THE BARTH REPORT

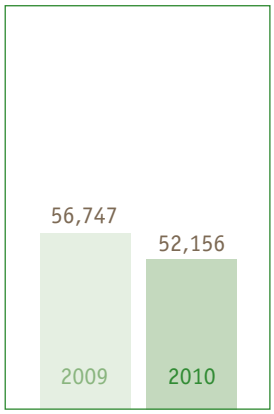
HOPS 2010/2011

BARTH-HAAS GROUP

CONTENTS

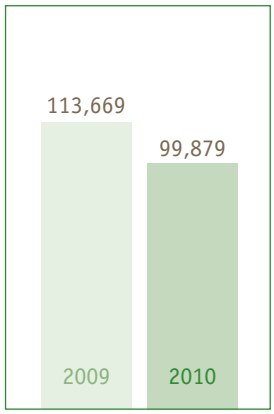
WORLD MARKET KEY DATA

Hop area under cultivation in ha



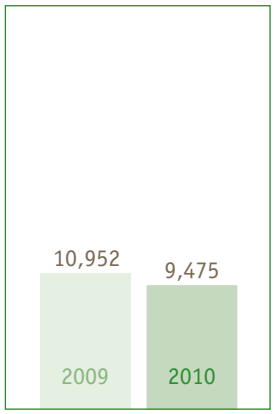
-1.0% -8.1%

Hop production in mt



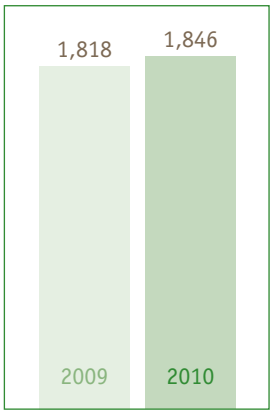
2.2% -12.1%

Hop alpha production in mt



5.1% -13.5%

Beer production in mill. hl



-0.1% 1.6%

COVER PICTURE

Organic farming is increasing in importance around the world. The extent of organic hop production has been studied for the first time in global terms. The findings can be seen on the back page of this report.

Alexander W. Barth

Stephan J. Barth

Regine Barth

The world market prices for commodities rose significantly in 2010. The factors behind this are diverse:

- **Increasing demand due to rapid growth** particularly in the up-and-coming advanced developing countries China, India and Brazil.
- **General demand from industry accompanied in certain cases by interference in supply,** e.g. for copper for the automotive and electrical industries. The most important suppliers are Chile, Peru and the USA.
- **Supply shortages due to extreme weather conditions**, e.g. of natural rubber from Thailand and Indonesia (extremely heavy rainfall), of cotton from Pakistan and India (monsoon rains), of wheat from Russia (scorched fields as a result of a heat wave), of coal and wheat from Australia (flooding).
- **Natural disasters**, e.g. earthquakes 27 February in Chile – largest known copper reserves in the world (40 %), 13 April in Central China – mining of metals known as rare earths.
- **Political and geopolitical unrest**, as seen in the Arab and North African countries, influence the oil price, for example.
- **Export restrictions**, e.g. for rare earths from China.
- **Export bans**, e.g. for wheat from Russia.

There is a growing tendency among professional investors to invest their capital in commodity funds. This has further stabilised the boom in commodity prices and has reinforced existing trends.

According to the UN's Food and Agriculture Organisation (FAO), prices for food rose to new record heights in 2010. In addition to crop failures due to unfavourable weather conditions, the rise in the cost of fuel for agricultural machinery also contributed to the price increases for food commodities.
Even though there has recently been a decline in prices for various commodities, price levels are still fundamentally higher than they were at the end of 2010.

High prices for agricultural produce have a particularly serious impact on countries that have to import food. The continuing wave of unrest that broke out in the Middle East at the beginning of the year did so partly because of price increases for staple foods. A continuation of this development cannot be ruled out.

In complete contrast to the general rise in agricultural commodity prices, the development of forward contract prices for hops and hop products, particularly for high-alpha hops, shows a negative price trend. Due to all these unforeseeable factors, breweries are advised not to orientate themselves exclusively towards the spot market. Healthy stockpiles and a solid base of forward contracts will help to secure the raw material supply of hops and to avoid extremes.

One of the imponderables is the earthquake with the resulting tsunami in Japan which will have a major influence on attitudes to nuclear power plants in the future.

It also remains absolutely unclear what effect climate change will have on hop growing in terms of yields in tons per hectare and alpha acid values, but it certainly will play an important role in the future.

POLITICAL SITUATION

Global politics have been marked by the upheaval in the old-established structures in the Middle East.

In September 2010, seven and a half years after the beginning of the **Iraq** war, US President **Barack Obama** officially declared the military operation over. The political forces in Iraq agreed to form a new government under Prime Minister **Nouri al-Maliki** in November 2010. Nevertheless, insurgents still persist in carrying out bombings with devastating effects.

Pakistan made the headlines – and not only due to the numerous bombings which claimed many victims. On 2 May 2011, **Osama Bin Laden**, the leader of the terrorist network al-Qaeda, was killed by US special forces in the Pakistani town of Abbotabad.

After breaking down almost two years previously, direct peace talks between **Israelis** and **Palestinians** resumed in September 2010. The negotiations soon ground to a halt, however. On 12 January 2011, the government of national unity of the **Lebanon** led by **Saad al-Hariri** collapsed after 14 months in office. The pro-Syrian Sunni **Najib Mikati** was elected as Mr Hariri's successor in the office of prime minister.

Mass unrest set off a chain reaction in countries in the **Middle East** and the **Arabian subcontinent**. Modern communication technology which the authorities were unable to control enabled demonstrators to make the events known to the whole world via the Internet. The popular uprisings found expression in a variety of ways. **Mass protests** took place in **Algeria, Jordan, Yemen, Bahrain, Morocco, Iraq, Oman** and **Saudi-Arabia**. In **Iran**, large sections of the population protested in vain against electoral manipulation. In **Syria,** the Assad government took extremely harsh military action against demonstrators nationwide. **Governments** were **overthrown** in **Tunisia** and **Egypt**. In **Libya,** the uprising developed into a **civil war**. The unrest in all these countries had many facets, but the main motives were injustice, suppression, poverty and lack of perspective.

Following a referendum, **South Sudan** is to become an independent state, separate from the muslim North, as of 9 July 2011.

In July 2010 **Christian Wulff** was sworn in as the new president of the **Federal Republic of Germany**. He succeeded **Horst Köhler** who resigned from office in May.

In the US congressional elections in November 2010 the Republicans won the majority in the House of Representatives. The Democrats held onto power in the Senate. This constitutes a politically difficult constellation for President **Barack Obama** in view of the important decisions facing the **USA**.

In a runoff ballot in October 2010 **Dilma Rousseff** became the first woman to be elected president of **Brazil**. On 1 January 2011 she succeeded her political mentor **Luiz Inácio Lula da Silva** during whose period in office Brazil grew to become the world's eighth-largest economy.

On 11 March 2011 **Japan** was shaken by an earthquake with a magnitude of 9.0. The powerful tremors also unleashed a tsunami. The coast of Honshu was struck by huge waves. In addition to tens of thousands killed, countless injured and a very great number made homeless, there was widespread destruction of buildings and infrastructure. Atomic reactors at the nuclear power station of Fukushima went out of control and radioactivity escaped into the atmosphere. The consequences of this catastrophe are far-reaching and unforeseeable.

EUROPEAN UNION (EU)

EU enlargement

In accordance with Section 49 of the EU treaty, any European country that meets the Copenhagen Criteria formulated in 1993 is entitled to apply for membership of the European Union. The EU is currently conducting accession negotiations with **Iceland, Croatia** and **Turkey**.

Iceland: negotiations were officially opened on 27 July 2010.
Croatia: the negotiations are about to be concluded and should lead to accession on 1 January 2013.
Turkey: accession negotiations have been in progress since 4 October 2005. One of 33 negotiating chapters has been concluded (status March 2011).

