXP01 (1,907)	Amarillo®, VGXP01 (1,913)	Amarillo®, VGXP01 (2,177)
9	HBC 682 (1,659)	HBC 682 (2,150)	Chinook (1,893)	Chinook (1,774)	HBC 682 (1,709)	Chinook (1,701)
10	Summit (1,574)	Summit (1,072)	El Dorado® (1,584)	El Dorado® (1,734)	El Dorado® (1,165)	Helios™, HS15619 (1,509)
	Top Ten 39,117	Top Ten 41,083	Top Ten 41,697	Top Ten 42,173	Top Ten 41,918	Top Ten 39,278
	Other 15,918	Other 15,461	Other 16,944	Other 18,699	Other 17,867	Other 16,432
	Total 55,035	Total 56,544	Total 58,641	Total 60,872	Total 59,785	Total 55,710
	Top Ten 71%	Top Ten 72.65%	Top Ten 71.1%	Top Ten 69.3%	Top Ten 70.1%	Top Ten 70.5%

Year	PNW Acres Harvested	PNW Production (pounds)	Yield	Value of Production (\$1,000)	Gross Return per acre*
2016	50,857	87,139,600	1,713	\$498,420	\$9,800
2017	53,989	105,621,500	1,959	\$591,375	\$10,954
2018	55,035	106,906,700	1,943	\$583,444	\$10,601
2019	56,544	112,041,200	1,981	\$636,580	\$11,258
2020	58,641	103,810,300	1,770	\$619,424	\$10,563
2021	60,872	115,630,900	1,900	\$661,618	\$10,869
2022	59,785	101,855,700	1,694	\$621,098	\$10,330
2023	54,318	104,042,500	1,915	\$562,146	\$10,349

Source: USDA-NASS, prepared by HGA.

Growers have faced substantial increases in the cost of production, driven by expansion of harvesting and production capacity to handle a doubling of acreage over the past 10 years, updating equipment, increased labor costs (including health care and other benefits), and inflation in the cost of production inputs. Administrative and operating costs associated with food safety, best practices compliance and other customer requirements have also increased.

Washington State University updated the Pacific Northwest Hop Cost of Production Study in 2020, estimating the annual cost of producing mature standard trellis hops under drip irrigation in the PNW at \$13,588 per acre (including variable and fixed costs, depreciation, etc.) – see <https://www.usahops.org/growers/cost-of-production.html>.

US HOP ACREAGE BY STATE AND VARIETY (FIVE YEARS)

STATE & VARIETY	ACRES HARVESTED					2022-2023
	2019	2020	2021	2022	2023	% +/-
ARIZONA	1.0	1.0	1.0	1.0	1.0	0.00%
CALIFORNIA	130.0	130.0	130.0	50.0	50.0	0.00%
COLORADO	147.0	147.0	147.0	10.0	10.0	0.00%
CONNECTICUT	15.0	15.0	20.0	10.0	10.0	0.00%
IDAHO						
Amarillo®, VGXP01	561	538	380	379	537	41.69%
Apollo™	*	*	*	*	209	
Bravo™	*	*	*	*	*	
Calypso™	81	*	*	*	*	
Cascade	710	407	479	845	699	-17.28%
Cashmere	*	125	124	140	91	-35.00%
Chinook	786	624	521	542	409	-24.54%
Citra®, HBC 394	973	1,527	1,743	1,767	1,014	-42.61%
Columbus/Tomahawk®/Zeus	1,602	1,457	1,046	520	1,059	103.65%
Comet	112	93	146	144	108	-25.00%
Crystal	131	*	*	*	*	
El Dorado®	352	526	621	304	242	-20.39%
Elani™, YQH1320	*	*	*	*	8	
Eureka™	185	*	332	419	525	25.30%
Galena	113	*	*	*	*	
Hallertauer Mittelfrüher	25	159	159	159	159	0.00%
Helios™, HS15619	*	*	*	*	503	
Idaho 7®	388	564	592	382	290	-24.08%
Mosaic®, HBC 369	801	1,186	1,380	1,440	1,120	-22.22%
Mt. Rainier	*	*	84	85	66	-22.35%
Northern Brewer	57	58	58	*	*	
Saaz	140	*	330	380	380	0.00%
Simcoe®, YCR 14	469	425	388	441	257	-41.72%
Triumph	*	39	72	55	*	
Willamette	170	*	389	459	459	0.00%
Other Varieties	702	1,540	850	806	510	-36.72%
TOTAL IDAHO	8,358	9,268	9,694	9,267	8,645	-6.71%
ILLINOIS	30.0	30.0	30.0	20.0	20.0	0.00%
INDIANA	50.0	50.0	100.0	80.0	80.0	0.00%
IOWA	60.0	60.0	60.0	40.0	40.0	0.00%
KENTUCKY	12.0	12.0	18.0	11.0	11.0	0.00%
MAINE	24.0	24.0	24.0	15.0	15.0	0.00%
MARYLAND	20	20	10	10	10	0.00%
MASSACHUSETTS	30	30	15	15	15	0.00%
MICHIGAN	720	500	375	380	380	0.00%

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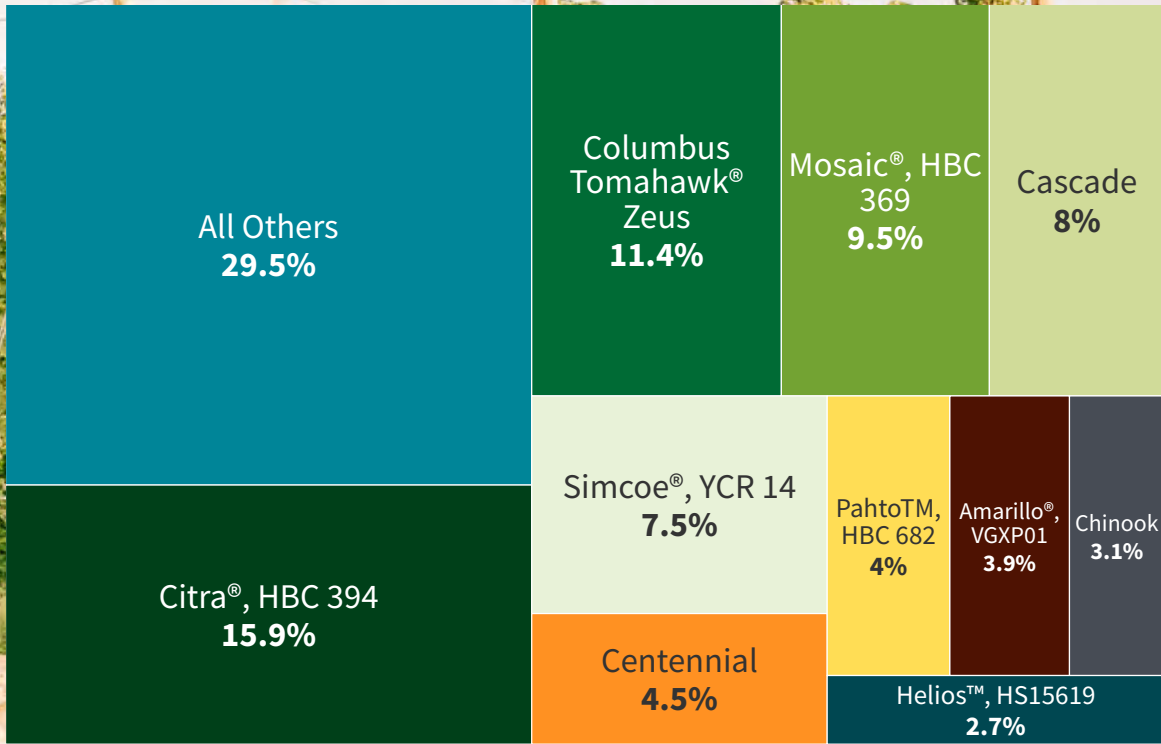
STATE & VARIETY	ACRES HARVESTED					2022-2023
	2019	2020	2021	2022	2023	% +/-
MINNESOTA	120.0	122.0	40.0	30.0	30.0	0.00%
MONTANA	36.0	36.0	173.0	197.0	197.0	0.00%
NEBRASKA	44.0	46.5	49.0	10.0	10.0	0.00%
NEW HAMPSHIRE	2.0	2.0	2.0	2.0	2.0	0.00%
NEW JERSEY	15.0	15.0	15.0	10.0	10.0	0.00%
NEW YORK	400.0	400.0	350.0	300.0	300.0	0.00%
NORTH CAROLINA	30.0	35.0	25.0	20.0	20.0	0.00%
NORTH DAKOTA	3.5	3.5	3.5	3.0	3.0	0.00%
OHIO	70.0	85.0	870.0	65.0	65.0	0.00%
OREGON						
Amarillo®, VGXP01	212	216	193	210	204	-2.86%
Cascade	1,039	754	666	658	629	-4.41%
Centennial	614	489	364	380	386	1.58%
Chinook	114	86	79	90	76	-15.56%
Citra®, HBC 394	998	1,327	1,472	1,691	1,528	-9.64%
Crystal	247	*	159	191	240	25.65%
Fuggle	63	*	*	*	*	
Golding	92	*	78	*	*	
Liberty	*	56	54	*	25	
Mosaic®, HBC 369	478	595	844	901	847	-5.99%
Mt. Hood	295	159	123	171	188	9.94%
Mt. Rainier	*	*	126	130	109	-16.15%
Nugget	1,059	826	572	441	375	-14.97%
Sabro®, HBC 438	*	74	225	119	*	
Simcoe®, YCR 14	440	474	499	527	466	-11.57%
Sterling	147	58	58	35	30	-14.29%
Strata™, OR 91331	253	484	833	1,143	839	-26.60%
Super Galena™	78	87	*	*	*	
Tahoma	*	*	*	*	104	
Talus®, HBC 692	*	*	*	46	*	
Willamette	619	605	446	471	439	-6.79%
Other Varieties	558	814	604	552	337	-38.95%
TOTAL OREGON	7,306	7,104	7,395	7,756	6,822	-12.04%
PENNSYLVANIA	30.0	50.0	40.0	20.0	20.0	0.00%
RHODE ISLAND	10.0	10.0	10.0	5.0	5.0	0.00%
VERMONT	25.0	25.0	40.0	38.0	38.0	0.00%
VIRGINIA	30.0	30.0	20.0	10.0	10.0	0.00%
WASHINGTON						
Ahtanum®, YCR 1	261	230	166	168	*	
Amarillo®, VGXP01	1,597	1,395	1,334	1,324	1,436	8.46%
Apollo™	851	750	*	807	802	-0.62%
Azacca®, ADHA-483	589	722	730	871	401	-53.96%
Bravo™	236	201	238	203	206	1.48%
Calypso™	104	115	*	*	*	
Cascade	3,718	2,877	3,183	3,604	3,156	-12.43%

