

2012
GUIDELINES
FOR HOP BUYING

	World Hop Acreage	World Hop Crop	World Beer Production	World Alpha Acids Production	World Alpha Acids Demand
	(ha)	(mt)	(Mio. hl)	(mt)	(mt)
2010	50,966 - 10.9 %	96,680 - 13.2	1,837.5 + 1.6 %	8,192 - 18.6	7,166 + 1.6 %
2011	48,226 - 5.4 %	97,376 + 0.7	1,904.8 + 3.7 %	9,560 + 16.7	7,239 + 1.0 %
2012	46,041 - 4.5 %	87,508* - 10.1 *	1,927.6* + 1.2 %*	8,199* - 14.2*	7,326* + 1.2 %*
2013	- -	- -	1,957.0* + 1.5 %*	- -	7,437* + 1.5 %*

Metric	2011	2012	2012*	2013*
World Hop Acreage (ha)	48,226	46,041	-	-
World Hop Crop (mt)	97,376	87,508	87,508	-
World Beer Production (Mio. hl)	1,904.8	1,927.6	1,927.6	1,957.0
World Alpha Acids Production (mt)	9,560	8,199	8,199	-
World Alpha Acids Demand (mt)	7,239	7,326	7,326	7,437

*Estimate

International Conversion Table

1 metr. Tonne (mt) → 1.000 kg → 2.204,6 lbs.
 100 lbs. → 45,359 kg

1 Hektar (ha) → 2,471 acres
 1 acre → 0,405 Hektar (ha)

1 Hektoliter (hl) → 100 Liter (Ltr.) → 0,8523 bbl. [USA] → 0,6114 bbl. [Brit.]
 1 bbl. [USA] → 117,34 Liter (Ltr.) → 1,1734 Hektoliter (hl)
 1 bbl. [Brit.] → 163,65 Liter (Ltr.) → 1,6365 Hektoliter (hl)

Foreword

” This year's Guidelines for Hop Buying covers further changes in the world's hop acreage and variety mix.

After an extraordinarily strong yield year in 2011, it was clear to hop producers that further acreage reductions would be needed in light of the ongoing oversupply of alpha. At the same time that bitter hops remained in oversupply, US aroma hops were in tight supply as the craft beer market's surge continued. As a result, US hop acreage continued its transition from alpha to aroma-focused to meet the demand for the aroma varieties used by craft brewers.

The key question remains unanswered: what is the bitter-aroma acreage blend that will meet the needs of all brewers? We hope that the information supplied by the 2012 edition of Guidelines for Hop Buying will be a reliable assistant in efforts to provide that answer.

We look forward to discussing this with all of you in the months ahead. “

October 2012
S. S. Steiner, Inc.
Simon H. Steiner, Hopfen, GmbH
Steiner Hops Limited



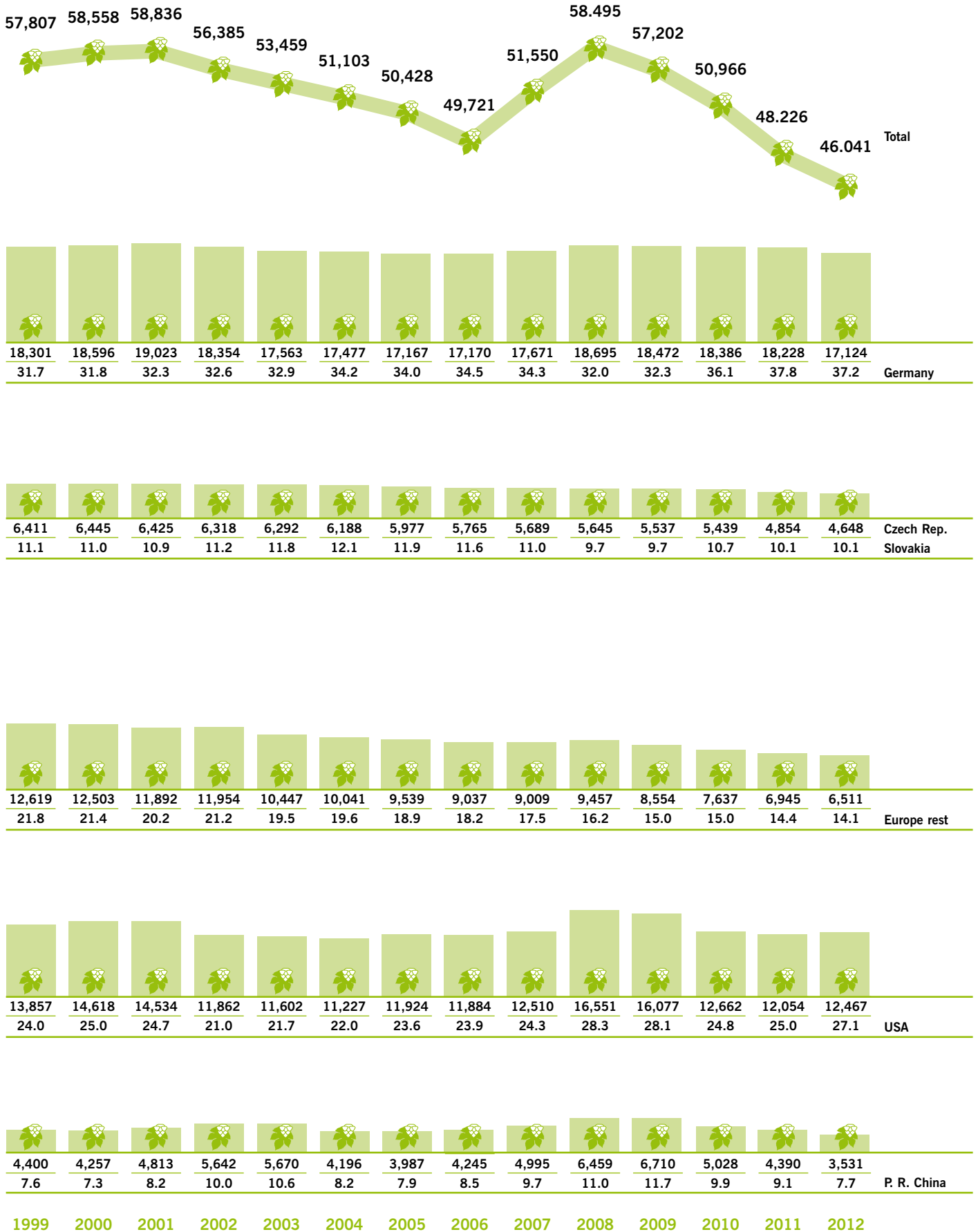
- *Hallertauer Hopfenveredelungs-
gesellschaft mbH
Au, Hallertau, Pelletwerk*
- *Hallertauer Hopfenveredelungs-
gesellschaft mbH
Mainburg, Hallertau,
Ethanol- und CO₂-Extraktion*
- *Hops Extract Corporation
of America, Yakima, Washington,
CO₂-Extraktion*
- *Golden Gate Hop Ranches Inc.
Yakima, Washington,
Hopfenanbaubetrieb*

