BARTH-HAAS GROUP
FOR YOUR SUCCESS

Hop Market Report

6th July 2017

Hop acreage increases by 1.673 ha (+2.8%) to 60.412 ha worldwide

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Favourable growing conditions so far; plant growth in Europe 10-20 days ahead of long-term average; balanced supply and demand expected for 2019

I. Changes of acreage by country:

Country	2017	2018	change	
	ha	ha	ha	%
Germany	19.543	20.144	601	3,1%
Czech Rep.	4.945	5.026	81	1,6%
Slovenia	1.591	1.651	60	3,8%
Poland	1.576	1.626	50	3,2%
England	967	1.000	33	3,4%
Spain	521	531	10	1,9%
France	481	496	15	3,1%
others	849	874	25	2,9%
European Union	**30.473**	**31.348**	**875**	**2,9%**
others Europe	**1.068**	**1.107**	**39**	**3,7%**
EUROPE total	**31.541**	**32.455**	**914**	**2,9%**
USA PNW	21.564	22.395	831	3,9%
USA other states	1.012	809	-203	-20,1%
USA total	**22.576**	**23.204**	**628**	**2,8%**
AMERICA	**22.901**	**23.536**	**635**	**2,8%**
China	2.683	2.700	17	0,6%
Japan	120	111	-9	-7,5%
ASIA	**2.803**	**2.811**	**8**	**0,3%**
South-Africa	421	427	6	1,4%
AFRICA	**421**	**427**	**6**	**1,4%**
Australia	631	652	21	3,3%
New Zealand	442	531	89	20,1%
AUSTRALIA/OCEANIA	**1.073**	**1.183**	**110**	**10,3%**
WORLD total	**58.739**	**60.412**	**1.673**	**2,8%**

Almost all growing countries have added acreage in 2018 albeit at a much slower pace than in previous years. Total hop acreage now exceeds the 60.000 ha mark again for the first time in over 20 years.

II. Germany

variety	2017	2018	change	
	ha	ha	ha	%
Perle	2.966	3.003	37	1,3%
Hallertauer Tradition	2.704	2.712	8	0,3%
Hersbrucker Spät	916	924	8	0,9%
Tettnanger	747	750	3	0,4%
Hallertauer Mittelfrüher	723	687	-35	-4,9%
Spalter Select	532	578	45	8,5%
Saphir	473	515	42	8,9%
Mandarina Bavaria	356	321	-35	-9,8%
Northern Brewer	300	293	-7	-2,4%
Amarillo	280	300	20	7,0%
Hallertau Blanc	170	168	-2	-1,0%
Huell Melon	157	140	-17	-10,8%
Opal	141	141	1	0,4%
Saazer	137	156	19	13,6%
Spalter	121	120	-1	-0,8%
other Aroma	369	378	9	2,5%
total Aroma	**11.091**	**11.185**	95	0,9%
Herkules	5.797	6.309	512	8,8%
Hallertauer Magnum	2.011	1.992	-19	-0,9%
Hallertauer Taurus	284	258	-26	-9,1%
Polaris	174	225	51	29,1%
Nugget	131	128	-3	-2,2%
other bitter	55	47	-9	-16,1%
total Bitter	**8.453**	**8.958**	506	6,0%
Germany total	**19.543**	**20.144**	**601**	**3,1%**

Source: deutscher Hopfenpflanzerverband

Herkules continues to lead the expansion in Germany adding another 512 ha and Polaris the only other bitter variety gaining ground. The decline in Magnum has slowed down. On the aroma side we see careful expansion in some of the traditional aroma varieties (Perle, Select, Saphir) and a needed correction of acreage in the German flavour varieties (Mandarina Bav., Melon).

III. USA:

Pacific Northwest (WA, OR, ID) only:

variety	2017 ha	2018 ha	share of total	change ha	change %
Cascade	2.811	2.432	10,9%	-379	-13,5%
Centennial	2.132	1.968	8,8%	-164	-7,7%
Citra®	2.072	2.692	12,0%	620	29,9%
Simcoe®	1.865	1.585	7,1%	-280	-15,0%
Amarillo®	1.217	1.106	4,9%	-111	-9,1%
Mosaic®	1.098	1.120	5,0%	22	2,0%
Chinook*	981	1.149	5,1%	168	17,1%
Willamette	620	567	2,5%	-53	-8,5%
Ekuanot™	398	352	1,6%	-46	-11,6%
other Aroma	3.391	3.588	16,0%	197	5,8%
Total Aroma	**16.586**	**16.559**	**73,9%**	-27	-0,2%
Columbus-Tomahawk-Zeus (CTZ)	1.977	2.470	11,0%	493	24,9%
Summit™	654	652	2,9%	-2	-0,3%
Nugget	604	601	2,7%	-3	-0,5%
HBC 682	399	690	3,1%	291	72,9%
Apollo™	371	415	1,9%	44	11,9%
other Bitter	973	1.008	4,5%	35	3,6%
Total Bitter	**4.978**	**5.836**	**26,1%**	858	17,2%
Total	**21.564**	**22.395**	**100,0%**	831	3,9%