EU currency union (ECU)

At present, 17 countries among the 27 member states belong to the European economic and currency union. They use the **euro** as legal tender and coordinate their economic and finance policies within the framework of the Euro Group. The countries are **Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, Spain** and, since 1 January 2011, **Estonia**.

The stability of the common currency is suffering from the high public debt of some of the member countries and the associated possibility of state bankruptcy. The state of the public finances particularly of Greece, Portugal, Ireland and, to a certain extent, Spain are giving cause for concern.

On 23 April 2010 **Greece** applied to the EU for help and received emergency loans amounting to 110bn EUR. In May the ECU states resolved to establish the European Stability Mechanism (ESM). Together with the International Monetary Fund (IMF) they created an aid package containing loan commitments of 750bn EUR. This defence mechanism serves to lessen the consequences of imminent crises which may be caused by the excessive debt of individual member states.

On 21 November **Ireland** applied for aid from the euro rescue package and was granted 85bn EUR. In order to further stabilise the common currency, an EU summit meeting in December 2010 resolved to establish a permanent rescue umbrella for the time after 2013. On 6 April 2011 **Portugal** applied for financial aid. This request was granted in the form of a loan totalling 78bn EUR. In May it became known that **Greece** required additional funds. Negotiations on this subject are still in progress.

The financial imbalance of certain states is weakening the euro and arousing political resistance on the part of a number of donor countries.

The Common Agricultural Policy (CAP) after 2013 ; Publication of information on recipients of budget funds

On 18 November 2010 the European Commission published a communication entitled "**The Common Agricultural Policy (CAP) until 2020**: food, natural resources and rural areas – the future challenges". This document explains that the CAP has to be reformed in order to achieve the following goals:

- viable food production (providing a secure and sufficient source of food in order to contribute to the security of food supply against the background of rising global demand and a significant increase in market volatility);
- sustainable farming with regard to natural resources and climate-related measures (farmers often have to place ecological considerations above economic ones, but the corresponding costs are not recompensed by the market);
- preservation of balanced land use and the diversity of rural areas (farming continues to be a significant economic and social driving force in rural areas as well as an important factor contributing to the preservation of the vitality of the rural environment).

The communication considers which instruments would be best suited to achieving these objectives in the future. These include the form of direct payments, market-related measures and development policy for rural areas. Three options are presented for the future orientation of the CAP:

- elimination of the most urgent shortcomings of the CAP by gradual change;
- creation of an environment-friendlier, fairer, more efficient and more effective CAP;
- shift of emphasis away from market-related measures and income support towards environmental and climate-related targets.

The Commission will work out legislative proposals taking into account detailed estimates of the consequences of each of these options and will present them in the summer of 2011. The proposals will then go through the co-legislation procedure which will be applied to a reform of the CAP for the first time. The reformed CAP should then come into force in 2014.

Since 2009, in accordance with the regulations of the EU, the member states have been required to ensure appropriate retrospective **publication of information on the recipients of budget funds** from the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD) on 30 April each year. In connection with two appeals against this publication, the Court of the European Union was asked to examine the validity of the corresponding regulations of the EU. In announcing its judgement on 9 November 2010, the court came to the conclusion that the publication of data containing the names of the recipients of budget funds and the precise amounts constituted an infringement of the right of the recipients concerned to respect of their privacy in general and to protection of their personal data in particular. The court therefore declared the legal basis for this publication partly invalid. For this reason, publication of information on recipients of CAP payments was suspended until further notice.

ECONOMIC SITUATION

In 2010 the world economy and the capital markets bore the marks of the after-effects and side-effects of the financial and economic crisis.

There was significant growth in **gross domestic product** (GDP) which amounted to 4.7 % compared with a decline of 0.7 % the previous year. Despite economic recovery of an almost global nature, major differences were apparent between individual regions and countries. The **USA** (+2.7 %) and the **European countries** are suffering from very high and further rising public debt. Within the **European Union**, **Germany** has a particular responsibility to bear on account of its positive economic development. In 2010 the average GDP of all 27 **EU countries** increased by 1.8 %, while in **Germany** alone GDP grew by 3.6 %. In up-and-coming economies such as **China** (+10.3 %), **India** (+8.3 %) and **Brazil** (+7.5 %), advances in productivity were achieved due among other things to growing entrepreneurship and improvement of the infrastructure. In **Japan** (+1.1 %) the existing economic problems were exacerbated as a result of the earthquake and tsunami followed by a nuclear catastrophe in the spring of 2011.
There has been a change in the rankings of the world's leading economies. **China** has now moved into second place behind the **USA** and is followed by **Japan, India** and **Germany**.

In April 2011, after almost two years, the **European Central Bank (ECB)** raised the base rate from its record low of 1 %, with an increase of 0.25 %. The **US central bank (Fed)** has kept its Federal Funds Rate unchanged at 0 % since December 2008. The **central bank of China (PBC)** on the other hand has gradually increased its base rate to 6.31 % in order to combat the country's high inflation.

Due to the debt crisis the **euro** lost value significantly. However, the common currency has again become increasingly stable. While the euro's exchange rate to the US dollar in early July 2010 was 1.22 USD, it had risen to 1.44 USD by the end of May 2011.

There was a significant rise in profits on **stock exchanges** worldwide in the reporting period running from July 2010 to the end of May 2011. The **Dow-Jones** rose by 28 % to approx. 12,440 points. Germany's **DAX** climbed by 25 % to approx. 7,200 points.
Due to economic growth and the political crises in oil-producing countries, the **oil price** rose dramatically. While the price of a barrel (159 litres) of Brent crude oil was 70.81 USD on 5 July 2010, the oil price reached an interim high of slightly below 127.00 USD on 11 April 2011. Following a decline in commodity prices in general in early May, the oil price was hovering at 116.00 USD at the time of going to press (end of May).

The public debt policies in the USA and Europe have further boosted the price of gold. On 3 May 2011 the price paid for a fine ounce (approx. 31 g) briefly reached 1,547.00 USD, which was more than had ever been paid in economic history.

KEY DATA

USA, JAPAN, GERMANY AND CHINA

The figures for 2008 and 2009 have been revised according to the latest statistics

**) Interest rate for 10-year bonds. China: interest for long-term credits.*

		GDP growth (real) in %	Balance of Payments in USD bn	Balance of Trade in USD bn	Inflation Rate Ø in %	Interest Rate Ø in %*)	Unemployment (as of 31.12.) in %
USA	2008	0.0%	-668.8	-816.2	3.8%	3.67%	5.8%
	2009	-2.6%	-378.4	-503.5	-0.3%	3.26%	9.3%
	2010	2.9%	-470.2	-633.9	1.6%	3.21%	9.6%
Japan	2008	-1.2%	158.4	20.0	1.4%	1.45%	4.0%
	2009	-5.3%	142.0	28.5	-1.4%	1.34%	5.1%
	2010	4.3%	196.7	75.6	-1.0%	1.15%	5.1%
Germany	2008	0.7%	227.7	262.2	2.6%	3.98%	7.8%
	2009	-4.7%	186.5	193.4	0.3%	3.22%	8.2%
	2010	3.5%	187.5	204.8	1.1%	2.74%	7.7%
China	2008	9.6%	436.1	297.0	5.9%	5.43%	4.2%
	2009	9.1%	297.1	197.6	-0.7%	5.25%	4.3%
	2010	10.3%	305.4	183.1	3.3%	5.40%	4.1%