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STATE & VARIETY	ACRES HARVESTED					2022-2023
	2019	2020	2021	2022	2023	% +/-
WASHINGTON CONTINUED						
Cashmere	310	448	690	717	258	-64.02%
Centennial	3,031	2,444	1,978	2,044	2,103	2.89%
Chinook	1,437	1,183	1,174	1,443	1,216	-15.73%
Citra®, HBC 394	6,720	8,143	8,766	8,586	6,314	-26.46%
Cluster	470	413	390	286	195	-31.82%
Columbus/Tomahawk®/Zeus	4,935	4,829	4,523	3,998	5,295	32.44%
Comet	210	330	386	327	175	-46.48%
Crystal	66	*	*	*	*	
Ekuanot™, HBC 366	632	641	381	367	373	1.63%
El Dorado®	641	1,058	1,113	861	621	-27.87%
Elani™, YQH1320	*	*	*	*	61	
Eureka!™	425	465	466	570	621	8.95%
Galena	297	241	*	*	*	
HBC 682	2,109	2,208	2,114	1,709	2,226	30.25%
Helios™, HS15619	*	*	*	*	1,006	
Idaho 7®	85	341	388	158	148	-6.33%
Jarrylo™, ADHA-881	*	17	*	*	*	
Loral®, HBC 291	125	164	197	199	161	-19.10%
Mosaic®, HBC 369	2,829	3,715	4,193	4,160	3,309	-20.46%
Mt. Hood	53	48	*	42	*	
Mt. Rainier	239	223	209	212	212	0.00%
Nugget	104	*	*	*	*	
Palisade®, YCR-4	477	246	333	377	260	-31.03%
Pekko®, ADHA-871	*	801	1,070	1,084	1,045	-3.60%
Sabro®, HBC 438	724	1,145	1,120	548	203	-62.96%
Simcoe®, YCR 14	3,367	3,214	3,172	3,494	3,483	-0.31%
Summit™	1,072	640	437	*	*	
Super Galena™	473	475	480	354	354	0.00%
Tahoma	230	177	388	383	385	0.52%
Talus®, HBC 692	*	*	*	377	147	-61.01%
Warrior®, YCR 5	*	283	128	147	148	0.68%
Willamette	270	203	132	124	199	60.48%
Zappa™	*	*	*	69	*	
Experimental	360	453	575	702	602	-14.25%
Other Varieties	1,833	1,431	3,329	2,447	1,730	-29.30%
TOTAL WASHINGTON	40,880	42,269	43,783	42,762	38,851	-9.15%
WISCONSIN	297.0	297.0	150.0	40.0	40.0	0.00%
TOTAL PACIFIC NORTHWEST	56,544	58,641	60,872	59,785	54,318	-9.14%
TOTAL NON-PNW US	2,386	2,077	1,387	1,392	1,392	0.00%
TOTAL UNITED STATES	58,930	60,718	62,259	61,177	55,710	-8.94%

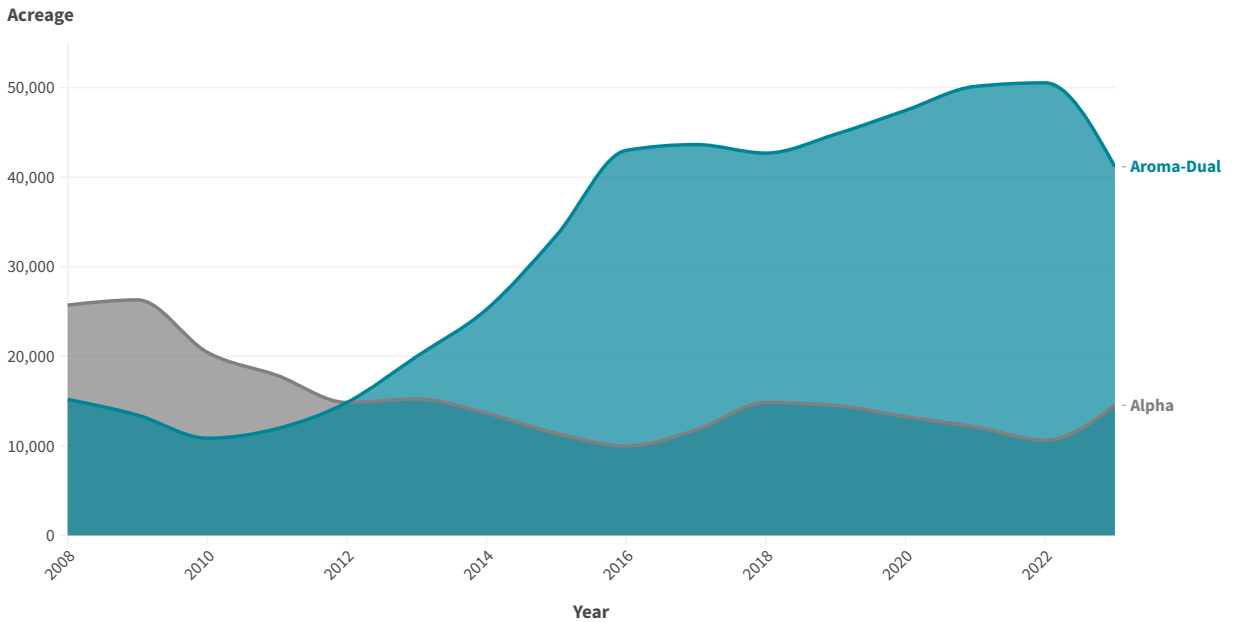
SOURCE: USDA-NASS and Hop Growers of America. Prepared by HGA. "Other Varieties" includes data to avoid disclosure of individual operations. # Figures for WA, OR, and ID are derived from the USDA-NASS 2023 National Hop Report.

MAJOR PNW HOP VARIETIES – 2023 (% OF ACREAGE)



Source: USDA-NASS, prepared by HGA.

U.S. HOP ACREAGE – AROMA/DUAL PURPOSE VS. ALPHA

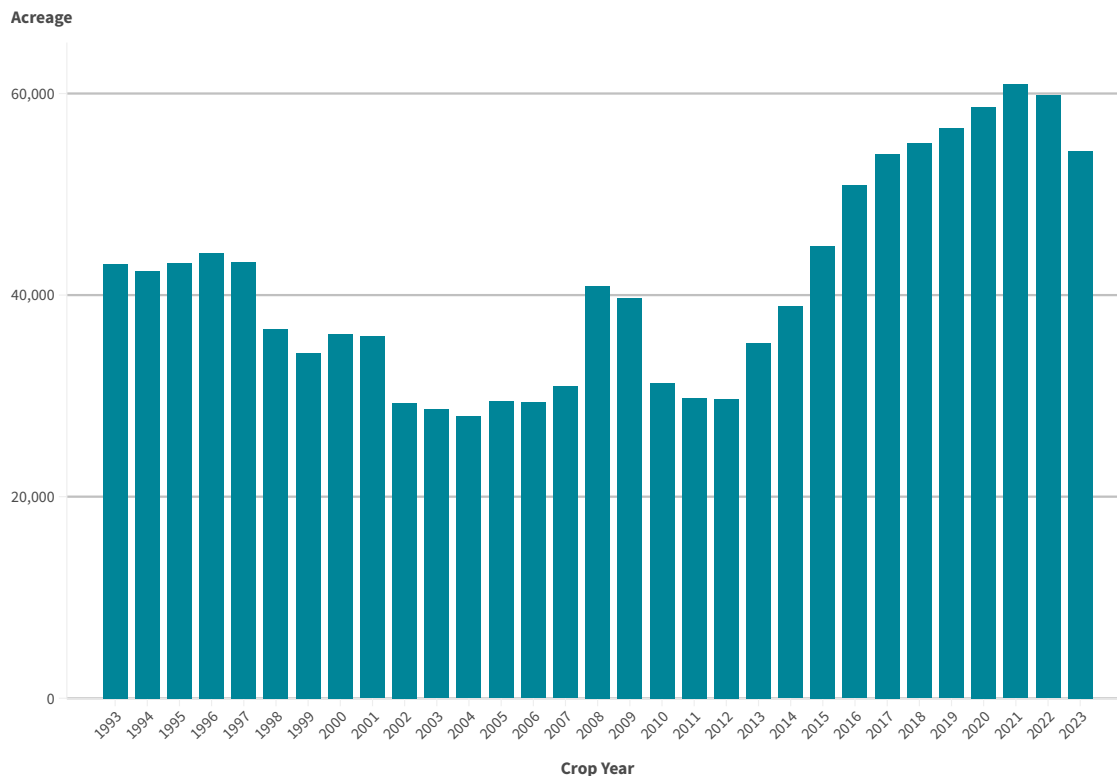


PACIFIC NORTHWEST HOP ACREAGE BY STATE (10 YEARS)

YEAR	ACREAGE HARVESTED			TOTAL
	WASHINGTON	OREGON	IDAHO	
2014	28,858	5,410	3,743	38,011
2015	32,158	6,612	4,863	43,633
2016	37,444	7,765	5,648	50,857
2017	38,648	8,216	7,125	53,989
2018	39,170	7,725	8,140	55,035
2019	40,880	7,306	8,358	56,544
2020	42,269	7,104	9,268	58,641
2021	43,783	7,395	9,694	60,872
2022	42,762	7,756	9,267	59,785
2023	38,851	6,822	8,645	54,318

Source: USDA-NASS, prepared by HGA.

U.S. HOP ACREAGE (1993-2023)



SOURCE: USDA-NASS and HGA Hop Acreage Reports

HOP YIELDS BY STATE AND VARIETY (FIVE YEARS)

STATE & VARIETY	YIELDS (POUNDS PER ACRE)					2022-2023
	2019	2020	2021	2022	2023	% +/-
IDAHO						
Amarillo®, VGXP01	1,560	1,576	1,813	1,458	1,589	8.98%
Apollo™	2,480	2,305	*	*	2,744	
Bravo™	2,246	1,473	*	*	*	
Calypso™	1,901	1,966	*	*	*	
Cascade	1,823	1,213	1,559	1,494	1,957	30.99%
Cashmere	*	1,578	1,828	1,622	1,321	-18.56%
Chinook	2,215	1,614	2,104	1,467	2,047	39.54%
Citra®, HBC 394	1,532	1,686	1,413	1,515	1,581	4.36%
Columbus/Tomahawk®/Zeus	3,002	2,673	3,169	3,027	2,638	-12.85%
Comet	1,970	1,740	1,663	1,863	1,877	0.75%
Crystal	1,971	*	*	*	*	
El Dorado®	1,352	1,590	1,778	1,766	2,256	27.75%
Elani™, YQH1320	*	*	*	*	1,158	
Eureka!™	2,243	2,184	2,552	2,200	2,308	4.91%
Galena	1,773	*	*	*	*	
Hallertauer Mittelfrüher	1,253	614	1,272	1,649	1,085	-34.20%
Helios™, HSI5619	*	*	*	*	1,736	
Idaho 7®	2,562	2,442	2,837	2,588	2,572	-0.62%
Mosaic®, HBC 369	2,296	2,335	2,141	2,103	2,442	16.12%
Mt. Rainier	*	*	985	1,364	1,572	15.25%
Northern Brewer	1,407	1,432	1,266	*	*	
Saaz	771	*	620	955	524	-45.13%
Simcoe®, YCR 14	1,164	992	1,121	1,208	1,312	8.61%
Triumph	*	365	1,063	871	*	
Willamette	1,695	*	1,311	1,393	1,440	3.37%
Zeus	2,672	*	*	*	*	
Other Varieties	1,971	1,567	1,725	1,587	1,778	12.04%
Total Idaho	2,034	1,855	1,900	1,734	1,949	12.40%
OREGON						
Amarillo®, VGXP01	2,312	2,360	2,186	1,870	1,841	-1.55%
Cascade	1,620	1,639	1,595	1,578	1,633	3.49%
Centennial	1,661	1,675	1,384	1,575	1,057	-32.89%
Chinook	1,733	1,481	1,794	1,543	1,453	-5.83%
Citra®, HBC 394	1,476	1,506	1,414	1,562	1,290	-17.41%
Crystal	1,943	*	1,816	1,739	1,422	-18.23%
Fuggle	1,243	*	*	*	*	
Golding	1,351	*	927	*	*	
Liberty	*	2,289	1,506	*	835	
Mosaic®, HBC 369	2,113	2,155	2,077	2,059	1,907	-7.38%
Mt. Hood	1,538	1,551	1,624	1,252	1,373	9.66%
Mt. Rainier	*	*	1,389	1,473	1,497	1.63%
Nugget	2,130	1,841	2,162	2,085	2,236	7.24%
Sabro®, HBC 438	*	870	1,749	1,996	*	
Simcoe®, YCR 14	1,845	1,823	1,643	1,646	1,225	-25.58%
Sterling	1,643	1,728	1,321	1,559	1,859	19.24%
Strata™ OR 91331	2,066	2,068	1,889	2,000	1,617	-19.15%
Super Galena™	2,580	2,801	*	*	*	
Tahoma	*	*	*	*	1,884	
Talus®, HBC 692	*	*	*	1,483	*	
Willamette	1,717	1,857	1,461	1,489	1,524	2.35%
Other Varieties	1,644	1,479	1,780	1,567	1,934	23.42%
Total Oregon	1,783	1,755	1,705	1,728	1,558	-9.84%