Hop Acreage 2009 – 2012

	Acreage in ha				+/- %		
	2009	2010	2011	2012	09/10	10/11	11/12
Hallertauer	761	704	729	716	- 7.5	+ 3.6	- 1.8
Hersbrucker	766	755	773	782	- 1.4	+ 2.4	+ 1.2
Perle	3,128	3,139	3,129	2,965	+ 0.4	- 0.3	- 5.2
Spalter Select	731	690	614	448	- 5.6	- 11.0	- 27.0
Tradition	2,493	2,513	2,634	2,624	+ 0.8	+ 4.8	- 0.4
Saphir	185	195	220	237	+ 5.4	+ 12.8	+ 7.7
Northern Brewer	268	248	220	190	- 7.5	- 11.3	- 13.6
Magnum	3,415	3,340	3,164	2,696	- 2.2	- 5.3	- 14.8
Nugget	249	236	213	179	- 5.2	- 9.7	- 16.0
Taurus	1,077	1,025	925	795	- 4.8	- 9.8	- 14.1
Herkules	2,208	2,350	2,422	2,457	+ 6.4	+ 3.1	+ 1.4
Rest	203	191	185	170	- 5.9	- 3.1	- 8.1
Hallertau	15,484	15,386	15,229	14,258	- 0.6	- 1.0	- 6.4
Elbe-Saale	1,387	1,379	1,392	1,284	- 0.6	+ 0.9	- 7.8
Tettngang	1,221	1,226	1,222	1,215	+ 0.4	- 0.3	- 0.6
Spalt	361	376	366	348	+ 4.2	- 2.7	- 4.9
Rest	19	20	20	20	+ 5.3	+ 0.0	+ 0.0
Germany total	18,472	18,386	18,228	17,124	- 0.5	- 0.9	- 6.1
Austria	214	233	239	239	+ 8.9	+ 2.6	+ 0.0
Belgium	186	183	189	189	- 1.6	+ 3.3	+ 0.0
Bulgaria	160	160	150	150	+ 0.0	- 6.3	+ 0.0
Czech Rep.	5,302	5,210	4,632	4,435	- 1.7	- 11.1	- 4.3
England	1,075	1,069	1,113	999	- 0.6	+ 4.1	- 10.2
France	524	580	492	457	+ 10.7	- 15.2	- 7.1
Poland	2,167	1,545	1,297	1,400	- 28.7	- 16.1	+ 7.9
Romania	240	247	241	245	+ 2.9	- 2.4	+ 1.7
Russia	220	220	158	158	+ 0.0	- 28.2	+ 0.0
Slovakia	235	229	222	213	- 2.6	- 3.1	- 4.1
Slovenia	1,517	1,391	1,376	1,160	- 8.3	- 1.1	- 15.7
Spain	480	477	510	510	- 0.6	+ 6.9	+ 0.0
Turkey	336	350	350	350	+ 4.2	+ 0.0	+ 0.0
Ukraine	1,247	995	646	470	- 20.2	- 35.1	- 27.2
Rest	188	187	184	184	- 0.5	- 1.6	+ 0.0
Europe total	32,563	31,462	30,027	28,283	- 3.4	- 4.6	- 5.8
Apollo	302	335	358	364	+ 10.9	+ 6.9	+ 1.7
Bravo	136	168	240	208	+ 23.5	+ 42.9	- 13.3
Cascade	879	748	960	1,206	- 14.9	+ 28.3	+ 25.6
Centennial	121	144	259	640	- 19.0	+ 79.9	+ 147.1
Chinook	155	179	231	401	+ 15.5	+ 29.1	+ 73.6
Col. / Tom. / Zeus	4,614	3,173	2,876	2,277	- 31.2	- 9.4	- 20.8
Galena	976	777	573	385	- 20.4	- 26.3	- 32.8
Nugget	1,134	884	930	940	- 22.0	+ 5.2	+ 1.1
Summit	1,310	1,295	1,002	1,093	- 1.1	- 22.6	+ 9.1
Super Galena	411	413	498	462	+ 0.5	+ 20.6	- 7.2
Willamette	2,100	1,290	677	508	- 38.6	- 47.5	- 25.0
Rest	3,940	3,256	3,449	3,983	- 17.4	+ 5.9	+ 15.5
USA total	16,077	12,662	12,054	12,467	- 21.2	- 4.8	+ 3.4
Argentina	197	235	188	188	+ 19.3	- 20.0	+ 0.0
Australia	514	448	455	455	- 12.8	+ 1.6	+ 0.0
Japan	200	190	180	180	- 5.0	- 5.3	+ 0.0
New Zealand	400	400	380	385	+ 0.0	- 5.0	+ 1.3
P.R.China	6,710	5,028	4,390	3,531	- 25.1	- 12.7	- 19.6
South Africa	481	481	492	492	+ 0.0	+ 2.3	+ 0.0
Rest	60	60	60	60	+ 0.0	+ 0.0	+ 0.0
World total	57,202	50,966	48,226	46,041	- 10.9	- 5.4	- 4.5

Hop Acreage 1999 – 2012

(ha and % share)