WORLD BEER PRODUCTION 2009/2010

Europe

Country	2009	2010
Russia	108,500	102,930
Germany	*98,078*	95,683
United Kingdom	45,141	44,997
Poland	32,200	33,900
Spain	33,800	33,375
Ukraine	30,500	31,000
Netherlands	*25,376*	23,936
Belgium	18,009	18,123*
Czech Republic	*18,600*	17,100
Romania	17,600	15,700
France	14,314	14,290
Italy	*12,780*	12,370
Turkey	9,500	9,670*
Austria	8,728	8,670
Portugal	7,832	8,312
Ireland	8,041	8,249
Denmark	6,046	6,335
Hungary	6,194	6,000*
Serbia	5,682	5,383
Bulgaria	5,255	5,015
Finland	4,491	4,235
Greece	4,450	4,050
Belarus/ White Russia	3,366	3,974
Sweden	3,740	3,700*
Switzerland	3,555	3,579
Croatia	3,721	3,455
Slovakia	3,300	3,110
Lithuania	2,794	2,955
Norway	*2,509*	2,429
Slovenia	1,953	1,847
Latvia	*1,358*	1,460
Estonia	1,070*	1,074
Moldavia	*912*	905
Bosnia-Herzegowina	891	837
Macedonia	636	620
Georgia	450*	485*
Montenegro	501	454
Albania	680	450
Cyprus	361	342
Luxembourg	*307*	302
Armenia	108	154
Iceland	160*	150*
Malta	127	134
TOTAL	553,616	541,739

Australia/Oceania

Country	2009	2010
Australia	*17,320*	17,420
New Zealand	*3,050*	2,990
Papua-New Guinea	600	600
Tahiti	187*	187*
Fiji Islands	157*	159*
New Caledonia	128*	134*
Samoa	61	62*
Solomon Islands	58	62
Tonga	8*	9*
Vanuatu	7*	8*
TOTAL	21,576	21,631

America

Country	2009	2010
USA	*230,937*	227,838
Brazil	107,000*	114,000*
Mexico	82,325	79,889
Canada	22,394	22,200*
Columbia	20,140	20,500
Venezuela	23,141	20,000*
Argentina	17,000*	17,500*
Peru	10,900	11,000
Ecuador	*5,300**	5,700*
Chile	5,923	5,680
Dominican Republic	3,100*	3,200*
Cuba	*2,474*	2,400
Panama	1,800*	1,800*
Guatemala	1,500*	1,500*
Paraguay	1,400*	1,500*
Costa Rica	1,500*	1,400*
Bolivia	1,300*	1,300*
Nicaragua	950*	950*
Jamaica	900*	930*
Honduras	950*	900*
Uruguay	900*	900*
El Salvador	780*	780*
Puerto Rico	600*	650*
Trinidad	410*	420*
Belize	260*	290*
Guyana	240*	250*
Bahamas	140*	140*
Dutch Antilles	140*	140*
Suriname	90*	90*
Barbados	80*	80*
St. Lucia	70*	70*
Martinique	60*	60*
St. Vincent	42	45
Haiti	50*	30*
Grenada	30*	30*
St. Kitts	23*	23*
Antigua	22	18
Aruba	16*	16*
Dominica	13	12
Cayman Islands	4*	4*
TOTAL	544,904	544,235

Asia

Country	2009	2010
China	423,638	448,304
Japan	59,820	59,630
Vietnam	23,000*	26,500*
Thailand	19,450*	19,980
South Korea	17,995	18,173
Philippines	14,600	15,700
India	15,500*	15,600
Taiwan	*5,088*	5,158
Kazakhstan	3,600	4,824
Uzbekistan	2,466	2,920
Iran	900*	2,000
Indonesia	2,100	1,900
Laos	1,500	1,665
Malaysia	1,600*	1,630*
Cambodia	*860**	1,600*
Singapore	1,000	1,000
Israel	900*	980*
Myanmar (Burma)	865*	865*
Sri Lanka	555	714
Aserbaidjan	466	520
Hongkong	450	470
Mongolia	324	449
Nepal	*361*	426
Tadschikistan	200*	225*
Lebanon	200	210
Syria	99	130*
Turkmenistan	80*	130*
Kirgisistan	100*	120
Jordan	89*	95*
Pakistan	52	60
TOTAL	597,858	631,978

Africa

Country	2009	2010
South Africa	*28,800*	29,600
Nigeria	16,000	17,600
Angola	6,869	7,362
Cameroon	6,200	5,890
Kenya	5,300	5,100
Dem. Rep. of the Congo (Zaire)	3,700	4,140
Tanzania	3,381	3,373
Congo (Brazzaville)	*2,900*	3,360
Ethiopia	2,678	2,740
Uganda	1,910	2,635
Namibia	2,200	2,500
Ghana	1,768	1,721
Burundi	1,400	1,670
Mozambique	1,448	1,665
Zimbabwe	541	1,505
Ivory Coast	1,300	1,500
Tunisia	1,250	1,420
Madagascar	921	1,277
Egypt	1,123	1,180
Gabon	1,100	1,100
Algeria	950	1,050
Rwanda	800	960
Morocco	1,015	900
Sambia	598	827
Burkina Faso	750	750
Benin	620	700
Togo	500	480
Mauritius	400	400
Botswana	601	384
Lesotho	328	373
Chad	340	370
Eritrea	159	260
Equatorial Guinea	165	250
Réunion	200	230
Malawi	200*	210*
Swaziland	207	199
Guinea (Conakry)	170	170
Sudan	0	164
Senegal	170	150
Central African Republic	150	150
Liberia	122	127
Mali	95	100
Sierra Leone	100	90
Niger	70	65
Guinea-Bissau	45*	45*
Seychelles	30	30
Gambia	30	30
Cape Verde	8*	8*
TOTAL	99,612	106,810

World total

	2009	2010
TOTAL	1,817,566	1,846,393

figures in 1,000 hl

in italics: corrections for 2009 as stated in last year's report.

** estimate*

A list of the "Top 40 Countries" according to ranking can be found in the Beer Production Market Leaders Report.

BEER OUTPUT DEVELOPMENT

The output volumes for 2009 quoted in last year's report have been revised in some cases.

	2009 1,000 hl	2010 1,000 hl	2009 +/- % rel.	2010 +/- % rel.
European Union	381,945	375,264	-5.5%	-1.7%
Rest of Europe	171,671	166,475	-4.9%	-3.0%
Europe total	**553,616**	**541,739**	**-5.3%**	**-2.1%**
North America	335,656	329,927	-0.3%	-1.7%
Central America/Caribbean	15,504	15,468	-2.4%	-0.2%
South America	193,744	198,840	1.6%	2.6%
America total	**544,904**	**544,235**	**0.3%**	**-0.1%**
Asia	**597,858**	**631,978**	**3.4%**	**5.7%**
Africa	**99,612**	**106,810**	**8.9%**	**7.2%**
Australia/Oceania	**21,576**	**21,631**	**0.0%**	**0.3%**
WORLD TOTAL	1,817,566	1,846,393	-0.1%	1.6%

The process of gathering the current beer output figures also provides an opportunity to check whether the beer volumes in the previous year's report require adjustment due to retrospective corrections. On the basis of these corrections, the quantity of beer produced in 2009 was 7.9m hl higher than originally calculated. Therefore, the decline in output from 2008 to 2009 was not 9.5m hl (-0.5 %), but only 1.6m hl (-0.1 %).

In 2010, on the basis of a reported output of 28.8m hl and taking the adjusted figures for the previous year into account, beer output rose by 1.6 %. While a virtually unchanged volume of beer was produced on the American continent, the negative trend in Europe continued for the third year in succession. All the other continents registered rising output.
Russia was replaced by Brazil in third place in the rankings of the top beer-producing nations. China remains unchallenged in first place, followed by the USA, Brazil, Russia and Germany.
In **Europe** output decreased by 11.9m hl. A decline of more than 1m hl was registered for five countries: Russia (-5.6m hl), Germany (-2.4m hl), Romania (-1.9m hl), Czech Republic (-1.5m hl) and the Netherlands (-1.4m hl). The only significant growth in Europe was achieved by Poland (+1.7m hl). On the **American continent**, Brazil almost made up for the decline in Venezuela and the USA (both -3.1m hl) and Mexico (-2.4m hl) with an increase in output amounting to 7m hl. In **Asia**, the beer market boom continues (+34.1m hl). The greatest increase of all was in China. 24.7m hl of beer was brewed there, raising its share of output growth worldwide to 86 %. But also Vietnam managed to achieve an impressive increase of 3.5m hl. Output growth of 7.2 % (+7.2m hl) in **Africa** meant that this was the continent with the highest growth rate.