STATE & VARIETY	YIELDS (POUNDS PER ACRE)					2022-2023
	2019	2020	2021	2022	2023	% +/-
WASHINGTON						
Ahtanum®, YCR 1	2,820	2,134	2,211	2,032	*	
Amarillo®, VGXP01	1,946	1,649	1,659	1,486	1,686	13.46%
Apollo™	2,735	2,248	*	2,483	2,989	20.38%
Azacca®, ADHA-483	2,441	1,527	1,909	1,559	1,980	27.00%
Bravo™	3,216	2,308	2,759	2,161	2,896	34.01%
Calypso™	3,140	2,437	2,930	*	*	
Cascade	1,920	1,551	1,585	1,477	1,957	32.50%
Cashmere	1,699	1,514	1,395	1,521	1,949	28.14%
Centennial	1,820	1,640	1,585	1,464	1,191	-18.65%
Chinook	1,942	1,665	1,851	1,335	1,812	35.73%
Citra®, HBC 394	1,424	1,526	1,580	1,365	1,585	16.12%
Cluster	1,815	2,065	2,016	1,505	1,722	14.42%
Columbus/Tomahawk®/Zeus	2,584	2,176	2,656	2,256	2,465	9.26%
Comet	1,311	872	1,632	1,299	1,857	42.96%
Crystal	1,989	*	*	*	*	
Ekuanot®, HBC 366	2,483	2,158	2,608	2,153	2,335	8.45%
El Dorado®	2,032	1,516	1,876	1,685	2,093	24.21%
Elani™, YQH1320	*	*	*	*	2,403	
Eureka!™	3,188	2,332	3,022	2,205	3,028	37.32%
HBC 682	2,398	2,019	2,463	2,132	2,032	-4.69%
Helios™, HS15619	*	*	*	*	1,733	
Galena	2,045	1,838	*	*	*	
Idaho 7®	1,544	1,736	3,197	2,755	3,062	11.14%
Jarrylo™, ADHA-881	*	1,428	*	*	*	
Loral®, HBC 291	2,515	1,874	2,088	1,843	1,989	7.92%
Mosaic®, HBC 369	2,054	1,998	2,129	1,963	2,207	12.43%
Mt. Hood	1,037	1,139	*	573	*	
Mt. Rainier	2,149	1,586	1,635	1,563	2,031	29.94%
Nugget	2,313	*	*	*	*	
Palisade®, YCR-4	2,520	2,114	1,866	1,842	2,268	23.13%
Pekko®, ADHA-871	*	1,239	2,072	1,882	2,319	23.22%
Sabro®, HBC 438	1,612	1,886	2,207	2,052	3,034	47.86%
Simcoe®, YCR 14	1,788	1,643	1,646	1,380	1,539	11.52%
Summit™	1,816	1,096	1,351	*	*	
Super Galena™	2,871	2,636	2,849	2,838	2,970	4.65%
Tahoma	1,958	1,588	1,055	1,310	1,589	21.30%
Talus®, HBC 692	*	*	*	1,703	1,967	15.50%
Warrior®, YCR 5	*	1,669	2,240	1,610	2,070	28.57%
Willamette	1,596	1,458	1,200	991	971	-2.02%
Zappa™	*	*	*	839	*	
Zeus	2,620	*	*	*	*	
Experimental	2,251	1,207	1,713	1,717	1,769	3.03%
Other Varieties	1,888	1,737	1,934	1,577	2,177	38.05%
Total Washington	2,006	1,754	1,932	1,679	1,971	17.39%
Total Pacific Northwest	1,981	1,770	1,900	1,694	1,915	13.05%

SOURCE: USDA-NASS. Prepared by HGA. State and variety yields for production outside of the Pacific Northwest are not reported.

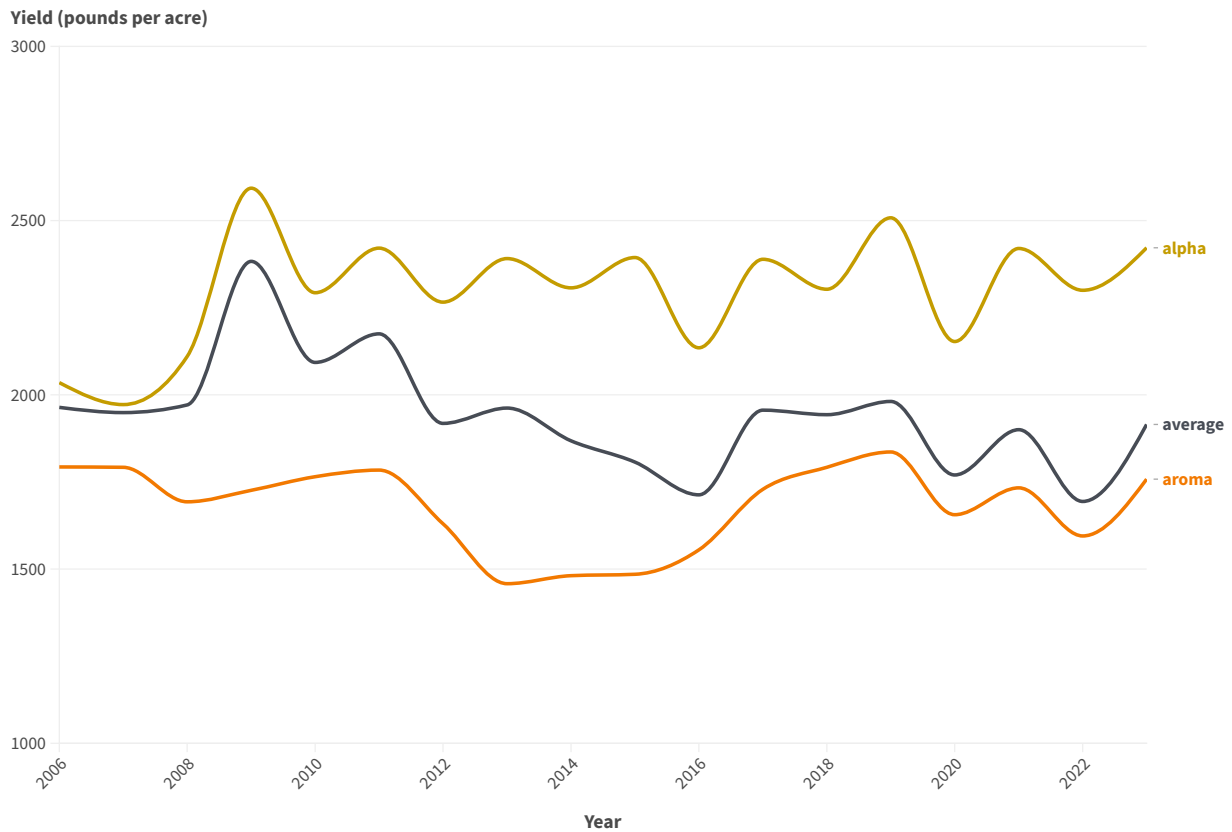
"Other Varieties" includes data to avoid disclosure of individual operations.

PACIFIC NORTHWEST AVERAGE HOP YIELD (TEN YEARS)

YEAR	POUNDS PER ACRE			TOTAL
	WASHINGTON	OREGON	IDAHO	
2014	1,936	1,520	1,847	1,868
2015	1,849	1,613	1,794	1,807
2016	1,748	1,596	1,646	1,713
2017	2,046	1,518	1,974	1,956
2018	1,984	1,675	1,995	1,943
2019	2,006	1,783	2,034	1,981
2020	1,754	1,755	1,855	1,770
2021	1,932	1,705	1,900	1,900
2022	1,679	1,728	1,734	1,694
2023	1,971	1,558	1,949	1,915

Source: USDA-NASS, prepared by HGA.