Crop Quantities and Average Yields 2009 – 2012

	Crop Quantities in mt				+/- %			Ø Yields in mt / ha			
	2009	2010	2011	2012*	09/10	10/11	11/12*	2009	2010	2011	2012*
Hallertauer	801.4	1,048.7	823.9	946.5	+ 30.9	- 21.4	+ 14.9	1.05	1.49	1.13	1.32
Hersbrucker	1,331.2	1,178.5	1,470.0	1,370.0	- 11.5	+ 24.7	- 6.8	1.74	1.56	1.90	1.75
Perle	4,738.1	5,464.3	6,492.8	5,550.0	+ 15.3	+ 18.8	- 14.5	1.51	1.74	2.08	1.87
Spalter Select	1,393.8	1,287.1	1,376.9	900.0	- 7.7	+ 7.0	- 34.6	1.91	1.87	2.24	2.01
Tradition	4,273.4	4,253.9	5,386.6	4,850.0	- 0.5	+ 26.6	- 10.0	1.71	1.69	2.05	1.85
Saphir	344.5	372.9	464.4	474.0	+ 8.2	+ 24.5	+ 2.1	1.86	1.91	2.11	2.00
Northern Brewer	336.7	414.1	362.6	340.1	+ 23.0	- 12.4	- 6.2	1.26	1.67	1.65	1.79
Magnum	5,422.9	6,633.1	5,991.4	5,600.0	+ 22.3	- 9.7	- 6.5	1.59	1.99	1.89	2.08
Nugget	490.4	495.1	511.8	415.5	+ 1.0	+ 3.4	- 18.8	1.97	2.10	2.40	2.32
Taurus	1,896.2	1,763.1	2,012.1	1,590.0	- 7.0	+ 14.1	- 21.0	1.76	1.72	2.18	2.00
Herkules	5,136.8	5,895.1	7,543.9	7,420.0	+ 14.8	+ 28.0	- 1.6	2.33	2.51	3.11	3.02
Others	257.3	323.8	321.1	324.0	+ 25.8	- 0.8	+ 0.9	1.27	1.70	1.74	1.91
Hallertau	26,422.6	29,129.7	32,757.3	29,780.2	+ 10.2	+ 12.5	- 9.1	1.71	1.89	2.15	2.09
Elbe-Saale	2,663.0	2,631.0	2,882.6	2,500.0	- 1.2	+ 9.6	- 13.3	1.92	1.91	2.07	1.95
Tettngang	1,611.2	1,798.9	1,783.5	1,620.0	+ 11.6	- 0.9	- 9.2	1.32	1.47	1.46	1.33
Spalt	610.4	641.1	643.7	510.0	+ 5.0	+ 0.4	- 20.8	1.69	1.71	1.76	1.47
Rest	36.2	33.1	43.4	46.4	- 8.6	+ 31.1	+ 6.9	1.91	1.66	2.17	2.32
Germany total	31,343.7	34,233.8	38,110.6	34,456.5	+ 9.2	+ 11.3	- 9.6	1.70	1.86	2.09	2.01
Austria	342.0	368.0	447.0	400.0	+ 7.6	+ 21.5	- 10.5	1.60	1.58	1.87	1.67
Belgium	355.0	300.0	288.0	288.0	- 15.5	- 4.0	+ 0.0	1.91	1.64	1.52	1.52
Bulgaria	183.0	183.0	183.0	183.0	+ 0.0	+ 0.0	+ 0.0	1.14	1.14	1.22	1.22
Czech Rep.	6,616.0	7,772.0	6,087.9	4,454.1	+ 17.5	- 21.7	- 26.8	1.25	1.49	1.31	1.00
England	1,450.0	1,608.0	1,093.0	1,030.0	+ 10.9	- 32.0	- 5.8	1.35	1.50	0.98	1.03
France	818.0	790.0	644.0	772.0	- 3.4	- 18.5	+ 19.9	1.56	1.36	1.31	1.69
Poland	2,167.0	2,668.0	2,267.8	2,000.0	+ 23.1	- 15.0	- 11.8	1.00	1.73	1.75	1.43
Romania	202.0	207.0	166.0	263.0	+ 2.5	- 19.8	+ 58.4	0.84	0.84	0.69	1.07
Russia	160.0	160.0	162.0	162.0	+ 0.0	+ 1.3	+ 0.0	0.73	0.73	1.03	1.03
Slovakia	240.0	205.0	272.0	225.0	- 14.6	+ 32.7	- 17.3	1.02	0.90	1.23	1.06
Slovenia	2,499.0	2,400.0	2,470.0	2,200.0	- 4.0	+ 2.9	- 10.9	1.65	1.73	1.80	1.90
Spain	1,014.0	1,037.0	936.0	936.0	+ 2.3	- 9.7	+ 0.0	2.11	2.17	1.84	1.84
Turkey	389.4	390.0	390.0	390.0	+ 0.2	+ 0.0	+ 0.0	1.16	1.11	1.11	1.11
Ukraine	1,335.0	750.0	681.0	495.0	- 43.8	- 9.2	- 27.3	1.07	0.75	1.05	1.05
Rest	304.0	302.2	302.0	302.0	- 0.6	- 0.1	+ 0.0	1.62	1.62	1.64	1.64
Europe total	49,418.1	53,374.0	54,500.3	48,556.6	+ 8.0	+ 2.1	- 10.9	1.52	1.70	1.82	1.72
Apollo	996.5	1,042.0	1,106.9	997.9	+ 4.6	+ 6.2	- 9.8	3.30	3.11	3.09	2.74
Bravo	364.2	481.9	701.8	576.1	+ 32.3	+ 45.6	- 17.9	2.68	2.87	2.92	2.77
Cascade	2,061.5	1,586.0	2,062.2	2,041.2	- 23.1	+ 30.0	- 1.0	2.35	2.12	2.15	1.69
Centennial	201.4	290.0	408.0	907.2	+ 44.0	+ 40.7	+122.4	1.66	2.01	1.58	1.42
Chinook	316.8	394.4	445.8	816.5	+ 24.5	+ 13.0	+ 83.2	2.04	2.20	1.93	2.04
Col./Tom./Zeus	16,201.6	9,019.0	8,218.3	6,577.1	- 44.3	- 8.9	- 20.0	3.51	2.84	2.86	2.89
Galena	2,026.0	1,576.0	1,168.6	771.1	- 22.2	- 25.9	- 34.0	2.08	2.03	2.04	2.00
Nugget	3,009.5	1,983.0	2,280.3	2,041.2	- 34.1	+ 15.0	- 10.5	2.65	2.24	2.45	2.17
Summit	3,946.5	3,116.0	3,040.2	3,175.2	- 21.1	- 2.4	+ 4.4	3.01	2.41	3.03	2.91
Super Galena	1,418.0	1,201.0	1,613.0	1,451.5	- 15.3	+ 34.3	- 10.0	3.45	2.91	3.24	3.14
Willamette	3,543.0	2,073.0	1,218.8	839.2	- 41.5	- 41.2	- 31.1	1.69	1.61	1.80	1.65
Rest	8,860.0	6,944.7	7,120.6	7,679.3	- 21.6	+ 2.5	+ 7.8	2.25	2.13	2.06	1.93
USA total	42,945.0	29,707.0	29,384.5	27,873.3	- 30.8	- 1.1	- 5.1	2.67	2.35	2.44	2.24
Argentina	185.0	185.0	226.1	280.5	+ 0.0	+ 22.2	+ 24.1	0.94	0.79	1.20	1.49
Australia	1,343.0	1,099.0	1,044.0	1,092.6	- 18.2	- 5.0	+ 4.7	2.61	2.45	2.29	2.40
Japan	420.0	420.0	420.0	420.0	+ 0.0	+ 0.0	+ 0.0	2.10	2.21	2.33	2.33
New Zealand	832.0	793.0	575.0	694.0	- 4.7	- 27.5	+ 20.7	2.08	1.98	1.51	1.80
P.R.China	15,396.0	10,150.0	10,230.0	7,548.0	- 34.1	+ 0.8	- 26.2	2.29	2.02	2.33	2.14
South Africa	807.0	913.0	956.0	1,002.7	+ 13.1	+ 4.7	+ 4.9	1.68	1.90	1.94	2.04
Rest	40.0	40.0	40.0	40.0	+ 0.0	+ 0.0	+ 0.0	0.67	0.67	0.67	0.67
World total	111,386.1	96,680.0	97,375.8	87,507.7	- 13.2	+ 0.7	- 10.1	1.95	1.90	2.02	1.90

World Hop Crop 1999 – 2012

(1.000 mt and % share)




*Estimate

Hopsteiner Laboratory Values 2009 – 2012

Alpha Content in %					Alpha Content in %				
Aroma Varieties	2009	2010	2011	2012	Bitter Varieties	2009	2010	2011	2012
Hersbrucker	3.4	3.5	4.5	3.0	Northern Brewer	10.4	9.7	10.9	9.9
Perle	9.2	7.5	9.6	8.1	Herkules	17.3	16.1	17.2	17.1
Tradition	6.8	6.5	7.1	6.7	Magnum	14.6	13.3	14.9	14.3
Select	5.7	5.7	6.4	5.1	Taurus	17.1	16.3	17.4	17.0
Tettnang	4.2	4.0	5.1	4.3	US Super Galena	14.3	14.8	15.3	15.5
Spalt	4.4	3.7	4.8	4.1	US Bravo	15.1	16.3	16.0	16.1
Saaz	3.9	3.0	4.0	3.8	US Chinook	11.7	13.1	13.5	12.5
Steirer Aurora	7.8	8.3	9.1	8.0	US Galena	12.3	12.5	12.5	12.5
Steirer Golding	4.2	4.0	4.1	3.2	US Nugget	13.1	13.0	13.5	13.5
US Willamette	4.5	5.2	5.5	4.6	US Summit	16.5	16.5	16.5	16.5
					US CTZ	15.2	15.0	15.5	15.5
					Pride of Ringwood	9.5	9.5	9.3	8.5
Dual Purpose	2009	2010	2011	2012					
US Centennial	10.1	10.7	11.5	10.5					