MARKET ANALYSIS

At first glance, it seems that the **structural oversupply** of the market continued with the 2010 crop. The alpha surplus of the 2010 crop amounted to 1,753 tons of alpha acids, in comparison to 3,382 tons and 2,608 tons in the two preceding years. The effects of an extensive clearing programme, which was carried out in particular by US growers following the 2009 crop year, were clearly felt. There was a 4,591 ton reduction in world acreage, bringing it to 52,156 tons. But as expected, this acreage reduction was not sufficient to bring supply and demand into a sustainable balance.

Closer inspection of the **market situation**, looking at the **different** hop segments, shows a more fragmented picture. The same applies to the economic situation of hop growing regions around the globe. The tone for world hop production is increasingly being set by the USA and Germany alone. Together, both countries accounted for 64 % of hop production and 74 % of alpha acid production in the 2010 crop year. It can therefore be safely assumed that the market share of both of these hop growing nations is over 75 % of the total revenue generated by hop production worldwide.

US and German growers enjoy **higher forward contract rates** than their counterparts in other hop producing countries. Their crop yields per hectare are significantly greater. The hops produced in both of these countries are processed to provide a full product range for all conceivable applications in the brewing industry, not to mention for other markets. Efficient public and private cultivation facilities ensure a steady supply of new varieties which are superior to those produced in other hop growing countries. It is therefore hardly surprising that this global mega trend in acreage concentration is reflected in the

MARKET ANALYSIS

marketability of hop varieties traded both on the open market and the forward contract market.
Internationally, little was played out on the **open market for high alpha hops** and market prices lay under production costs. The USA produced almost no non-contracted hops in this sector. The majority of non-contracted hops grown in Germany were purchased by hop merchants and sold on to the brewing industry, while in all other hop producing countries, some hops remained unsold at farms. In Eastern Europe and China in particular, the situation is grim in terms of high alpha hops. Thousands of tons of hops remained unsold. In this sector, forward contracts from the brewing industry were almost exclusively for US and German produced hops. The reliable behaviour of producers based in the USA and in Germany in the boom years of 2006 – 2008 may well have played a role in this.
Almost all **aroma hop varieties available for the open market** could be sold at low to low-mid price levels in Germany and at mid price levels in the USA. The supply surplus on the market thus only had a limited impact on aroma hops. The nominal surplus in supply primarily hit producers in Poland, Slovenia, the Czech Republic and other eastern European hop producing countries.

In the USA in particular, significant demand has developed for varieties which do not fall into the classic segmentation of alpha or aroma hops. This was caused primarily by the US Craft Beer industry and, to a certain extent, by the marked increase in the number of micro breweries in other countries. This new category consists of hop varieties with strong flavours, which produce beers that have unusually distinctive tastes. These "**flavor hops**" revived the US market. Demand ensured that prices were attractive to the growers. Spot-market hops, if available at all, found buyers quickly. Both the number of varieties grown and the volume of these special varieties have increased in the last few years.

Regardless of this fact, oversupply in the high alpha hop segment remains the biggest challenge facing the hop industry. Without **extensive plantation clearances** to bring hop production into line with demand, we must continue to view the entire market as in need of recovery, despite some rays of hope on the aroma market and the optimistic outlook for the "flavor hops" niche market.

HOP FORWARD CONTRACT RATES

Forward contract rates (as per spring 2011)

Country	2011	2012	2013	2014
Germany	85%	80%	70%	55%
USA	100%	90%	40%	30%
Czech Republic	80%	70%	65%	37%
Poland	45%	45%	25%	25%
Slovenia	45%	35%	25%	15%
England	80%	50%	30%	10%

Due to insufficient availability of official data, the forward contracting rates are based on estimates and have been calculated on the basis of the acreage expected for 2011 and the long-term average yield.

There was hardly any activity on the forward contract market in the bitter and high alpha variety segments. Contracts were signed for aroma varieties in isolated cases.

HOP ALPHA ACID PRODUCTION

Alpha acid production world-wide has been divided into variety groups:

GROUP I: Fine aroma hops	such as Hallertau Mittelfrueh, Hersbruck Spaet, Klon 18, Lubliner, Saazer, SA-1, Spalt, Savinjski Golding, Styrian Golding (Celeia), Strisselspalt, Tettnang.
GROUP II: Aroma hops	such as Aurora, Bobek, Cascade, Cluster, First Gold, Fuggles, Golding, Hallertau Tradition, Mount Hood, NZ Hallertau, Opal, Perle, Saphir, Smaragd, Spalt Select, Sterling, Willamette.
GROUP III: Bitter hops/ High Alpha hops	such as Admiral, Chelan, Chinook, Columbus/Tomahawk/Zeus (CTZ), Galena, Hallertau Magnum, Hallertau Merkur, Hallertau Taurus, Herkules, Kirin Flower, Marco Polo, Marynka, Millennium, Northern Brewer, Nugget, NZ Pacific Gem, Phoenix, Pride of Ringwood, Super Pride, Target, Tsingdao Flower, Victoria, Warrior.

Varieties with a long-term average alpha of up to 4.5%

Varieties with a long-term average alpha of over 4.5%

HOP ALPHA ACID PRODUCTION

With the world hop crop divided into these groups, alpha acid production was as follows:

Group I – Fine aroma hops
Czech Republic 47.5 % (previous year 46.7 %), Germany 35.1 % (previous year 30.4 %)

Group II – Aroma hops
Germany 50.1 % (previous year 45.6 %), USA 23.2 % (previous year 26.5 %)

Group III – Bitter hops/ high alpha hops
USA 43.6 % (previous year 51.6 %), Germany 33.0 % (previous year 26.3 %)

	2009					2010				
Group	Crop share	Crop mt	Alpha Ø	Alpha mt	Alpha share	Crop share	Crop mt	Alpha Ø	Alpha mt	Alpha share
I	10.4%	11,813	3.5%	419	3.8%	12.6%	12,622	3.1%	391	4.1%
II	25.2%	28,673	6.3%	1,794	16.4%	26.0%	25,962	6.3%	1,647	17.4%
III	64.4%	73,183	11.9%	8,739	79.8%	61.4%	61,295	12.1%	7,437	78.5%
TOTAL	100.0%	113,669	9.6%	10,952	100.0%	100.0%	99,879	9.5%	9,475	100.0%

In global terms alpha acid production in 2010 fell by 1,477 mt year on year. Due to acreage reduction in the bitter and high alpha variety group, the shares of production volume and alpha acid shifted among the variety groups.

As a result of acreage removal in the USA, there were significant changes in the world market shares of the producer countries. The **USA**'s share fell from 45.5 % in crop year 2009 to 38.2 % in crop year 2010. **Germany** on the other hand increased its share from 29.6 % in 2009 to 36.1 % in 2010. **China** saw its share rise from 9.1 % to 10.2 %.

Some corrections have been made to the 2009 crop and alpha volumes quoted in last year's report. At the same time, more precise information on the hop varieties grown in Ukraine and Romania made it necessary to make adjustments within variety groups I and II.