U.S. HOP YIELD – AROMA/DUAL PURPOSE VS. ALPHA



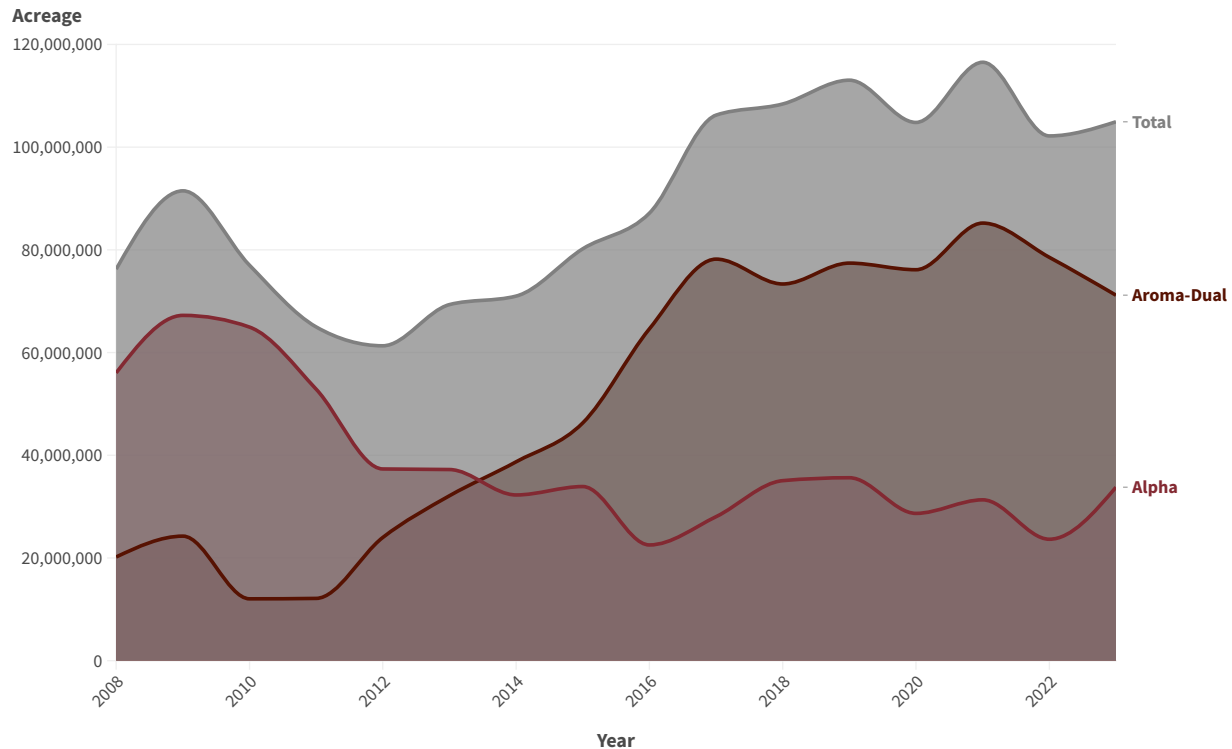
HOP PRODUCTION BY STATE AND VARIETY (FIVE YEARS)

STATE & VARIETY	HOP PRODUCTION (POUNDS)					2022-2023
	2019	2020	2021	2022	2023	% +/-
IDAHO						
Amarillo®, VGXP01	875,200	847,900	688,900	552,600	853,300	54.42%
Apollo™	*	*	*	*	573,500	
Calypso™	154,000	*	*	*	*	
Cascade	1,294,300	493,700	746,800	1,262,400	1,367,900	8.36%
Cashmere	*	197,300	226,700	227,100	120,200	-47.07%
Chinook	1,741,000	1,007,100	1,096,200	795,100	837,200	5.29%
Citra®, HBC 394	1,490,600	2,574,500	2,462,900	2,677,000	1,603,100	-40.12%
Columbus/Tomahawk®/Zeus	4,607,600	3,894,600	3,314,800	1,574,000	2,793,600	77.48%
Comet	220,600	161,800	242,800	268,300	202,700	-24.45%
Crystal	258,200	*	*	*	*	
El Dorado®	475,900	836,300	1,104,100	536,900	546,000	1.69%
Elani™, YQH1320	*	*	*	*	9,300	
Eureka!™	415,000	*	847,300	921,800	1,211,700	31.45%
Galena	200,300	*	*	*	*	
Hallertauer Mittelfrüher	31,300	97,600	202,200	262,200	172,500	-34.21%
Helios™, HSI5619	*	*	*	*	873,200	
Idaho 7®	994,100	1,377,300	1,679,500	988,600	745,900	-24.55%
Mosaic®, HBC 369	1,839,100	2,769,300	2,954,600	3,028,300	2,735,000	-9.69%
Mt. Rainier	*	*	82,700	115,900	103,800	-10.44%
Northern Brewer	80,200	83,100	73,400	*	*	
Saaz	107,900	*	204,600	362,900	199,100	-45.14%
Simcoe®, YCR 14	545,900	421,600	434,900	532,700	337,200	-36.70%
Triumph	*	14,200	76,500	47,900	*	
Willamette	288,200	*	510,000	639,400	661,000	3.38%
Other Varieties	1,383,700	2,413,800	1,465,900	1,779,200	906,800	-49.03%
Total Idaho	17,003,100	17,190,100	18,414,800	16,572,300	16,853,000	1.69%
OREGON						
Amarillo® VGXP01	490,100	509,800	421,900	392,700	375,600	-4.35%
Cascade	1,683,200	1,235,800	1,062,300	1,038,300	1,027,200	-1.07%
Centennial	1,019,900	819,100	503,800	598,500	408,000	-31.83%
Chinook	197,600	127,400	141,700	138,900	110,400	-20.52%
Citra®, HBC 394	1,473,000	1,998,500	2,081,400	2,641,300	1,971,100	-25.37%
Crystal	479,900	*	288,700	332,100	341,300	2.77%
Fuggle	78,300	*	*	*	*	
Golding	124,300	*	72,300	*	*	
Liberty	*	128,200	81,300	*	20,900	
Mosaic®, HBC 369	1,010,000	1,282,200	1,753,000	1,855,200	1,615,200	-12.94%
Mt. Hood	453,700	246,600	199,800	214,100	258,100	20.55%
Mt. Rainier	*	*	175,000	191,500	163,200	-14.78%
Nugget	2,255,700	1,520,700	1,236,700	919,500	838,500	-8.81%
Sabro®, HBC 438	*	64,400	393,500	237,500	*	
Simcoe®, YCR 14	811,800	864,100	819,900	867,400	570,900	-34.18%
Sterling	241,500	100,200	76,600	54,600	55,800	2.20%
Strata™ OR 91331	522,700	1,000,900	1,573,500	2,286,000	1,356,700	-40.65%
Super Galena™	201,200	243,700	*	*	*	
Tahoma	*	*	*	*	195,900	
Talus®, HBC 692	*	*	*	68,200	*	
Willamette	1,062,800	1,123,500	651,600	701,300	669,000	-4.61%
Other Varieties	917,500	1,203,600	1,074,900	934,800	651,900	-30.26%
Total Oregon	13,023,200	12,468,700	12,607,900	13,471,900	10,629,700	-21.10%

STATE & VARIETY	HOP PRODUCTION (POUNDS)					2022-2023
	2019	2020	2021	2022	2023	% +/-
WASHINGTON						
Ahtanum®, YCR 1	736,000	490,800	367,000	341,400	*	
Amarillo®, VGXP01	3,107,800	2,300,400	2,213,100	1,967,500	2,421,100	23.05%
Apollo™	2,327,500	1,686,000	*	2,003,800	2,397,200	19.63%
Azacca®, ADHA-483	1,437,700	1,102,500	1,393,600	1,357,900	794,000	-41.53%
Bravo™	759,000	463,900	656,600	438,700	596,600	35.99%
Calypso™	326,600	280,242	*	*	*	
Cascade	7,138,600	4,462,200	5,045,100	5,323,100	6,176,300	16.03%
Cashmere	526,700	678,300	962,600	1,090,600	502,800	-53.90%
Centennial	5,516,400	4,008,200	3,135,100	2,992,400	2,504,700	-16.30%
Chinook	2,790,700	1,969,700	2,173,100	1,926,400	2,203,400	14.38%
Citra®, HBC 394	9,569,300	12,426,200	13,850,300	11,719,900	10,007,700	-14.61%
Cluster	853,100	852,800	786,200	430,400	335,800	-21.98%
Columbus/Tomahawk®/Zeus	12,846,000	10,507,900	12,013,100	9,019,500	13,052,200	44.71%
Comet	275,300	287,800	630,000	424,800	325,000	-23.49%
Crystal	131,300	*	*	*	*	
Ekuanot®, HBC 366	1,569,300	1,383,300	993,600	790,200	871,000	10.23%
El Dorado®	1,302,500	1,603,900	2,088,000	1,450,800	1,299,800	-10.41%
Elani™, YQH1320	*	*	*	*	146,600	
Eureka!™	1,354,900	1,084,400	1,408,300	1,256,900	1,880,400	49.61%
HBC 682	5,057,400	4,458,000	5,206,800	3,643,600	4,523,200	24.14%
Helios™, HSI5619	*	*	*	*	1,743,400	
Galena	607,400	443,000	*	*	*	
Idaho 7®	131,200	592,000	1,240,400	435,300	453,200	4.11%
Jarrylo™, ADHA-881	*	24,300	*	*	*	
Loral®, HBC 291	314,400	307,300	411,300	366,800	320,200	-12.70%
Mosaic®, HBC 369	5,810,800	7,422,600	8,926,900	8,166,100	7,303,000	-10.57%
Mt. Hood	55,000	54,700	*	24,100	*	
Mt. Rainier	513,600	353,700	341,700	331,400	430,600	29.93%
Nugget	240,600	*	*	*	*	
Palisade®, YCR-4	1,202,000	520,000	621,400	694,400	589,700	-15.08%
Pekko®, ADHA-871	*	992,400	2,217,000	2,040,100	2,423,400	18.79%
Sabro®, HBC 438	1,167,100	2,159,500	2,471,800	1,124,500	615,900	-45.23%
Simcoe®, YCR 14	6,020,200	5,280,600	5,221,100	4,821,700	5,360,300	11.17%
Summit™	1,946,800	701,400	590,400	*	*	
Super Galena™	1,358,000	1,252,100	1,367,500	1,004,700	1,051,400	4.65%
Tahoma	450,300	281,100	409,300	501,700	611,800	21.95%
Talus®, HBC 692	*	*	*	642,000	289,100	
Warrior®, YCR 5	*	472,300	286,700	236,700	306,400	29.45%
Willamette	430,900	296,000	158,400	122,900	193,200	57.20%
Zappa™	*	*	*	57,900	0	
Experimental	810,400	546,800	985,000	1,205,300	1,064,900	-11.65%
Other Varieties	3,330,100	2,405,158	6,436,800	3,858,000	3,765,500	-2.40%
Total Washington	82,014,900	74,151,500	84,608,200	71,811,500	76,559,800	6.61%
Total Pacific Northwest	112,041,200	103,810,300	115,630,900	101,855,700	104,042,500	2.15%
Other States Estimate	1,000,000	1,000,000	900,000	900,000	900,000	0.00%
Total US Estimate	113,041,200	104,810,300	116,530,900	102,755,700	104,942,500	2.13%

SOURCE: USDA-NASS. Prepared by HGA. "Other Varieties" includes data to avoid disclosure of individual operations. Production outside of PNW estimated from reports submitted by growers, extension and university personnel.