Worldwide use of Hops and Hop Products 1999 – 2012

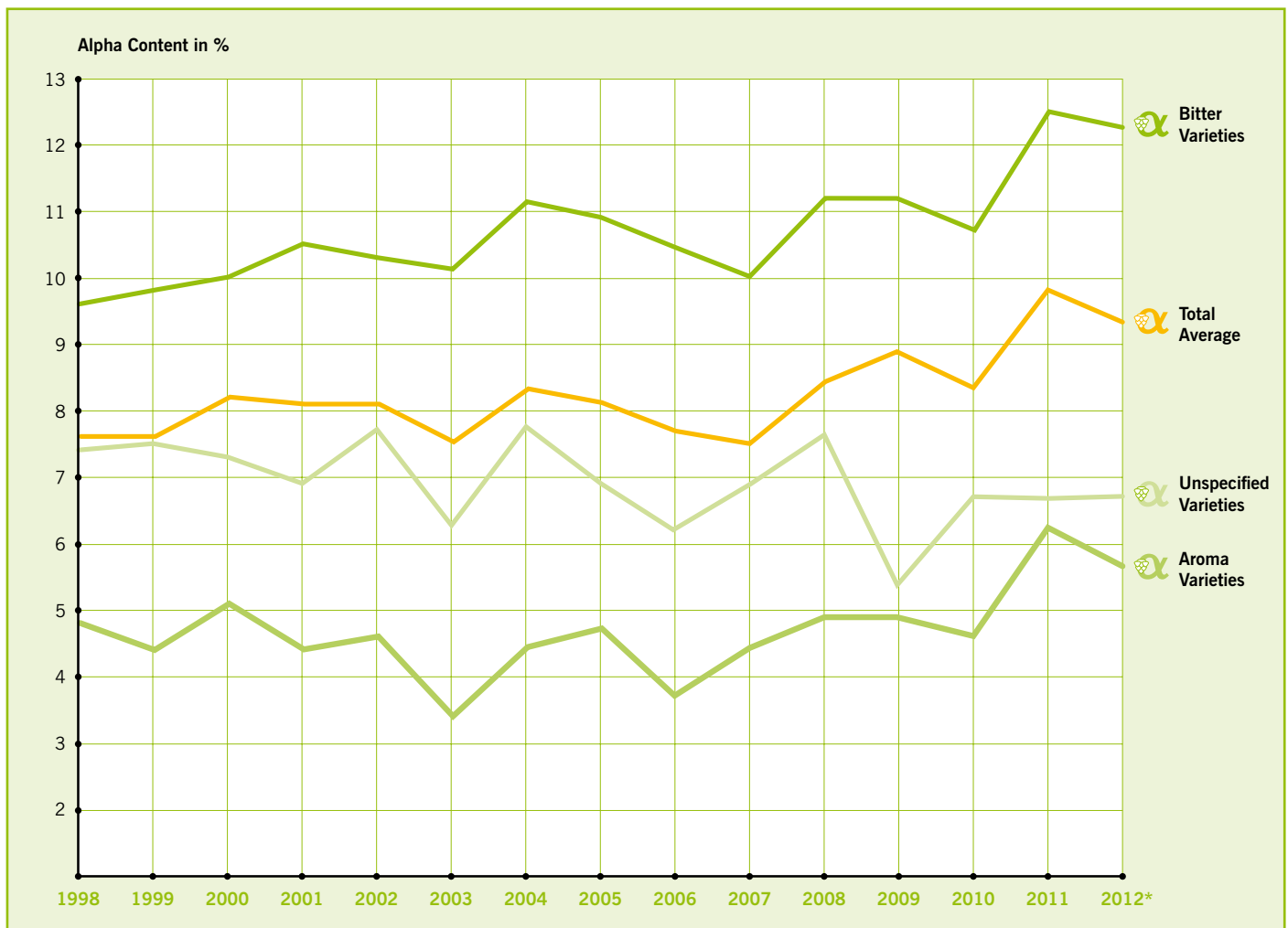
	Hops total		Pellets total		Extract total	
	(mt)		(mt)	(% total)	(mt)	(% total)
1999	95,519		52,000	54.4	28,000	29.3
2000	95,925		56,000	58.4	24,650	25.7
2001	96,959		52,900	54.6	28,800	29.7
2002	97,130		53,400	55.0	28,500	29.3
2003	85,520		49,600	58.0	28,000	32.7
2004	91,132		56,800	62.3	28,600	31.4
2005	93,448		61,582	65.9	28,595	30.6
2006	85,266		56,361	66.1	26,177	30.7
2007	91,418		59,513	65.1	29,345	32.1
2008	113,125		69,119	61.1	40,951	36.2
2009	111,386		65,161	58.5	43,997	39.5
2010	96,680		55,108	57.0	39,639	41.0
2011	97,376		54,531	56.0	41,482	42.6
2012*	87,508		48,129	55.0	38,241	43.7

World Alpha Acids Productions 2009 – 2012

Total Crop Quantities in mt					% share				
	2009	2010	2011	2012*	2009	2010	2011	2012*	
Aroma Varieties	39,716	36,965	41,424	39,019	35.7	38.2	42.5	45.0	
Bitter Varieties	71,558	59,650	55,886	48,419	64.2	61.7	57.4	55.0	
Rest	112	65	66	70	0.1	0.1	0.1	0.1	
Total	111,386	96,680	97,376	87,508	100.0	100.0	100.0	100.0	

Alpha Amount in kg					Alpha Content in %				
	2009	2010	2011	2012*	2009	2010	2011	2012*	
Aroma Varieties	1,990,765	1,763,700	2,569,000	2,244,100	5.0	4.8	6.2	5.8	
Bitter Varieties	8,065,020	6,424,000	6,986,400	5,949,800	11.3	10.8	12.5	12.3	
Rest	6,194	4,500	4,500	4,700	5.5	6.8	6.7	6.8	
Total	10,061,979	8,192,200	9,559,900	8,198,600	9.0	8.5	9.8	9.4	