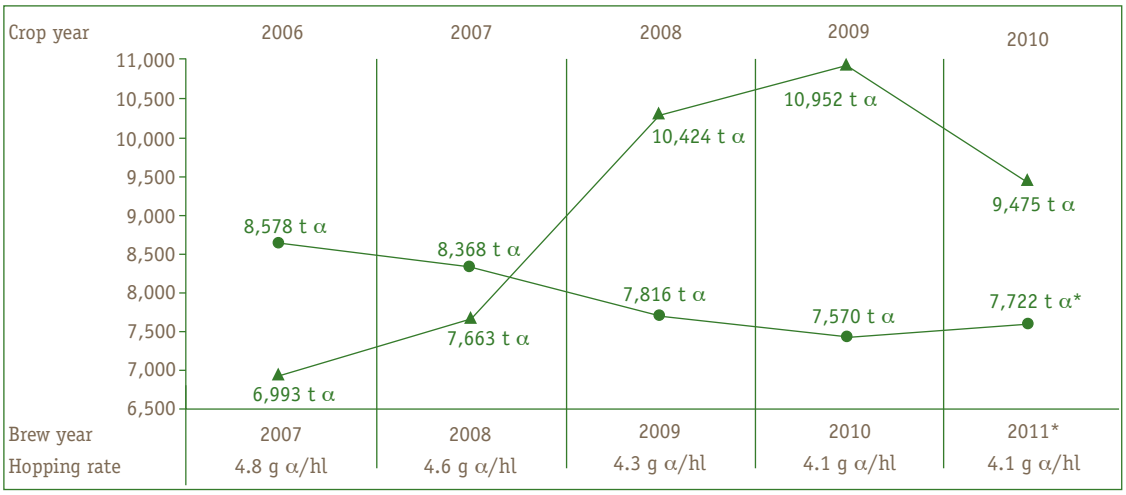
The alpha acid values upon which the calculations are based are recorded using the method of EBC analysis 7.4 % as is at the time of processing (ToP).

HOP ALPHA ACID BALANCE

Alpha supply

Brew year	Surplus/Deficit
2007	-1,585 t α
2008	-705 t α
2009	+2,608 t α
2010	+3,382 t α
2011*	+1,753 t α

● Alpha demand (Brew year)
▲ Alpha production (Crop year)
* Estimated demand



For the third year in succession the volume of alpha produced considerably exceeded demand. The reduction in acreage already had a noticeable effect on production volume. The point at which a balance is restored between production and demand will depend on the further development of world acreage and the prevailing weather conditions.
The existing alpha surplus is probably restricted mainly to the high alpha hop segment. The calculation of alpha demand for the 2011 brewing year is based on an assumed increase in beer output volume of 2 %.

These statistics do not take into account the alpha degradation that occurs during the time between the processing of the hops and their actual use in the brewing industry or the approx. 200 mt of alpha required for use outside the brewing industry.

HOP ACREAGE AND CROP

		2009				2010			
		Acreage ha	Production mt	Ø-Alpha %	Alpha mt	Acreage ha	Production mt	Ø-Alpha %	Alpha mt
Germany	Hallertau	15,473	26,422.8	10.7%	2,815	15,387	29,129.6	10.2%	2,982
	Elbe-Saale	1,387	2,663.0	11.7%	313	1,379	2,631.0	11.9%	312
	Tettnang	1,221	1,611.2	5.0%	80	1,226	1,798.9	4.9%	88
	Spalt	373	610.4	5.6%	34	376	641.1	5.4%	35
	Others	19	36.2	6.8%	2	20	33.1	7.2%	2
	Total	**18,472**	**31,343.7**	**10.3%**	**3,244**	**18,386**	**34,233.8**	**10.0%**	**3,419**
Czech Republic	Saaz	3,899	4,612.9	4.6%	210	3,831	5,620.4	3.5%	194
	Tirschitz	737	1,168.1	4.5%	53	742	1,248.1	3.2%	40
	Auscha	671	834.6	4.4%	37	637	903.2	3.5%	31
	Total	**5,307**	**6,615.7**	**4.5%**	**300**	**5,210**	**7,771.7**	**3.4%**	**265**
Poland		2,167	3,691.2	8.5%	312	1,867	1,866.8	7.5%	140
Slovenia		1,579	2,499.6	6.9%	173	1,391	2,461.7	7.1%	175
England		1,081	1,444.4	7.9%	114	1,070	1,608.2	7.1%	114
France		533	817.8	3.4%	27	580	791.5	4.2%	33
Spain		469	1,019.3	11.9%	122	508	1,038.6	12.5%	129
Romania		*248*	*202.0*	*8.6%*	*17*	245	214.0	8.1%	17
Austria		231	341.4	8.3%	28	234	368.0	8.4%	31
Slovakia		208	245.0	4.6%	11	229	205.0	3.5%	7
Belgium		187	336.1	9.5%	32	186	375.5	9.2%	34
Bulgaria		160	183.0	9.8%	18	160	200.0*	9.0%	18
Hungary		24	21.0	12.0%	3	27	34.0	11.8%	4
Portugal		21	28.6	9.5%	3	17	22.8	10.5%	2
European Union		***30,687***	***48,788.8***	***9.0%***	***4,404***	**30,110**	**51,191.6**	**8.6%**	**4,388**
Ukraine		*1,346*	*1,344.8*	*5.8%*	*78*	1,184	785.8	5.5%	43
Russia		270	200.0	5.8%	12	420	66.0	6.1%	4
Turkey		336	389.4	9.4%	37	352	359.0	10.1%	36
Belarus/White Russia		50	50.0	8.5%	4	53	55.0	8.0%	4
Serbia		*67*	*110.0*	*7.8%*	*9*	39	82.0	8.0%	7
Switzerland		18	35.4*	8.4%	3	18	34.4*	8.1%	3
Croatia		16	24.0	8.9%	2	16	21.8	10.6%	2
Rest of Europe		***2,103***	***2,153.6***	**6.7%**	**145**	**2,082**	**1,404.0**	**7.1%**	**99**
EUROPE		*32,790*	*50,942.4*	*8.9%*	*4,549*	32,192	52,595.6	8.5%	4,487
USA	Washington	11,974	33,997.7	*12.2%*	*4,147*	9,848	23,701.4	12.6%	2,991
	Oregon	2,472	5,396.2	8.6%	463	1,870	3,754.7	9.1%	342
	Idaho	1,631	3,551.3	10.6%	375	943	2,251.0	12.9%	291
	Total	**16,077**	***42,945.2***	***11.6%***	***4,985***	**12,662**	**29,707.1**	**12.2%**	**3,624**
Argentina		197	320.3	7.6%	24	235	258.3	7.4%	19
Canada		*4*	*2.0*	*9.0%*	*0*	9	3.5	9.5%	0
AMERICA		*16,278*	*43,267.5*	11.6%	5,009	12,906	29,968.9	12.2	3,643
China	Xinjiang	3,605	9,885.0	6.1%	602	3,303	8,316.0	6.4%	531
	Gansu	2,418	6,251.0	6.4%	399	2,199	5,805.0	7.5%	434
	Total	**6,023**	**16,136.0**	**6.2%**	**1,001**	**5,502**	**14,121.0**	**6.8%**	**965**
Japan		200	303.2	6.7%	20	192	362.9	6.7%	24
India		60	47.3	11.4%	5	45	26.0	12.5%	3
ASIA		6,283	16,486.5	6.2%	1,026	5,739	14,509.9	6.8%	992
South Africa		481	798.0	14.4%	115	492	913.0	13.9%	126
AFRICA		481	798.0	14.4%	115	492	913.0	13.9%	126
Australia		514	1,342.9	12.4%	166	448	1,098.7	13.1%	144
New Zealand		401	832.0	10.5%	87	379	793.0	10.5%	83
AUSTRALIA/OCEANIA		915	2,174.9	11.6%	253	827	1,891,7	12.0%	227
WORLD		***56,747***	***113,669.3***	***9.6%***	***10,952***	**52,156**	**99,879,1**	**9.5%**	**9,475**