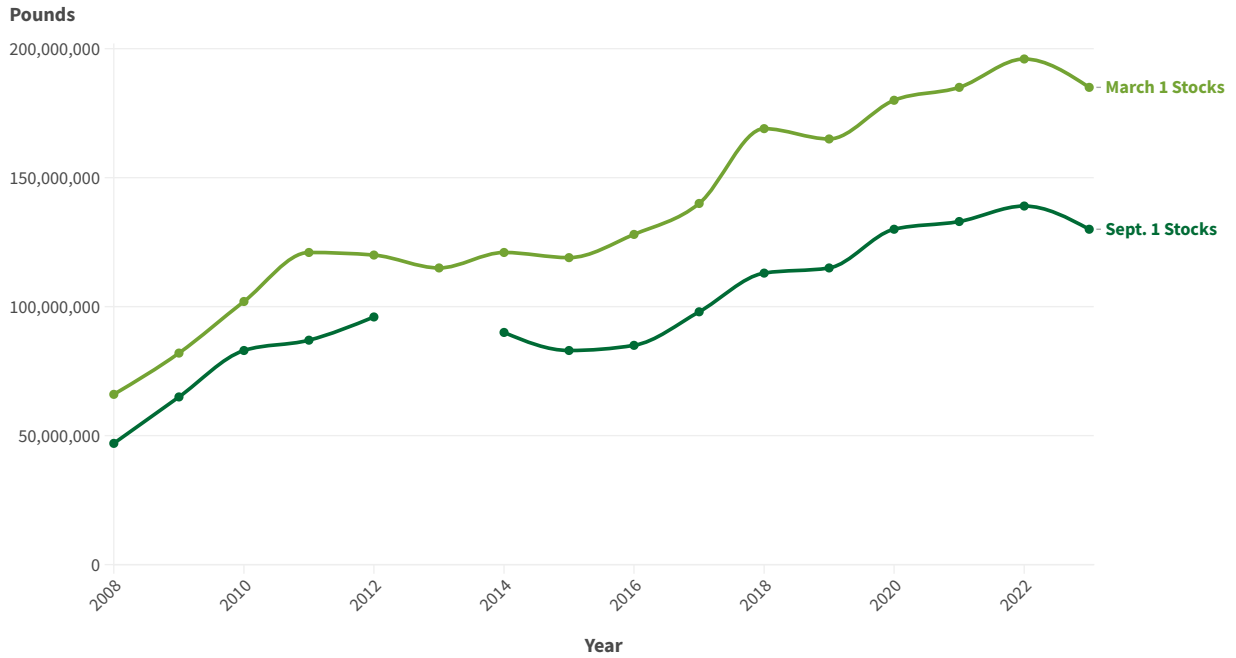
U.S. HOP PRODUCTION – ALPHA VS. AROMA POUNDS OF PRODUCTION



U.S. HOPS: ESTIMATED SEASON AVERAGE PRICE & TOTAL CROP VALUE

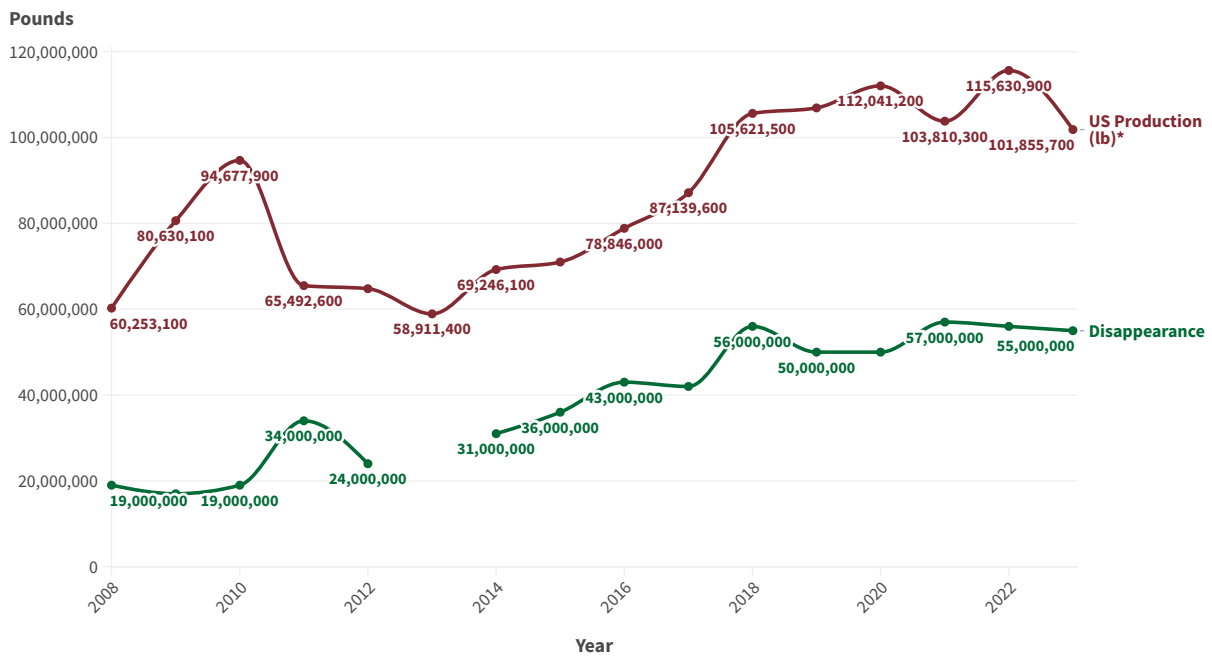
Marketing	SEASON AVERAGE PRICE				PNW	Total Crop
	Washington	Oregon	Idaho	U.S.	Production	Value
Year	----- (\$ / pound) -----				(Lbs. x 1,000)	(x 1,000)
2012	\$3.10	\$3.91	\$2.69	\$3.17	58,911	\$186,876
2013	\$3.37	\$3.76	\$2.62	\$3.35	69,246	\$232,308
2014	\$3.73	\$4.07	\$2.72	\$3.67	70,995	\$260,627
2015	\$4.71	\$3.24	\$3.53	\$4.38	78,846	\$345,388
2016	\$5.84	\$5.25	\$5.50	\$5.72	87,140	\$498,420
2017	\$5.80	\$5.00	\$5.00	\$5.60	105,622	\$591,375
2018	\$5.50	\$5.40	\$5.30	\$5.46	106,907	\$583,444
2019	\$5.80	\$5.50	\$5.25	\$5.68	112,041	\$636,580
2020	\$6.00	\$6.00	\$5.80	\$5.97	103,810	\$619,424
2021	\$5.70	\$5.90	\$5.70	\$5.72	115,631	\$661,618
2022	\$6.05	\$6.35	\$6.10	\$6.10	101,856	\$621,098
2023	\$5.30	\$6.15	\$5.40	\$5.40	104,043	\$562,146

U.S. HOP STOCKS



SOURCE: USDA-NASS. Due to Federal funding cuts the September 2012 Hop Stocks survey was not conducted. All data is based in Pacific Northwest totals.

PRODUCTION (POUNDS) VS. MARCH TO SEPTEMBER STOCKS DISAPPEARANCE



SOURCE: USDA-NASS. Prepared by HGA. Due to Federal funding cuts the September 2012 Hop Stocks survey was not conducted. All data is based on Pacific Northwest totals.

2023 HOP INSPECTION REPORT

YEAR	WASHINGTON	OREGON	IDAHO	TOTAL
2019	413,742	72,551	84,400	570,693
2020	377,543	61,291	86,619	525,453
2021	436,042	62,643	90,994	589,679
2022	361,305	68,284	78,803	508,392
2023	372,093	52,805	83,073	507,971

TABLE 1. Total Number of Bales Inspected.

State	0%	1%	2%	3%	4%	5%	6%	7%	TOTAL	AVERAGE
WA	295,316	66,424	9,672	648	33	0	0	0	372,093	0.24%
OR	48,654	4,146	5	0	0	0	0	0	52,805	0.08%
ID	65,744	14,140	2,798	191	200	0	0	0	83,073	0.25%
Total	409,714	84,710	12,475	839	233	0	0	0	507,971	0.22%
% of Total	81%	17%	2%	0%	0%	0%	0%	0%	100%	

TABLE 2. Number of Bales in Each Leaf & Stem Category – 2023

State	0%	1%	2%	3%	4%	5%	6%	7%	TOTAL	AVERAGE
WA	295,192	44,191	16,989	7,538	4,116	2,096	779	1,192	372,093	0.38%
OR	43,539	4,425	2,419	723	943	531	104	121	52,805	0.37%
ID	79,803	1,663	1,289	199	119	0	0	0	83,073	0.06%
Total	418,534	50,279	20,697	8,460	5,178	2,627	883	1,313	507,971	0.33%
% of Total	82%	10%	4%	2%	1%	1%	0%	0%	100%	

TABLE 3. Number of Bales in Each Seed Category – 2023

SOURCE: State Hop Inspection Labs. Prepared by HGA.

U.S. HOP LEAF, STEM & SEED CONTENT PERCENTAGE (10 YEARS)

Year	WASHINGTON Leaf & Stem	OREGON Leaf & Stem	IDAHO Leaf & Stem	U.S. AVERAGE %	
				Leaf & Stem	Seed Content
2015	0.42%	0.51%	0.32%	0.42%	0.78%
2016	0.33%	0.31%	0.19%	0.31%	1.31%
2017	0.26%	0.50%	0.46%	0.32%	0.87%
2018	0.37%	0.16%	0.78%	0.41%	0.48%
2019	0.29%	0.39%	0.38%	0.37%	1.19%
2020	0.27%	0.04%	0.58%	0.30%	0.67%
2021	0.38%	0.09%	0.65%	0.39%	0.97%
2022	0.17%	0.05%	0.30%	0.17%	0.19%
2023	0.24%	0.08%	0.25%	0.22%	0.33%

SOURCE: State Hop Inspection Labs. Prepared by HGA.

2023 US-GROWN HOP VARIETY CODES (INTERNATIONALLY HARMONIZED)

Brand/Variety	Code	Brand/Variety	Code
Adeena® - ADHA-1940)	ADA	Lemondrop™	LDP
Ahhhroma™	AHH	Liberty	LIB
Ahtanum® - YCR 1	AHT	Loral® - HBC 291	LOR
Alpharoma	AAA	Lórien™	LRN
Alora HS17701	ALR	Lotus™	LOT
Altus™	ATS	McKenzie™	MKZ
Amarillo® - VGXP01	VG1	Medusa™	MED
Apollo™	APO	Meridian	MER
Aquila	AQU	Millennium	MLM
Azacca® - ADHA-483	AZA	Mosaic® - HBC 369	MOS
Banner	BAN	Mt. Hood	MTH
Belma®	BEL	Mt. Rainier	MTR
Bitter Gold	BIG	Newport	NWP
Bravo™	BRO	Northern Brewer	NBR
BRU-1™	BR1	Nugget	NUG
Calypso™	CPO	Olympic	OLC
Cascade	CAS	Other	OTH
Cashmere	CMR	Palisade® - YCR 4	PAL
Centennial	CEN	Pekko® - ADHA 871	PEK
Chelan	CHE	Saaz	SAZ
Chinook	CHI	Sabro® - HBC 438	SAB
Citra® - HBC 394	CIT	Santiam	SNT
Cluster	CLU	Simcoe® - YCR 14	SIM
Columbia	CBA	Sonnet™	SON
Columbus	CBS	Sterling	STR
Columbus/Tomahawk®/Zeus (CTZ)	CTZ	Strata™ - OR91331	STT
Comet	COM	Sultana™ - 06277, formerly Denali™	SUL
Contessa™	CTA	Summit™	SUM
Crystal	CRY	Super Galena™	SGA
Delta™	DEL	Tahoma	TAH
Ekuanot® - HBC 366	EKU	Talisman	TLN
El Dorado®	ELD	Talus® - HBC 692 c.v.	TAL
Eroica	ERO	Teamaker	TMK
Eureka!™	EUE	Tillicum®	TIL
Experimental	EXP	Tomahawk® - F10	TOM
Fuggle	FUG	Triple Pearl	TRP
Galena	GAL	Triumph	TRI
Glacier	GLC	Ultra	ULT
Golding	GOL	Vanguard	VAN
Hallertauer Magnum	HMG	Vista	VTA
Hallertauer Mittelfruher	HAL	Warrior® - YCR 5	WAR
HBC 682	PAH	Willamette	WIL
Helios™ - EXP15619	HLO	Yakima Gold	YKG
Horizon	HOR	YQH1320	Y20
Idaho7®	ID7	Zappa™	ZAP
Idaho Gem™	IDG	Zeus	ZEU
Jarrylo® - ADHA-881	JAR		

Hop variety codes are internationally harmonized through a collaborative effort managed by the International Hop Growers Convention (IHGC) Scientific Commission.