Source: Hop Growers of America/USDA and own data

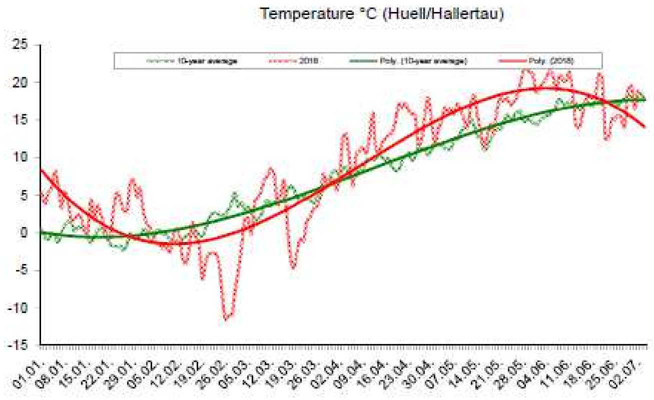
The US PNW (Pacific Nowthwest) now surpasses 55,000 acres of hop land, 55,339 to be precise (22,136 ha), which is an increase of 3.9% over 2017. Most of the expansion took place in Idaho, which now has slightly more acres under hops than Oregon. Acreage in the states outside of the PNW is declining (-203 ha) as the hop market becomes more competitive.

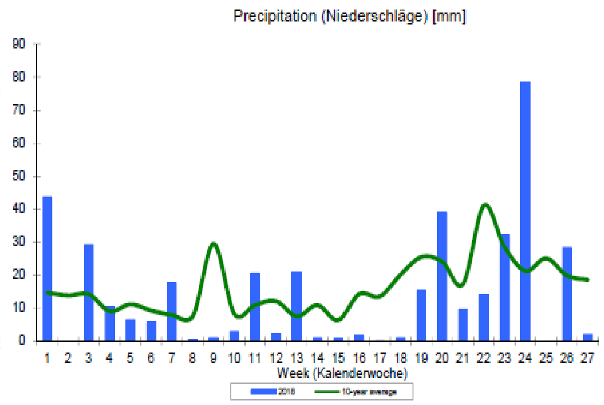
Citra® has become the number one variety in the US having added another 1,532 acres (+30%). Cascade on the other hand drops 936 acres (-13%) and into #3 position behind CTZ. A big increase for CTZ (+487ha/1,218 acres) and HBC 682 (+291 ha/728 acres or 73%) is putting the US strongly back into the high alpha rink.

IV. Plant growth and development:

Germany

Growing conditions in Germany were characterized by a very warm spring with above average temperatures all the way from April through June (see chart) causing plants to grow very rapidly. Across most varieties growth is 10-14 days ahead of the long-term average. With the exception of the very early maturing varieties (Hall. Mittelfrüh and Northern Brewer) which went into early bloom, this does not seem to have affected the plants negatively. Precipitation has varied strongly from area to area but has been sufficient on average.





Precipitation and Temperature for Hüll, Wolnzach

<u>USA</u>

The overall crop development appears to be approximately one week ahead of average. The relatively mild spring, low pest pressure, and ample water has provided ideal growing conditions. Most plants have not experienced any conditions that would cause stress, although there are a few varieties, such as Centennial, which began to bloom early in their development. The early bloom could have an impact on yield come harvest.
Water supply is abundant this year and sufficient to irrigate the crop.

V. <u>Market outlook:</u>

Hop acreage is reacting to market conditions with high alpha hops coming back into the ground and excess flavour hops being being either grubbed or converted into high alpha or aroma/flavour varieties in high demand. Provided the main growing regions produce an average crop we foresee a fairly balanced supply and demand situation on the hop market for the 2019 brewing year.

Hop demand is expected to increase further despite a stagnant beer market as flavourful and well-hopped beers continue to expand and displace lighter versions.

The forward contract ratios on both sides of the Atlantic remain at a very high level: crops 2018-20 are almost fully contracted so that spot opportunities should be few and far between. Most trading has focused on crop years 2021-25 during the first half of the year.

The BARTH-HAAS GROUP