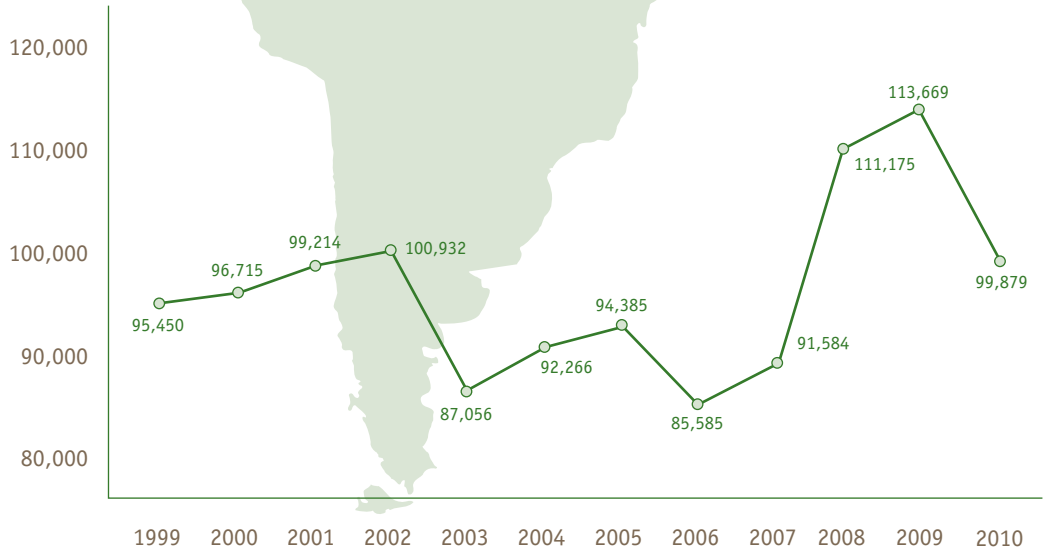
in italics:
corrections for 2009 as stated in last year's report.

** estimate*

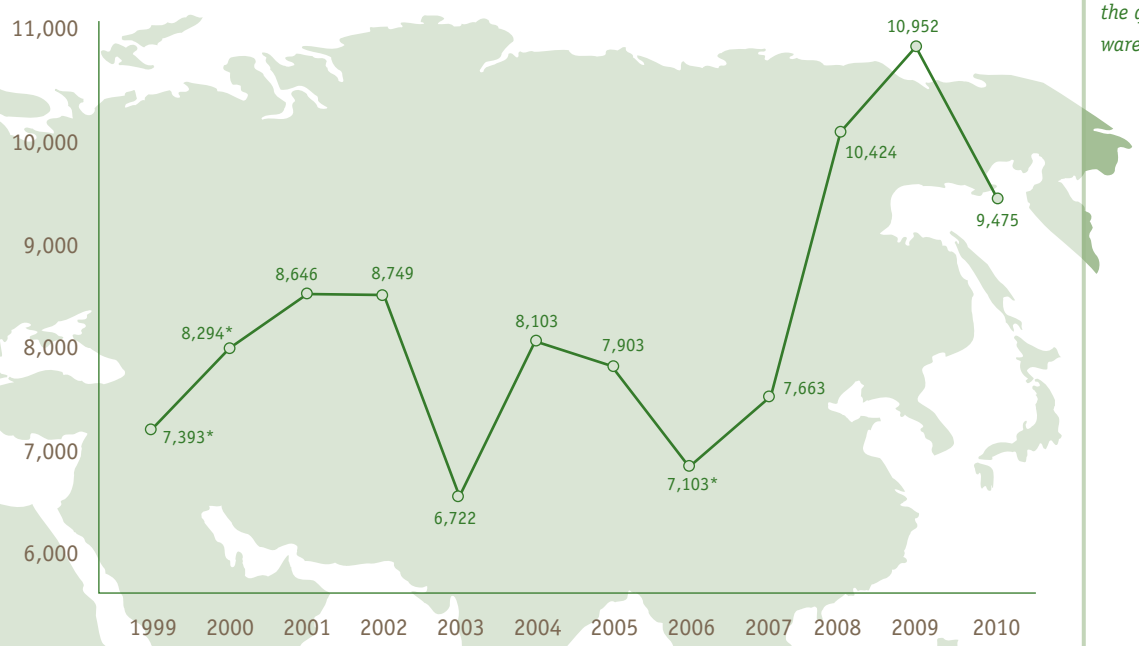
Rounding differences of the acreage may cause differences in addition.

HOP AREA UNDER CULTIVATION HA

HOP PRODUCTION MT



HOP ALPHA PRODUCTION MT

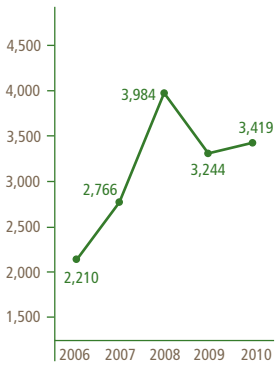


** not taking into consideration the quantities destroyed in warehouse fires*

BEER PRODUCTION IN MILL. HL

GERMANY

Alpha production in mt



Rounding differences of the acreage may cause differences in addition.

Area	Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
		2009	+/-	2010	2009	2010	2009	2010
Hallertau	Perle	3,126	13	3,139	1.52	1.74	4,738.08	5,464.28
	Hallertau Tradition	2,492	21	2,513	1.71	1.69	4,273.41	4,253.93
	Hersbruck Spaet	766	-11	755	1.74	1.56	1,331.21	1,178.46
	Hallertau Mittelfrueh	761	-57	704	1.05	1.49	801.37	1,048.70
	Spalt Select	727	-37	690	1.92	1.87	1,393.75	1,287.12
	Saphir	185	10	195	1.86	1.91	344.48	372.88
	Other Aroma	75	0	75	1.16	1.54	87.00	115.33
	Total Aroma	**8,132**	**-62**	**8,070**	**1.59**	**1.70**	**12,969.30**	**13,720.70**
	Northern Brewer	268	-20	248	1.26	1.67	336.73	414.06
	Other Bitter	27	0	27	1.67	2.15	45.20	57.94
	Total Bitter	**295**	**-20**	**275**	**1.29**	**1.72**	**381.93**	**472.00**
	Hallertau Magnum	3,415	-75	3,340	1.59	1.99	5,422.86	6,633.05
	Herkules	2,207	143	2,350	2.33	2.51	5,136.75	5,895.07
	Hallertau Taurus	1,077	-52	1,025	1.76	1.72	1,896.20	1,763.14
	Nugget	249	-13	236	1.97	2.10	490.37	495.14
	Hallertau Merkur	68	-5	63	1.43	1.74	97.02	109.89
	Other High Alpha	7	-3	4	1.73	1.68	12.09	6.50
	Total High Alpha	**7,023**	**-5**	**7,018**	**1.86**	**2.12**	**13,055.29**	**14,902.79**
	Other	**23**	**1**	**24**	**0.71**	**1.42**	**16.29**	**34.15**
	Total Hallertau	15,473	-86	15,387	1.71	1.89	26,422.81	29,129.64
Elbe-Saale	Perle	150	2	152	1.92	1.76	287.54	267.84
	Hallertau Tradition	33	-5	28	1.70	1.60	56.18	44.70
	Other Aroma	8	0	8	0.38	1.26	3.03	9.74
	Total Aroma	**191**	**-3**	**188**	**1.82**	**1.71**	**346.75**	**322.28**
	Northern Brewer	132	-5	127	1.52	1.59	200.39	201.66
	Total Bitter	**132**	**-5**	**127**	**1.52**	**1.59**	**200.39**	**201.66**
	Hallertau Magnum	844	10	854	1.84	1.98	1,550.36	1,687.18
	Herkules	134	2	136	3.03	2.14	405.79	291.44
	Other High Alpha	76	-10	66	1.98	1.85	150.60	121.99
	Total High Alpha	**1,054**	**2**	**1,056**	**2.00**	**1.99**	**2,106.75**	**2,100.61**
	Other	**8**	**0**	**8**	**1.14**	**0.80**	**9.11**	**6.46**
	Total Elbe-Saale	1,387	-8	1,379	1.92	1.91	2,663.00	2,631.01
Tettnang	Tettnang	765	7	772	1.17	1.32	893.33	1,016.03
	Hallertau Mittelfrueh	302	-18	284	1.29	1.46	390.18	415.77
	Perle	70	8	78	1.99	2.06	139.51	160.95
	Other Aroma	52	5	57	1.69	1.94	87.81	110.76
	Total Aroma	**1,188**	**3**	**1,191**	**1.27**	**1.43**	**1,510.83**	**1,703.51**
	High Alpha	**30**	**4**	**34**	**2.96**	**2.77**	**88.68**	**94.09**
	Other	**3**	**-2**	**1**	**3.90**	**1.95**	**11.69**	**1.31**
	Total Tettnang	1,221	5	1,226	1.32	1.47	1,611.20	1,798.91
Spalt	Spalt Select	108	-4	104	2.03	1.86	219.25	193.69
	Spalt	84	7	91	1.09	1.33	91.55	121.34
	Hallertau Mittelfrueh	86	-6	80	1.38	1.56	118.40	124.92
	Other Aroma	61	-1	60	1.91	1.97	116.36	118.33
	Total Aroma	**338**	**-2**	**336**	**1.61**	**1.66**	**545.56**	**558.28**
	High Alpha	**35**	**5**	**40**	**1.85**	**2.07**	**64.86**	**82.83**
	Total Spalt	373	3	376	1.64	1.71	610.42	641.11
Rheinpf,/ Hochdorf	**Aroma**	**16**	**0**	**16**	**1.92**	**1.71**	**30.79**	**27.17**
	High Alpha	**3**	**1**	**4**	**1.82**	**1.54**	**5.45**	**5.97**
	Total Rheinpf./Hoch.	19	1	20	1.91	1.66	36.24	33.14
Total Aroma		**9,866**	**-66**	**9,800**	**1.56**	**1.67**	**15,403.23**	**16,331.94**
Total Bitter		**427**	**-25**	**402**	**1.36**	**1.68**	**582.32**	**673.66**
Total High Alpha		**8,145**	**7**	**8,152**	**1.88**	**2.11**	**15,321.03**	**17,186.29**
Total Others		**34**	**-1**	**33**	**1.09**	**1.28**	**37.09**	**41.92**
GERMANY TOTAL		18,472	-86	18,386	1.70	1.86	31,343.67	34,233.81