For a complete list of IHGC varieties, please visit HGA's website at www.usahops.org/growers/industry-standards.html.

IHGC AROMA ACREAGE (FIVE YEARS)

COUNTRY	AROMA ACREAGE (IN ACRES)					2022-2023
	2019	2020	2021	2022	2023	% +/-
Argentina	247	314	324	324	324	0.00%
Australia	1,176	1,354	1,460	1,675	1,965	17.26%
Austria	479	487	487	494	509	3.00%
Belgium	306	306	306	306	311	1.61%
Brazil	*	*	*	62	62	0.00%
Bulgaria		44	44	44	44	0.00%
Canada	541	494	494	494	494	0.00%
China	988	890	890	699	699	0.00%
Czech Rep.	11,629	11,454	11,419	11,434	11,288	-1.28%
France	1,087	1,021	1,107	1,114	1,107	-0.67%
Germany	26,836	27,115	26,384	26,073	25,299	-2.97%
Great Britain	1,945	1,757	1,310	1,265	1,072	-15.23%
Japan	131	131	131	131	131	0.00%
New Zealand	1,478	1,478	1,478	2,471	2,471	0.00%
Poland	1,596	1,606	1,515	2,071	2,100	1.43%
Romania	185	185	180	180	180	0.00%
Russia	415	415	415	247	259	5.00%
Serbia	0	20	20	20	27	0.00%
Slovakia	319	94	94	94	94	0.00%
Slovenia	3,707	3,410	3,477	3,595	3,726	3.64%
South Africa	180	180	230	210	205	-2.35%
Spain	0	0	15	20	20	0.00%
Ukraine	764	764	764	247	247	0.00%
USA	44,884	47,456	50,148	50,544	41,170	-18.55%
IHGC Total	98,895	100,975	102,691	103,816	93,807	-9.64%

SOURCE: IHGC Economic Commission November report. US hop acreage is updated to reflect the USDA-NASS 2023 National Hop Report. Numbers may not total exactly due to rounding and standard/metric conversions.

IHGC ALPHA ACREAGE (FIVE YEARS)

COUNTRY	ALPHA ACREAGE (IN ACRES)					2022-2023
	2019	2020	2021	2022	2023	% +/-
Argentina	148	146	116	116	116	0.00%
Australia	435	376	269	269	269	0.00%
Austria	143	143	143	141	141	0.00%
Belgium	143	143	143	143	146	1.72%
Brazil	*	*	*	62	62	0.00%
Bulgaria		37	37	37	37	0.00%
Canada	494	371	371	371	371	0.00%
China	5,642	4,942	4,942	5,291	5,291	0.00%
Czech Rep.	121	151	151	138	198	42.86%
France	64	119	124	131	190	45.28%
Germany	22,025	22,620	22,915	23,616	24,056	1.86%
Great Britain	423	388	346	339	299	-11.68%
Japan	131	131	131	131	131	0.00%
New Zealand	358	358	358	988	988	0.00%
Poland	2,511	2,661	2,829	2,041	2,170	6.30%
Romania	457	465	472	479	489	2.06%
Russia	183	183	183	64	74	15.38%
Serbia	20	0	0	0	0	0.00%
Slovenia	52	57	59	62	47	-24.00%
South Africa	875	875	783	801	803	0.31%
Spain	1,322	1,156	1,386	1,386	1,374	-0.89%
Ukraine	148	148	148	124	124	0.00%
USA	14,582	13,262	12,111	10,633	14,540	36.74%
IHGC Total	50,277	48,731	48,019	47,363	51,915	9.61%

SOURCE: IHGC Economic Commission November report. US hop acreage is updated to reflect the USDA-NASS 2023 National Hop Report. Numbers may not total exactly due to rounding and standard/metric conversions.



IHGC TOTAL ACREAGE (5 YEARS)

COUNTRY	TOTAL ACREAGE (IN ACRES)					2022-2023
	2019	2020	2021	2022	2023	% +/-
Argentina	395	460	440	440	440	0.00%
Australia	1,611	1,730	1,730	1,945	2,234	14.87%
Austria	623	630	630	635	650	2.33%
Belgium	450	450	450	450	457	1.65%
Brazil	*	*	*	124	124	0.00%
Bulgaria	0	82	82	82	82	0.00%
Canada	1,035	865	865	865	865	0.00%
China	6,630	5,832	5,832	5,990	5,990	0.00%
Czech Rep.	11,750	11,604	11,570	11,572	11,486	-0.75%
France	1,152	1,139	1,231	1,245	1,297	4.17%
Germany	48,861	49,736	49,298	49,689	49,355	-0.67%
Great Britain	2,367	2,145	1,656	1,604	1,371	-14.48%
Japan	262	262	262	262	262	0.00%
New Zealand	1,836	1,836	1,836	3,460	3,460	0.00%
Poland	4,107	4,268	4,344	4,112	4,270	3.85%
Romania	642	650	652	660	670	1.50%
Russia	598	598	598	311	334	7.14%
Serbia	20	20	20	20	27	37.50%
Slovakia	319	94	94	94	94	0.00%
Slovenia	3,759	3,467	3,536	3,657	3,773	3.18%
South Africa	1,055	1,055	1,013	1,011	1,008	-0.24%
Spain	1,322	1,156	1,401	1,406	1,394	-0.88%
Ukraine	912	912	912	371	371	0.00%
USA	59,466	60,718	62,259	61,177	55,710	-8.94%
IHGC Total	149,172	149,707	150,710	151,179	145,722	-3.61%

Note: Totals may not match the sum of aroma and alpha acreage presented in preceding charts due to inclusion of new acreage not strung for harvest in the IHGC Total Acreage figures.

IHGC HOP ACREAGE & PRODUCTION 2023

COUNTRY	2023 HOP ACREAGE (acres)				2023 HOP PRODUCTION (pounds)			
	AROMA	ALPHA	NEW	TOTAL	AROMA	ALPHA	TOTAL	Alpha MT.
Argentina	324	116	0	440	416,669	143,299	559,968	22
Australia	1,965	269	116	2,234	4,018,986	313,053	4,332,039	342
Austria	509	141	2	650	652,562	185,186	837,748	27
Belgium	311	146	7	457	337,304	310,849	648,152	28
Brazil	62	62	0	124	169,754	227,074	396,828	16
Bulgaria	44	37	25	82	77,161	55,115	132,276	6
Canada	494	371	0	865	716,495	440,920	1,157,415	53
China	699	5,291	0	5,990	1,543,220	12,786,680	14,329,900	470
Czech Rep.	11,288	198	524	11,486	15,542,430	330,690	15,873,120	250
France	1,107	190	106	1,297	1,574,084	268,961	1,843,046	44
Germany	25,299	24,056	1,591	49,355	39,151,491	51,752,985	90,904,476	4,144
Great Britain	1,072	299	0	1,371	1,296,305	414,465	1,710,770	63
Japan	131	131	0	262	180,777	264,552	445,329	25
New Zealand	2,471	988	0	3,460	3,086,440	1,388,898	4,475,338	204
Poland	2,100	2,170	0	4,270	3,328,946	4,515,021	7,843,967	364
Romania	180	489	0	670	154,322	341,713	496,035	24
Russia	259	74	0	334	518,081	220,460	738,541	20
Serbia	27	0	0	27	48,501	0	48,501	2
Slovakia	94	0	0	94	50,706	0	50,706	1
Slovenia	3,726	47	366	3,773	5,930,374	99,207	6,029,581	197
South Africa	205	803	0	1,008	218,255	1,413,149	1,631,404	102
Spain	20	1,374	25	1,394	28,660	1,829,818	1,858,478	96
Ukraine	247	124	0	371	220,460	127,867	348,327	8
USA	41,170	14,540	0	55,710	71,169,589	33,772,912	104,942,501	5,905
IHGC Total	93,807	51,915	2,763	145,722	150,431,573	111,202,873	261,634,446	12,413

SOURCE: IHGC Economic Commission November report. US hop acreage is updated to reflect the USDA-NASS 2023 National Hop Report. IHGC Total Acreage includes baby acreage (not included in separate aroma and alpha tables). Numbers may not total exactly due to rounding and standard/metric conversions.

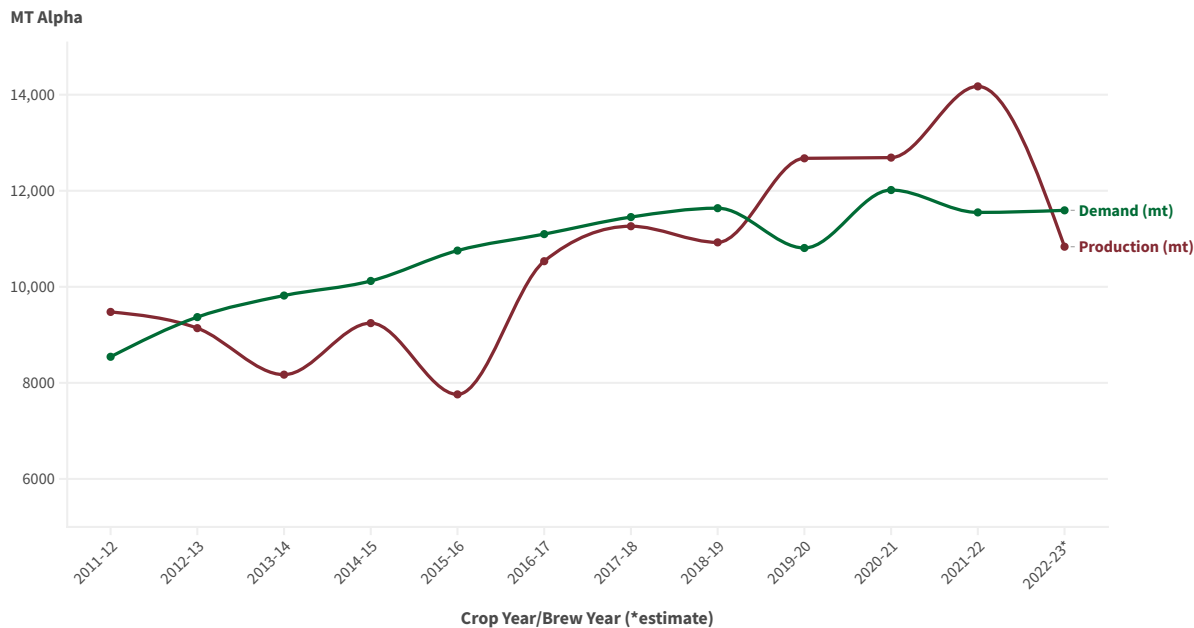
U.S. & GERMAN ALPHA ACID PRODUCTION (10 YEARS)

YEAR	UNITED STATES				GERMANY			
	Pounds of Hops (x 1,000)	MT Hops EBC 7.4 MT=2204.6 lb	MT Alpha	Avg. Alpha %*	Pounds of Hops (x 1,000)	MT Hops	MT Alpha EBC 7.4	Avg. Alpha %*
2014	70,996	32,204	3,541	11.0%	74,956	38,500	4,104	10.7%
2015	80,351	36,447	3,856	10.6%	62,170	28,200	2,700	9.6%
2016	88,640	40,207	4,082	10.2%	94,304	42,776	4,501	10.5%
2017	107,497	48,760	5,300	11.0%	91,614	41,556	4,047	9.7%
2018	108,407	49,173	5,277	10.7%	92,139	41,794	3,828	9.2%
2019	113,041	51,275	5,755	11.2%	106,861	48,472	5,260	10.9%
2020	104,810	47,542	5,500	11.6%	103,347	46,878	5,438	11.6%
2021	116,531	52,858	5,920	11.2%	104,851	47,862	6,240	13.0%
2022	102,756	46,610	5,500	11.8%	75,397	34,406	3,725	10.8%
2023*	104,943	47,602	5,807	12.2%	90,904	41,234	4,144	10.0%

*2023 figures are estimated at time of publication.