Alpha Values over time 1998 – 2012



*Estimate

World Beer Production 2009 – 2012

	Beer Production in Mio hl				+/- %					
	2009	2010	2011	2012*	09/10	10/11	11/12*			
Russia	108.5	103.0	99.4	99.5	-	5.1	-	3.5	+	0.1
Germany	102.9	98.3	98.2	97.8	-	4.5	-	0.1	-	0.4
England	45.2	45.0	42.5	41.4	-	0.4	-	5.6	-	2.6
Poland	32.3	33.5	37.9	39.1	+	3.7	+	13.1	+	3.2
Spain	33.8	32.7	33.6	33.5	-	3.3	+	2.8	-	0.3
Ukraine	30.0	30.9	30.5	30.5	+	3.0	-	1.3	+	0.0
Netherlands	25.4	24.0	23.6	23.4	-	5.5	-	1.7	-	0.8
Czech Rep.	20.0	17.0	18.3	18.8	-	15.0	+	7.6	+	2.7
Belgium	18.0	18.0	18.0	18.3	+	0.0	+	0.0	+	1.7
Romania	17.2	15.5	17.0	17.3	-	9.9	+	9.7	+	1.8
France	14.2	14.3	16.0	16.0	+	0.7	+	11.9	+	0.0
Italy	12.4	12.3	13.4	13.9	-	0.8	+	8.9	+	3.7
Turkey	9.4	9.7	9.8	9.9	+	3.2	+	1.0	+	1.0
Austria	8.9	9.0	8.9	9.0	+	1.1	-	1.1	+	1.1
Ireland	8.5	8.4	8.6	8.7	-	1.2	+	2.4	+	1.2
Portugal	7.8	8.3	8.3	7.8	+	6.4	+	0.0	-	6.0
Hungary	6.6	6.5	6.1	6.3	-	1.5	-	6.2	+	3.3
Denmark	6.0	6.3	6.3	6.3	+	5.0	+	0.0	+	0.0
Bulgaria	5.2	5.0	4.9	5.0	-	3.8	-	2.0	+	2.0
Finland	4.5	4.3	4.2	4.0	-	4.4	-	2.3	-	4.8
Sweden	3.7	3.7	3.8	3.8	+	0.0	+	2.7	+	0.0
Switzerland	3.4	3.6	3.6	3.6	+	5.9	+	0.0	+	0.0
Croatia	3.6	3.5	3.5	3.5	-	2.8	+	0.0	+	0.0
Greece	4.2	4.1	3.7	3.4	-	2.4	-	9.8	-	8.1
Slovakia	3.7	3.4	3.2	3.3	-	8.1	-	5.9	+	3.1
Lithuania	2.8	3.0	3.0	3.0	+	7.1	+	0.0	+	0.0
Norway	2.6	2.5	2.4	2.3	-	3.8	-	4.0	-	4.2
Slovenia	1.9	1.8	1.9	1.9	-	5.3	+	5.6	+	0.0
Latvia	1.1	1.5	1.5	1.6	+	36.4	+	0.0	+	6.7
Estonia	1.1	1.1	1.4	1.5	+	0.0	+	27.3	+	7.1
Albania	0.7	0.5	0.6	0.6	-	28.6	+	20.0	+	0.0
Cyprus	0.4	0.3	0.3	0.3	-	25.0	+	0.0	+	0.0
Luxembourg	0.3	0.3	0.3	0.3	+	0.0	+	0.0	+	0.0
Malta	0.1	0.1	0.1	0.1	+	0.0	+	0.0	+	0.0
Europe rest	13.0	12.9	13.2	13.5	-	0.8	+	2.5	+	2.1
Europe total	559.4	544.3	548.0	549.2	-	2.7	+	0.7	+	0.2
USA	228.5	228.4	226.0	227.0	-	0.0	-	1.1	+	0.4
Brazil	106.7	113.9	127.2	127.5	+	6.7	+	11.7	+	0.2
Mexico	82.0	80.0	81.2	81.0	-	2.4	+	1.5	-	0.2
Venezuela	23.2	22.0	23.2	23.5	-	5.2	+	5.5	+	1.3
Colombia	19.0	19.5	20.8	20.8	+	2.6	+	6.7	+	0.0
Canada	23.2	22.4	19.8	20.0	-	3.4	-	11.6	+	1.0
Argentina	16.5	17.0	17.3	17.5	+	3.0	+	1.8	+	1.2
Peru	10.9	11.0	11.5	11.8	+	0.9	+	4.5	+	2.6
Equador	3.4	3.5	5.2	5.5	+	2.9	+	48.6	+	5.8
Chile	6.0	5.8	5.0	5.0	-	3.3	-	13.8	+	0.0
Dominican Rep.	3.1	3.1	3.4	3.5	+	0.0	+	9.7	+	2.9
Cuba	2.5	2.4	2.6	2.8	-	4.0	+	8.3	+	7.7
Panama	1.9	1.9	1.9	2.0	+	0.0	+	0.0	+	5.3
Guatemala	1.7	1.7	1.6	1.6	+	0.0	-	5.9	+	0.0
Costa Rica	1.8	1.7	1.6	1.6	-	5.6	-	5.9	+	0.0
Paraguay	1.5	1.5	1.5	1.5	+	0.0	+	0.0	+	0.0
Bolivia	1.9	1.9	1.3	1.2	+	0.0	-	31.6	-	7.7
Uruguay	0.9	0.9	0.9	1.0	+	0.0	+	0.0	+	11.1
Jamaica	1.0	1.0	1.0	1.0	+	0.0	+	0.0	+	0.0
Honduras	1.0	1.0	1.0	1.0	+	0.0	+	0.0	+	0.0