Farm Structure

The number of registered hop growers has again decreased. At the time of harvest in 2010 there were 1,435 producers in Germany, i.e. 38 hop farms fewer than in crop year 2009. The number of growers in the Hallertau region was 1,164 (-32). Although acreage also fell in the same period, the average hop acreage per farm in Germany rose from 12.5 ha to 12.8 ha. In the Hallertau region, the average hop acreage per farm was 13.2 ha.

Growth, crop estimate and weights

As in the year before, the winter of 2009/2010 was unusually cold, with continuous night frosts from late December to mid-March. The winter was also particularly snowy and the German hop-growing regions were almost continuously under a complete snow cover until mid-March. As a result, growers were not able to begin cutting until the second half of March. However, there were no visibly adverse effects on the condition of the hop plants when vegetation began.

April 2010 was characterised by a lasting period of high pressure under the influence of which spring began with above-average sunshine and low rainfall. The soil dried out quickly, making the ground suitable for vehicles and thus allowing spring work to be carried out in favourable conditions.

From 1 May the weather changed and the hop plants had to be trained in rainy conditions accompanied by cool temperatures. The cool weather conditions led to a delay in the development of the hop plants. In comparison to the previous years, the lag in growth amounted to approx. one week. In addition, in most cases the necessary plant protection measures could not be taken on schedule due to the unsuitability of the waterlogged ground for vehicles. With temperatures rising significantly in late May there was a widespread outbreak of primary infections with downy mildew, with the most serious damage evident in the areas affected by hail a year previously.

In the evenings of 25 and 26 May unusually wide-ranging thunderstorms with hail of varying severity occurred in both the north-eastern and central areas of the Hallertau region. In the hop gardens in these areas up to 100 % of the hop plants were torn down. In total, an area of approx. 2,000 ha was affected.

The very rainy weather, which created favourable conditions for mould disease, continued until around the middle of June and called for intensive plant protection measures. At the end of the month dry, summery weather set in, bringing high temperatures. The hot, dry weather continued throughout the first three weeks of July, causing plant impairment due to lack of water in locations with low water storage capacity. Vertical growth was completed in the last ten days of July. At this time, the hops either began to bloom or were already in full bloom, depending on the variety. Cone development began in the early varieties, such as **Northern Brewer** and **Hallertau Mittelfrueh**. On the whole, August was too cool for the time of year and very rainy, with an average of 165 l/m². Consequently, the ripening of the hop plants was delayed and in most cases the harvest did not begin until September, one to one and a half weeks later than usual. The mainly dry weather during the harvest helped the growers to bring in hops of high quality.

With a final total of 34,234 mt, the production volume in 2010 was 2,890 mt higher than that of crop year 2009. Compared with the official volume estimate of August 2010, the volume actually produced was 4.1 % lower, whereby the yield of the **Hallertau Mittelfrueh** variety was underestimated by 11 % and that of the **Herkules** variety was significantly overestimated by 19 %.

Area	Estimate (mt) August 2010	Weight (mt) 31 March 2011	Difference
Hallertau	30,500.00	29,129.64	-4.5%
Elbe-Saale	2,745.00	2,631.01	-4.2%
Tettnang	1,805.00	1,798.91	-0.3%
Spalt	597.25	641.11	7.3%
Rheinpfalz/Hochdorf	37.40	33.14	-11.4%
TOTAL	35,684.65	34,233.81	-4.1%

Acreage and Variety Development

Comparing crop year 2010 with 2009, there was a slight overall reduction in acreage amounting to 86 ha. The biggest change among the aroma varieties was registered for **Hallertau Mittelfrueh** which was cut back by 81 ha. In the high alpha variety group, the area planted with **Herkules** hops was increased by 154 ha, while **Hallertau Magnum, Hallertau Taurus** and other high alpha varieties were cut back.

Changes within the variety groups: aroma -66 ha (0.7 %), bitter -25 ha (5.9 %), high alpha +7 ha (0.1 %).

GERMANY

In the last five years the acreage developed as follows:

Variety	2006 ha	2007 ha	2008 ha	2009 ha	2010 ha
Perle	3,112	3,246	3,297	3,380	3,403
Hallertau Tradition	2,322	2,457	2,503	2,605	2,624
Hallertau Mittelfrueh	2,036	2,082	2,034	1,150	1,069
Spalt Select	854	846	842	841	801
Tettnang	752	725	731	765	772
Hersbruck Spaet	871	747	740	768	758
Saphir	191	186	187	185	196
Spalt	98	92	90	84	91
Other Aroma	47	56	77	87	87 [1)]
Total Aroma	**10,283**	**10,437**	**10,502**	**9,866**	**9,800**
Northern Brewer	550	471	438	401	375
Other Bitter	32	31	32	27	27 [2)]
Total Bitter	**582**	**502**	**471**	**427**	**402**
Hallertau Magnum	4,387	4,263	4,277	4,266	4,202
Herkules	214	868	1,868	2,388	2,542
Hallertau Taurus	1,178	1,146	1,140	1,106	1,054
Nugget	331	290	281	279	266
Other High Alpha	176	137	120	106	89 [3)]
Total High Alpha	**6,286**	**6,704**	**7,686**	**8,145**	**8,152**
Other	**19**	**28**	**37**	**34**	**33** [4)]
GERMANY TOTAL	17,170	17,671	18,695	18,472	18,386

Share per variety group in 2010:
Aroma varieties 53 %
Bitter varieties 2 %
High alpha varieties 44 %

The addition of rounded acreage figures may lead to differences in some cases.