US figures include an estimate for non-PNW states, added to the Pacific Northwest production estimated by US hop merchant sources, based on EBC 7.4 method of analysis. Conversion factor of 90% is used to convert Spectro to EBC 7.4. German estimated alpha figure was also provided by hop merchant contacts.

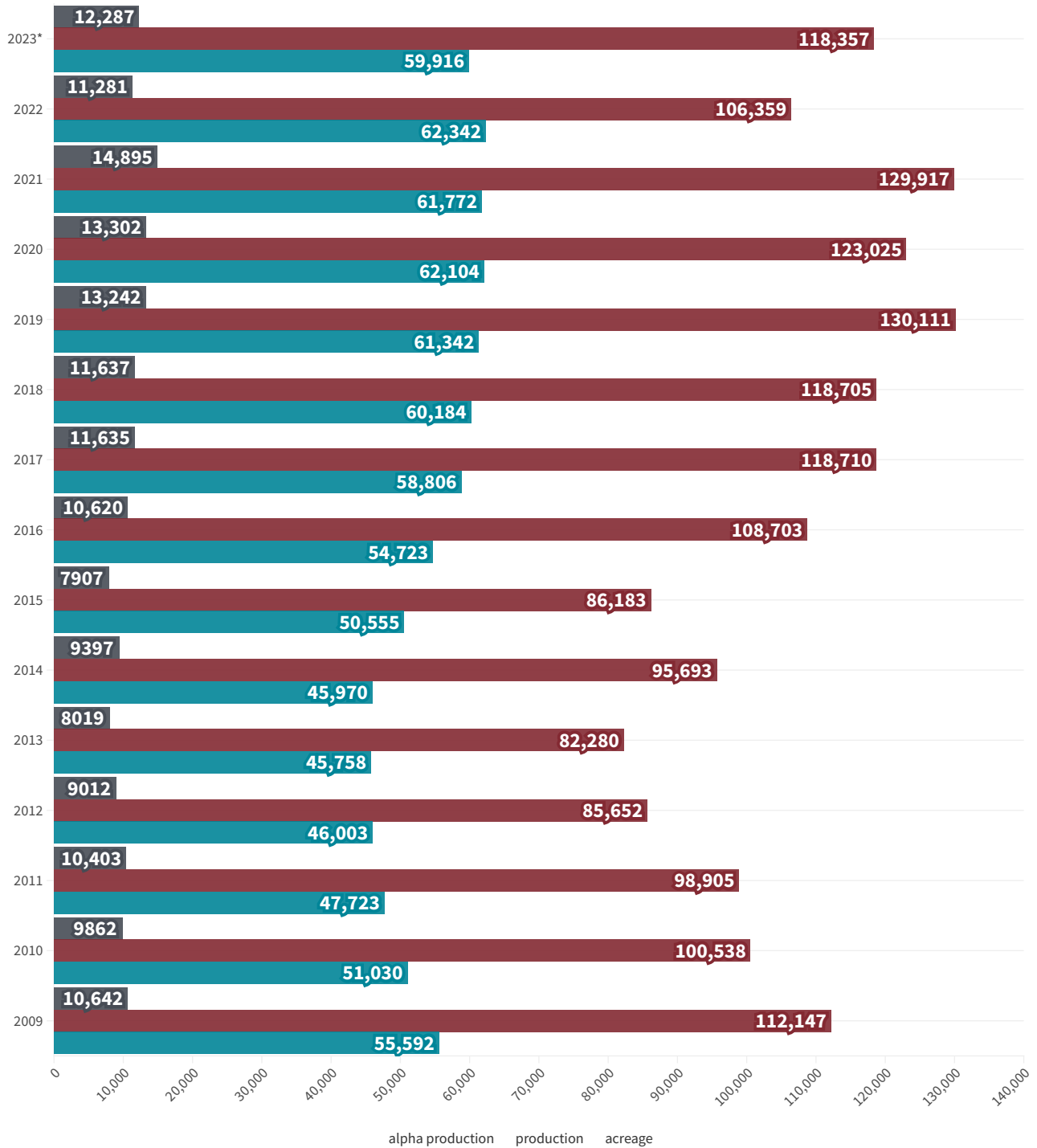
WORLD ALPHA PRODUCTION & DEMAND



SOURCE: BarthHaas Report. 2022-2023. Prepared by HGA

COMPARISON OF IHGC CROPS 2009-2023

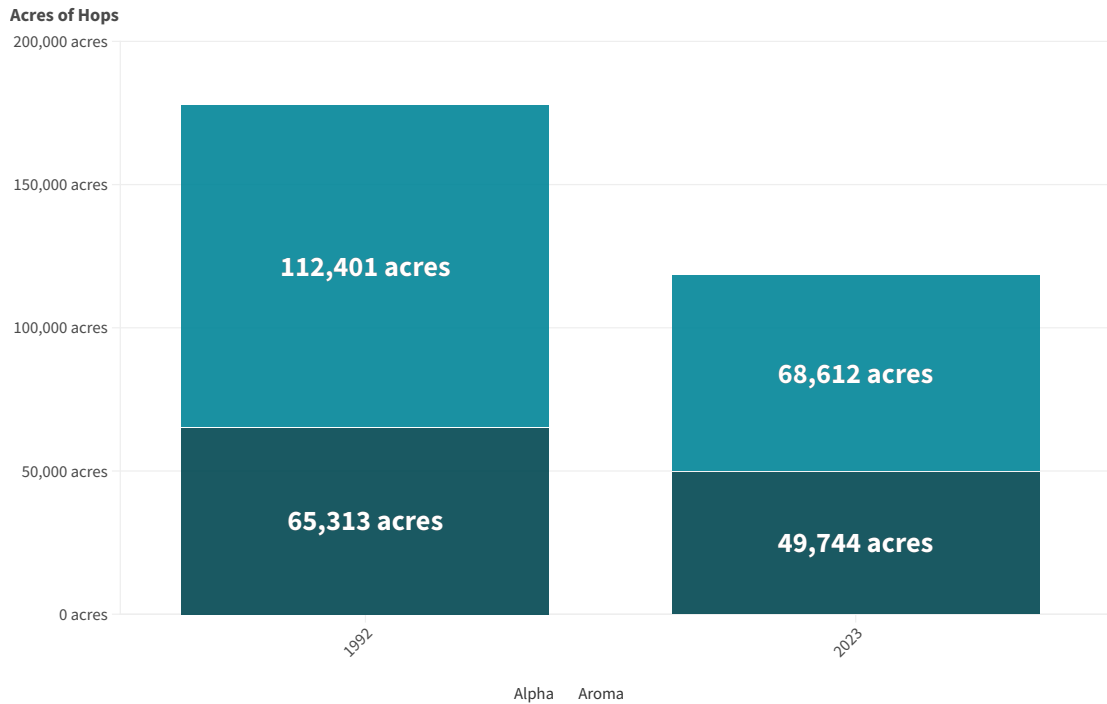
hectares, tons



*estimation

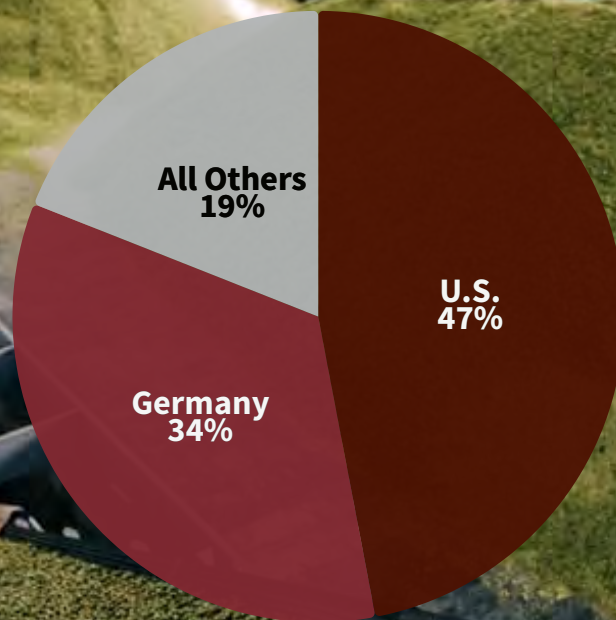
SOURCE: IHGC November Report. Prepared by HGA.

COMPOSITION OF WORLD HOP ACREAGE - 1992 VERSUS 2023



SOURCE: IHGC November Report and USDA-NASS December 2023 National Hop Report. Prepared by HGA.

WORLD'S LARGEST ALPHA PRODUCERS – 2023



SOURCE: IHGC November Report. Prepared by HGA.

WORLD HOP ACREAGE & PERCENT SHARE (ACRES)

COUNTRY	2019	2020	2021	2022	2023
USA	59,466 40%	60,718 41%	62,259 41%	61,177 40%	55,710 38%
Germany	48,861 33%	49,736 33%	49,298 33%	49,689 33%	49,355 34%
Czech Rep.	11,750 8%	11,604 8%	11,570 8%	11,572 8%	11,486 8%
China	6,630 4%	5,832 4%	5,832 4%	5,990 4%	5,990 4%
Poland	4,107 3%	4,268 3%	4,344 3%	4,112 3%	4,270 3%
Europe (rest)	11,565 8%	10,744 7%	10,663 7%	10,223 7%	10,186 7%
World (rest)	6,793 5%	6,805 5%	6,744 5%	8,417 6%	8,725 6%
World Totals	149,172	149,707	150,710	151,179	145,722

Europe (rest): Austria, Belgium, Bulgaria, France, Great Britain, Romania, Serbia, Slovakia, Slovenia, Spain, Ukraine.

World (rest): Argentina, Australia, Brazil, Canada, Japan, New Zealand, Russia, South Africa.

SOURCE: IHGC Economic Commission November 2020-2023 reports. US hop acreage is updated to reflect the USDA-NASS 2023 National Hop Report.