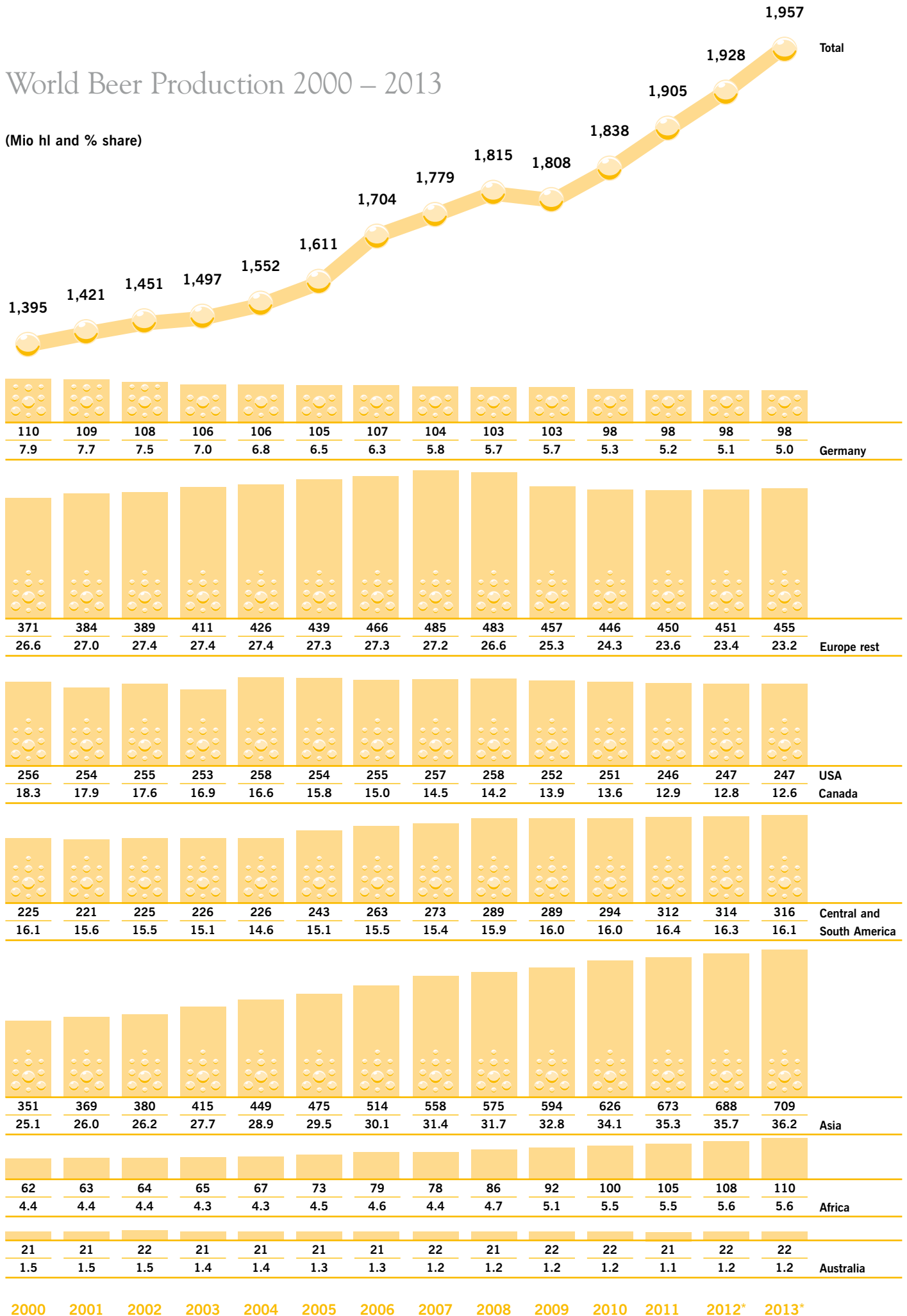
*Estimate

	Beer Production in Mio hl				+/- %		
	2009	2010	2011	2012*	09/10	10/11	11/12*
→ Nicaragua	0.7	0.7	0.9	1.0	+ 0.0	+ 28.6	+ 11.1
El Salvador	0.8	0.8	0.8	0.8	+ 0.0	+ 0.0	+ 0.0
Puerto Rico	0.7	0.7	0.7	0.7	+ 0.0	+ 0.0	+ 0.0
Trinidad	0.4	0.4	0.4	0.4	+ 0.0	+ 0.0	+ 0.0
America rest	1.8	2.0	1.3	1.4	+ 11.1	- 35.0	+ 7.7
America total	541.1	545.2	558.1	561.1	+ 0.8	+ 2.4	+ 0.5
P.R.China	422.6	449.0	489.9	502.0	+ 6.2	+ 9.1	+ 2.5
Japan	59.7	57.0	56.0	53.5	- 4.5	- 1.8	- 4.5
Vietnam	21.0	25.0	27.0	29.0	+ 19.0	+ 8.0	+ 7.4
Thailand	18.5	19.2	20.4	20.5	+ 3.8	+ 6.2	+ 0.5
South Korea	18.5	18.5	18.8	19.0	+ 0.0	+ 1.6	+ 1.1
India	15.0	14.8	18.3	20.0	- 1.3	+ 23.6	+ 9.3
Philippines	14.2	15.2	15.7	15.8	+ 7.0	+ 3.3	+ 0.6
Taiwan	4.0	4.0	4.0	4.0	+ 0.0	+ 0.0	+ 0.0
Laos	2.2	2.7	2.4	2.2	+ 22.7	- 11.1	- 8.3
Cambodia	1.4	2.1	1.9	2.0	+ 50.0	- 9.5	+ 5.3
Indonesia	2.0	2.4	2.3	2.6	+ 20.0	- 4.2	+ 13.0
Malaysia	1.9	1.9	2.3	2.5	+ 0.0	+ 21.1	+ 8.7
Myanmar	1.0	1.2	1.1	1.2	+ 20.0	- 8.3	+ 9.1
Singapore	1.2	1.2	1.1	1.2	+ 0.0	- 8.3	+ 9.1
Israel	0.8	0.8	1.0	1.0	+ 0.0	+ 25.0	+ 0.0
Sri Lanka	0.7	0.7	0.8	0.8	+ 0.0	+ 14.3	+ 0.0
Jordan	0.6	0.7	0.1	0.1	+ 16.7	- 85.7	+ 0.0
Nepal	0.3	0.3	0.4	0.4	+ 0.0	+ 33.3	+ 0.0
Mongolia	0.2	0.2	0.5	0.6	+ 0.0	+ 150.0	+ 20.0
Lebanon	0.3	0.3	0.2	0.3	+ 0.0	- 33.3	+ 50.0
Syria	0.1	0.1	0.1	0.1	+ 0.0	+ 0.0	+ 0.0
Asia rest	7.3	8.9	8.8	9.2	+ 21.9	- 1.1	+ 4.5
Asia total	593.5	626.2	673.1	688.0	+ 5.5	+ 7.5	+ 2.2
South Africa	26.2	29.5	30.0	31.0	+ 12.6	+ 1.7	+ 3.3
Nigeria	16.0	17.5	19.4	19.8	+ 9.4	+ 10.9	+ 2.1
Angola	6.2	7.5	8.1	8.3	+ 21.0	+ 8.0	+ 2.5
Cameroon	6.0	6.0	5.9	6.2	+ 0.0	- 1.7	+ 5.1
Kenya	5.5	5.6	5.2	5.2	+ 1.8	- 7.1	+ 0.0
Zaire	3.5	3.7	4.8	5.0	+ 5.7	+ 29.7	+ 4.2
Ethiopia	3.1	3.3	3.2	3.5	+ 6.5	- 3.0	+ 9.4
Tanzania	3.3	3.4	3.5	3.5	+ 3.0	+ 2.9	+ 0.0
Uganda	2.0	2.0	2.8	3.0	+ 0.0	+ 40.0	+ 7.1
Namibia	2.0	2.2	2.2	2.3	+ 10.0	+ 0.0	+ 4.5
Mozambique	1.8	1.9	1.9	1.9	+ 5.6	+ 0.0	+ 0.0
Ghana	2.0	1.8	1.8	1.8	- 10.0	+ 0.0	+ 0.0
Tunesia	1.3	1.3	1.4	1.6	+ 0.0	+ 7.7	+ 14.3
Ivory Coast	1.5	1.3	1.4	1.6	- 13.3	+ 7.7	+ 14.3
Egypt	1.2	1.2	1.1	1.2	+ 0.0	- 8.3	+ 9.1
Zimbabwe	0.5	0.5	0.8	1.2	+ 0.0	+ 60.0	+ 50.0
Madagascar	0.7	0.7	1.1	1.1	+ 0.0	+ 57.1	+ 0.0
Morocco	1.1	1.2	0.9	1.0	+ 9.1	- 25.0	+ 11.1
Zambia	0.7	0.7	0.9	1.0	+ 0.0	+ 28.6	+ 11.1
Mauritius	0.5	0.5	0.4	0.4	+ 0.0	- 20.0	+ 0.0
Africa rest	7.0	8.4	7.7	7.7	+ 20.0	- 8.3	+ 0.0
Africa total	92.1	100.2	104.5	108.3	+ 8.8	+ 4.3	+ 3.6
Australia	17.0	17.2	16.6	16.4	+ 1.2	- 3.5	- 1.2
New Zealand	3.4	3.2	3.3	3.4	- 5.9	+ 3.1	+ 3.0
Oceania	1.2	1.2	1.2	1.2	+ 0.0	+ 0.0	+ 0.0
Australia total	21.6	21.6	21.1	21.0	+ 0.0	- 2.3	- 0.5
World total	1,807.7	1,837.5	1,904.8	1,927.6	+ 1.6	+ 3.7	+ 1.2