WORLD HOP PRODUCTION & PERCENT SHARE (POUNDS X 1,000)

COUNTRY	2019	2020	2021	2022	2023
USA	113,041 39%	104,810 39%	116,531 41%	102,756 44%	104,943 40%
Germany	106,861 37%	103,347 38%	105,517 37%	75,851 32%	90,904 35%
Czech Rep.	15,752 5%	13,062 5%	18,311 6%	9,815 4%	15,873 6%
China	15,529 5%	15,529 6%	13,889 5%	13,258 6%	14,330 5%
Poland	8,300 3%	8,018 3%	6,852 2%	7,549 3%	7,844 3%
Europe (rest)	16,550 6%	15,280 6%	14,264 5%	12,626 5%	14,004 5%
World (rest)	10,725 4%	11,175 4%	11,054 4%	13,195 6%	13,737 5%
World Totals	286,759	271,222	286,417	235,050	261,635

Europe (rest): Austria, Belgium, Bulgaria, France, Great Britain, Romania, Serbia, Slovakia, Slovenia, Spain, Ukraine.

World (rest): Argentina, Australia, Brazil, Canada, Japan, New Zealand, Russia, South Africa.

SOURCE: IHGC Economic Commission November 2020-2023 reports. US hop acreage is updated to reflect the USDA-NASS 2023 National Hop Report.

EXPORTS OF U.S. HOPS(INCLUDING EXTRACT), TOP 40 COUNTRIES (2019-2023)

Rank	Destination Partner	September-August Quantities (MT)				
		2019	2020	2021	2022	2023
1	Belgium-Luxembourg	2,467.2	2,318.9	3,151.4	3,864.5	2,671.1
2	Germany	1,896.6	2,226.5	2,127.6	2,327.7	2,179.0
3	Canada	2,106.4	2,500.0	2,073.8	2,054.8	2,033.0
4	Brazil	1,584.4	1,768.0	2,280.1	2,258.8	1,998.3
5	United Kingdom	2,028.2	1,973.9	2,090.8	2,306.4	1,442.8
6	China	953.1	967.0	938.5	1,374.2	1,168.3
7	Australia(*)	963.6	751.2	1,017.1	1,230.4	954.9
8	Mexico	810.4	588.1	725.6	885.9	915.6
9	Japan	447.4	515.9	486.5	479.7	487.0
10	Argentina	521.1	817.3	796.8	886.0	400.4
11	Korea, South	233.6	219.0	277.6	288.1	297.4
12	New Zealand(*)	188.9	146.9	242.2	327.4	287.1
13	Vietnam	296.3	355.5	268.5	198.2	279.0
14	Colombia	558.2	196.5	220.5	182.7	253.0
15	Netherlands	57.3	100.1	103.8	321.6	160.9
16	India	142.1	25.6	44.3	125.8	138.8
17	Chile	181.0	222.2	297.2	166.0	137.0
18	Hong Kong	118.1	184.3	286.1	267.0	133.7
19	South Africa	118.7	36.5	75.1	43.8	100.0
20	Philippines	125.9	141.2	66.4	68.3	91.2
21	Bolivia	37.7	15.4	14.4	46.0	59.7
22	Thailand	39.1	1.7	18.2	260.7	57.9
23	Ireland	48.3	69.9	74.0	123.5	45.7
24	Cambodia	48.0	26.5	28.5	27.5	43.3
25	Dominican Republic	98.5	93.8	117.1	83.9	41.7
26	Russia	94.9	97.7	145.9	144.9	39.6
27	Uruguay	13.0	49.0	23.1	58.6	37.7
28	Ecuador	130.4	46.4	63.1	44.5	31.2
29	Italy(*)	2.1	5.0	14.1	15.9	31.1
30	Sweden	12.1	55.5	69.2	28.9	30.7
31	Indonesia	18.0	22.6	17.2	41.1	30.5
32	Panama	66.4	40.4	61.8	38.2	29.1
33	Peru	229.1	122.6	154.5	100.4	28.7
34	Guatemala	45.1	50.6	47.4	80.2	28.6
35	Mauritius	14.0	0.0	6.0	0.0	28.0
36	Burma	8.7	5.9	6.9	12.7	27.3
37	Nigeria	0.0	0.0	0.0	1.2	25.3
38	Honduras	26.7	18.7	25.5	4.9	22.7
39	Venezuela	17.2	2.2	34.8	68.0	22.3
40	Paraguay	28.1	35.0	20.3	16.6	21.5
	Total Top 40 Countries	16,775.90	16,813.50	18,511.90	20,855.00	16,811.10
	All Other Countries	270.20	251.60	266.60	335.40	244.10
	Grand Total	17,046.10	17,065.10	18,778.50	21,190.40	17,055.20

USDA Global Agricultural Trade System. Data Source: U.S. Census Bureau Trade Data. (*) denotes a country that is a summarization of its component countries. Quantity includes the total for all forms of hops (dried cones, powder, pellets, extract, and downstream products) with no conversion factor applied to represent dried hop cone weight equivalent.



U.S. IMPORTS OF HOPS (FIVE YEARS)

Rank	Destination Partner	September-August Quantities (MT)				
		2019	2020	2021	2022	2023
1	Germany	3,064.00	2,909.80	3,073.20	2,243.60	2,050.60
2	New Zealand	372.4	954.4	852.6	1,148.50	1,332.90
3	Australia	670.2	750.9	399.8	1,009.90	817.4
4	United Kingdom	426.5	209.5	134.7	157.4	118
5	Czech Republic	82	86.1	163.9	142.9	82.8
6	Canada	37	32.2	25	23.6	43.5
7	Belgium-Luxembourg	15.8	0.2	10.5	8.1	30.3
8	France	29.4	2.8	4.1	3.6	27.8
9	Slovenia	23.7	45.8	22.5	12	14.2
10	South Africa	43.1	118.8	0	265.6	11.4
11	Netherlands	0	0	0	27.9	10.5
12	China	78.8	49.8	11.5	5.7	3.9
13	Austria	6.9	1.4	5.7	10.2	2.3
14	Spain	0	0	0	0.2	2.2
15	India	0	0	0	0	1
16	Italy	17.9	13.9	6.2	0.9	0.6
17	Poland	0.4	0	2.1	1.7	0.4
18	Hong Kong	13	0	0	0	0.4
19	Slovakia	0	0	0	0	0.1
20	Argentina	6.7	0	0	0.3	0
21	Chile	0	1.3	0	0	0
22	Ethiopia	6.1	1.8	6.7	9.5	0
23	Russia	0.4	0	0	0	0
24	Sierra Leone	33.7	37.2	0	0	0
Grand Total		4,928.0	5,215.9	4,718.5	5,071.6	4,550.3

USDA Global Agricultural Trade System. Data Source: U.S. Census Bureau Trade Data. Quantity includes the total for all forms of hops (dried cones, powder, pellets, extract, and downstream products) with no conversion factor applied to represent dried hop cone weight.

WORLD BEER PRODUCTION BY BREWERY (TOP 10) 2022-23 (MILLION HL)

Brewery	2022 Production	2022 % Share	2023 Production	2023 % Share
ABInBev	581.7	31.3%	518	27.4%
Heineken	231.2	12.4%	256.9	13.6%
China Res. Snow Breweries	112.2	6.0%	122.2	6.5%
Carlsberg	119.6	6.4%	102.4	5.4%
Molson-Coors	84	4.5%	82.3	4.4%
Tsingtao Brewery Group	76	4.1%	79.6	4.2%
Asahi Group	57.4	3.1%	59.3	3.1%
BGI/Groupe Castel	40	2.2%	43.7	2.3%
Yanjing	33.5	1.8%	37.7	2.0%
Efes Group	37.9	2.0%	34	1.8%
Top 10 total	1,373.5	73.8%	1,336.1	70.7%

The top 3 brewing groups controlled 47.5% of the market share in 2022, down from 50.1% in 2021.

The top 40 brewing groups worldwide represented 88.1% market share in 2022.

Source: Barth Report 2022-23

FOR AN INTERESTING COMPARISON, HERE IS THE RANKING FOR WORLD BEER PRODUCTION BY BREWERY (TOP 10) FOR 1988 (MILLION HL) - 35 YEARS AGO

Brewery	1988 Production	1988 % Share
Anheuser-Busch	90	7%
Miller	47	4%
Heineken	43	3%
Kirin	30	2%
Bond	30	2%
Stroh	25	2%
Elders	21	2%
Kronenbourg	20	2%
Coors	20	2%
Brahma	18	1%
Top 10 total	344	26%

WORLD BEER PRODUCTION 2020-2023 (MILLION HL)

Country	2020	2021	2022	2023*
Germany	87.0	85.4	87.8	88.5
Russia	79.5	81.6	70.4	70.4
Spain	34.7	38.1	41.1	42.0
England	45.0	40.6	39.7	39.7
Poland	38.4	38.2	37.9	38.0
Netherlands	22.1	22.1	26.0	26.0
Belgium	23.5	25.1	23.3	23.0
Czech Republic	18.5	19.3	20.6	20.6
France	20.7	22.1	20.0	20.0
Italy	16.2	16.6	18.0	18.0
Romania	16.8	16.6	16.1	16.0
Austria	9.6	9.9	10.4	10.1
Turkey	8.7	9.3	9.5	9.5
Ireland	6.7	7.5	8.0	8.0
Other Europe	83.4	86.1	75.5	75.2
Total Europe	510.8	518.5	504.3	505.0
USA	210.0	219.5	213.0	211.0
Brazil	135.0	139.0	143.0	142.0
Mexico	112.0	120.0	126.0	128.0
Colombia	22.0	22.0	23.5	23.6
Canada	21.8	21.8	22.6	22.5
Argentina	19.0	20.0	19.8	19.7
Peru	14.0	14.8	14.8	14.8
Chile	8.6	8.7	8.6	8.5
Other Americas	39.2	40.8	40.8	40.6
Total Americas	581.6	606.6	612.1	610.7
P.R. China	329.9	365.3	356.9	355.0
Japan	44.1	45.1	43.0	44.0
Vietnam	38.0	42.3	40.1	31.6
India	19.0	16.2	23.0	23.8
Thailand	17.0	18.9	21.0	21.8
South Korea	16.4	13.2	17.8	18.1
Philippines	18.5	18.3	17.6	16.6
Cambodia	11.6	13.8	13.5	14.0
Other Asia	34.9	37.3	33.5	32.4
Total Asia	529.4	570.4	566.4	557.3
South Africa	26.0	31.0	32.5	32.3
Nigeria	16.5	19.4	19.6	19.5
Angola	9.0	11.0	11.0	11.0
Ethiopia	10.6	9.0	10.0	10.0
Other Africa	62.4	68.5	81.8	82.5
Total Africa	124.5	138.9	154.9	155.3
Australia	16.6	16.8	17.0	17.0
Other Australia	4.2	4.3	3.4	3.1
Total Australia	20.8	21.1	20.4	20.1
WORLD TOTALS	1,767.1	1,855.5	1,858.1	1,848.4

Source: S.S. Steiner 2023 Guidelines for Hop Buying

- Estimate