*Estimate

World Beer Production 2000 – 2013

(Mio hl and % share)



*Estimate

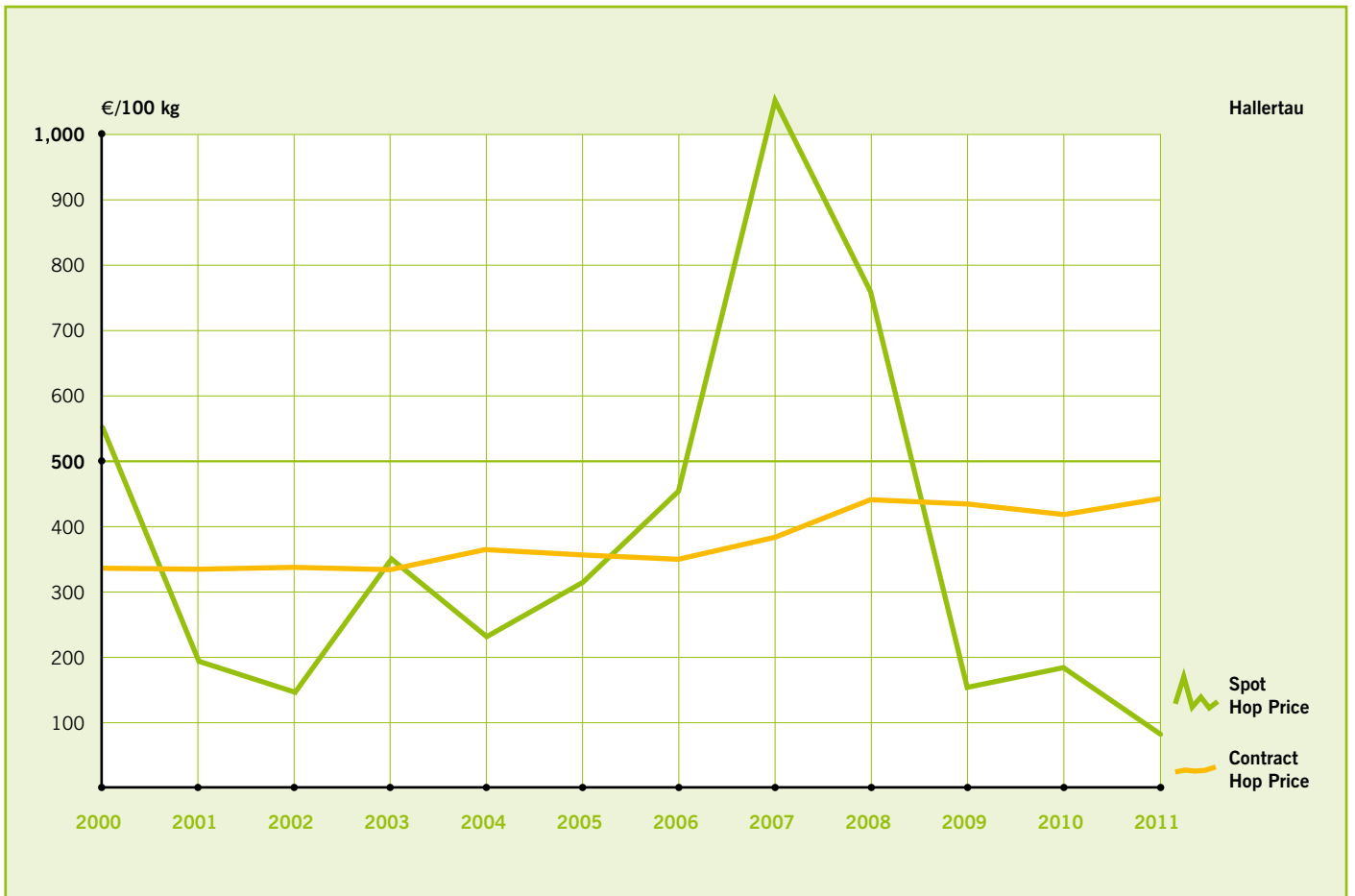
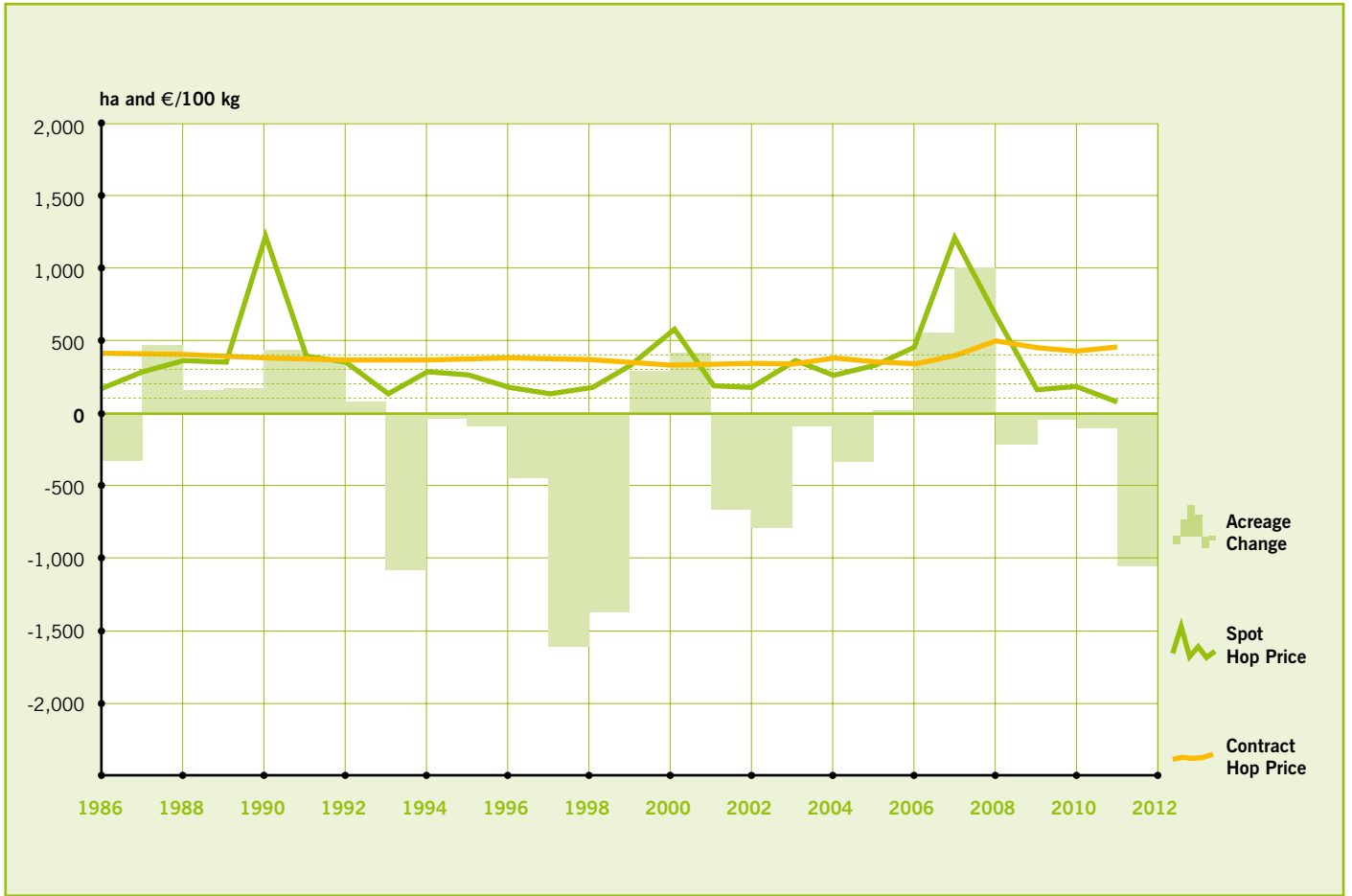
World Hop Acid Supply and Demand 2005 – 2012

Production		Beer Production		Alpha Dosage	Alpha Usage	Annual Balance
(mt Alpha)		(Mio hl)		(g Alpha / hl)	(mt Alpha)	(mt Alpha)
2005	7,626	2006	1,704	4.5	7,668	- 42
2006	6,570 ¹⁾	2007	1,779	4.3	7,650	- 1,080
2007	6,983	2008	1,815	4.0	7,260	- 277
2008	9,748	2009	1,808	3.9	7,051	2,697
2009	10,062	2010	1,838	3.9	7,166	2,896
2010	8,192	2011	1,905	3.8	7,239	953
2011	9,560	2012*	1,928	3.8	7,326	2,234
2012*	8,199	2013*	1,957	3.8	7,437	762

¹⁾ This figure takes into account the destruction of approx. 110 mt alpha acid in a warehouse fire in USA.



*Estimate



Hop Market Review and Outlook

Retrospective

Crop 2011 had a record average alpha acid level of 9.8% compared to 8.5% for crop 2010. With a production of 97,378 tons of raw hops this equaled 9,560 tons of alpha. Despite an acreage reduction of 2,700 ha after crop 2010, the above average alpha yields resulted in a surplus of 2,234 tons of alpha acid, based on an estimated demand of approximately 7,300 tons for the brewing year 2012.

As a result of this overproduction, spot prices for most bitter and some aroma varieties immediately dropped to the point that bargain hunters used the opportunity to buy the available quantities to further build up their inventory. The exception was US aroma varieties, which continued to be in tight supply as the craft brewery industry kept on its upward growth trajectory. Only PRC and Slovenia still have larger quantities of unsold crop 2011 inventory.

Based on these developments, we estimate that the brewing industry has accumulated an inventory of approximately 8,800 tons of alpha.

Prognosis

As a result of the low spot prices and lack of a market for new long-term bitter hop contracts, the world's hop acreage decreased to 46,041 ha for crop 2012. In particular, Germany reduced its acreage by 1,100 ha, a sudden change for a country whose acreage had been very stable for several years. In addition there was a large reduction in the PRC, which removed nearly 20% of its acreage. Some reductions occurred also in England, France, Slovenia, and the Czech Republic.

Although the USA had a further decrease of its bitter hop acreage, this reduction was offset by an increase for aroma varieties, resulting in a slight increase in total acreage. This increase occurred to meet the needs of the US craft brewers, which have captured more than 5% of the US beer market and have started to influence beer markets in other countries. These brewers use mainly US aroma varieties with citrusy and fruity characteristics which are suitable for dry hopping. Furthermore, craft brewers have a high hopping rate, commonly estimated at one or two pounds per 31-gallon barrel. Compared to current market prices for bitter hops, which often do not cover growing costs, growers can achieve good returns from producing aroma varieties.

Although growing conditions during spring and early summer 2012 were normal, indicating a good crop, conditions deteriorated during the summer. Various dry periods in the European hop regions weakened the plants, particularly hurting the noble aroma varieties. In the Czech Republic, yields for Saaz dropped in some cases below 800 kg/hectare. Similar yield reductions in noble aroma varieties were recorded in other European regions. Therefore, spot hops were not available for these traditional aroma varieties.

In the USA, unfavorable weather conditions such as extended heat combined with high disease pressure from mites as well as a new powdery mildew strain will result in a crop short of the original estimate. These conditions had a particularly negative effect upon new plantings of aroma hops, so the supply of most aroma varieties will fall short of demand.

With 87,224 tons of raw hops, crop 2012 is 10,000 tons smaller compared to 2011. This is a reduction of 10.4% while the acreage decreased by only 4.5%. We estimate a total alpha production of around 8,000 tons. Large fluctuations in yield, alpha acid concentration and quality have been noted in all growing regions for crop 2012. Some varieties were particularly impacted by the growing conditions. An



overview of the hop production for the individual hop growing regions is provided under the chapter "Crop Quantity and Average Yields 2009 – 2012."

The outlook for crop 2013 is for additional decreases in bitter hop acreage coupled with further increases in US aroma hop acreage.

World beer production for 2012 is expected to reach 1.928 million HL. A slight increase to 1.957 MHL is expected for 2013, mainly due to increased consumption in Asia and South-America countries, thereby off-setting lower sales in Europe. Based on an estimated alpha acid dosage of 3.8g/hl the demand will be 7,437 tons of alpha, resulting in a theoretical surplus of 700 tons. Our alpha balance estimates the impact of dry hopping at 200 to 300 tons of alpha, and includes a similar figure for the demand from non-brewing applications. Therefore, the actual available surplus might only be 200 tons of alpha acid for the brewing year 2013.

Nevertheless, as brewers hold an inventory of around 8,000 tons of alpha acid, which exceeds their annual demand, further corrections of the bitter hop acreage will be necessary before the market will be somewhat balanced. Unfortunately, this will likely result in an overcorrection which could become a significant market factor once alpha demand normalizes. In the USA, with current strong demand for aroma hops as well as several other crops, whether annual (corn, wheat) or perennial (mint, apples, cherries), growers will be reluctant to plant bitter hop varieties if the return is not at least equal to what they can realize from other crops.

We therefore expect that the overall world acreage will further decline this year, particularly with reductions in the German and PRC hop regions. In the USA it is likely that the ongoing demand for aroma varieties will again off-set the acreage reduction of bitter hops, potentially even resulting in a further acreage increase.

We will stay in close contact as developments occur.


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Simon H. Steiner, Hopfen, GmbH

Auhofstraße 18 | D-84048 Mainburg, Germany
Tel +49 (0) 87 51-86 05-0 | Fax +49 (0) 87 51-86 05-80
E-mail info@hopsteiner.de

S.S. Steiner, Inc.

655 Madison Avenue, New York, N.Y., 10065, USA
Tel +1 212 838-8900 | Fax +1 212 593-4238
E-mail sales@hopsteiner.com

Steiner Hops Limited

319 A High Street, Epping, Essex CM16 4DA, England
Tel +44 (0) 1992 572 331 | Fax +44 (0) 1992 573 780
E-mail enquiries@hopsteiner.co.uk

Steiner Asia

Hopsteiner Trading (Zhuhai) Co., Ltd.
Suite 15 C, Jiu Chang Building, No. 8, Hai Zhou Road, Ji Da District,
Zhuhai, Guangdong, China 519015
Tel +86 756 322-3340 | Fax +86 756 322-3345
E-mail info@hopsteiner.com.cn

www.hopsteiner.com