1) Other aroma hops include: Hersbruck Pure, Opal, Saaz, Smaragd
2) Other bitter hops include: Brewers Gold
3) Other high alpha hops include: Hallertau Merkur, Target, Zeus
4) Others include: Record, others/selections

Market Development

After the 2009 harvest had been completed there was no activity of any consequence on the contract market for many months. It was not until July 2010 that a hop marketing firm offered extension contracts for various selected varieties, but on condition that only existing contracts would be extended and so that due to the specific nature of the contracts there would be no new planting which would put additional pressure on the market. For example, contracts were offered and concluded for **Hersbruck Spaet** hops starting at 3.80 EUR/kg for 2013, and rising to 3.90 EUR/kg for 2014 and 4.00 EUR/kg from 2015 to 2017, and for **Hallertauer Tradition** starting at 3.50 EUR/kg for 2011 and rising to 3.70 EUR/kg from 2012 to 2017 (maximum). Contracts for the classic bitter variety **Northern Brewer** were offered at prices of 4.00 EUR/kg from 2012 up to and including 2016 and 4.50 EUR/kg from 2017 to 2019.

There was a strictly limited offering of contracts for the high alpha varieties **Hallertau Magnum** and **Hallertau Taurus** starting at 3.60 EUR/kg for 2014, 3.70 EUR/kg for 2015, 3.80 EUR/kg for 2016 and finally 3.90 EUR/kg for 2017. These contracts were only offered in conjunction with contracts for the high alpha variety **Herkules** that were at least equivalent in volume terms, from 2013 up to 2020 at most at a price of 15.00 EUR/kg alpha acid.
There was no purchasing activity worth mentioning on the open market in 2010 until early October, when the HVG growers' cooperative opened its hop pool as it had done for many years and at the same time hop growers received purchasing offers from other hop marketing companies. Barth's 2010 purchasing initiative included advance payment prices for all varieties and fixed prices of 3.00 EUR/kg for **Hallertau Tradition** and 4.00 EUR/kg for the niche variety **Saphir**. The advance payment prices offered by the market participants were essentially identical, e.g. 1.00 EUR/kg for the varieties **Hallertau Mittelfrueh** and **Hallertau Magnum**, 1.30 EUR/kg for **Hallertau Taurus**, 2.00 EUR/kg for **Hersbruck Spaet** and **Perle** and finally 2.50 EUR/kg for the varieties **Hallertau Tradition** and **Northern Brewer**.
Nearly all the non-contracted hops were purchased within a few weeks in response to the initiatives of the growers' cooperative and the hop marketing companies or on the basis of the various fixed price offers on the first marketing level.

At the turn of the year 2010/2011 contracts were offered by various hop marketing companies at 6.00 EUR/kg for **Hallertau Mittelfrueh** hops with a period running from 2011 to 2015 at most. Nearly all available acreage of this variety was contracted on these conditions. Immediately after that, a hop marketing company offered contracts at 2.50 EUR/kg for 2011, 3.40 EUR/kg for 2012, 3.50 EUR/kg for 2013 and 3.60 EUR/kg for 2014 for the aroma variety **Perle** and at 3.20 EUR/kg for 2011, 3.50 EUR/kg for 2012, 3.60 EUR/kg for 2013 and 3.70 EUR/kg for 2014 and 2015 for the variety **Hallertau Tradition**. In addition, long-term contracts were also offered for the high alpha

variety **Herkules** starting at 15.00 EUR/kg alpha acid as of 2013 and providing an annual price increase of 0.50 EUR/kg alpha acid for each subsequent year of the contract period, i.e. 15.50 EUR/kg alpha acid for 2014, 16.00 EUR/kg alpha acid for 2015, etc.
It is apparent from the prevailing prices for non-contracted hops and the contracts offered that the market continues to be characterised by an almost historically high degree of overproduction in the high alpha segment, with no sign of a recovery in this segment of the market in the near future. On the other hand, even in these times of extreme overproduction, specific varieties – primarily in the aroma segment – and limited quantities are in demand and are being marketed at normal price levels.

Alpha acids

While the alpha acid values of the aroma varieties were in line with or above the 5-year average, with the sole exception of **Perle**, the results for the high alpha varieties were in line with or below the 5-year average. Compared with the previous year, only the aroma varieties **Hersbruck Spaet** and **Smaragd** achieved higher levels, while all the other varieties remained below or equalled the values recorded in crop year 2009. In spite of the lower average alpha acid content overall, the alpha yield rose as a result of the year-on-year increase of 5.4 % in alpha volume from the bitter and high alpha varieties.

The alpha acid table shows the average alpha acid values measured in freshly harvested hops by members of "Arbeitsgruppe Hopfenanalyse" (AHA) on the fixed date of 15 October. The members of AHA are the in-house laboratories of the German hop processing plants, the Bavarian state institute of agriculture's hop department (Hüll), BLQ Weihenstephan, VLB Berlin and Labor Veritas (Zürich).
These values constitute the basis for any adjustments of supply contracts containing "alpha clauses" between the brewing industry and the hop industry. The alpha clause was devised jointly by the German brewers' association and the hop industry association and was applied for the first time as a result of the 2003 harvest. It is a contractual provision used solely in forward contracts for aroma hops. The average values serve as the basis for parties concluding new supply contracts containing an alpha clause.

Alpha acid values as is, as per EBC 7.4, in **freshly harvested hops.**
All other alpha acid values mentioned in the Barth Report were recorded on the basis of % as is, EBC 7.4 ToP (Time of Processing).

Area	Variety	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Ø 5 Years	Ø 10 Years
Hallertau	Hallertau	4.6	4.6	3.1	4.3	4.4	2.4	3.9	4.4	4.2	3.8	3.7	4.0
	Hersbruck Spaet	3.0	3.2	2.1	3.0	3.5	2.2	2.6	2.9	3.4	3.5	2.9	2.9
	Saphir	–	–	–	3.4	4.1	3.2	4.6	5.1	4.5	4.5	4.4	–
	Opal	–	–	–	–	–	–	7.4	9.4	9.0	8.6	8.6	–
	Smaragd	–	–	–	–	–	–	6.1	6.7	6.4	7.4	6.7	–
	Perle	7.0	8.6	3.9	6.4	7.8	6.2	7.9	8.5	9.2	7.5	7.9	7.3
	Spalt Select	4.8	6.0	3.2	4.9	5.2	4.3	4.7	5.4	5.7	5.7	5.2	5.0
	Hallertau Tradition	6.3	7.2	4.1	6.3	6.3	4.8	6.0	7.5	6.8	6.5	6.3	6.2
	Northern Brewer	9.6	10.1	6.0	9.8	9.8	6.4	9.1	10.5	10.4	9.7	9.2	9.1
	Hallertau Magnum	13.9	14.6	11.7	14.8	13.8	12.8	12.6	15.7	14.6	13.3	13.8	13.8
	Nugget	11.9	12.4	8.5	10.6	11.3	10.2	10.7	12.0	12.8	11.5	11.4	11.2
	Hallertau Taurus	15.7	16.5	12.3	16.5	16.2	15.1	16.1	17.9	17.1	16.3	16.5	16.0
	Hallertau Merkur	–	–	–	13.5	13.3	10.3	13.0	15.0	14.8	12.6	13.1	–
	Herkules	–	–	–	–	–	–	16.1	17.3	17.3	16.1	16.7	–
Elbe-Saale	Hallertau Magnum	13.9	13.9	10.2	14.0	14.4	12.4	13.3	12.2	13.7	13.1	12.9	13.1
Tettnang	Tettnang	4.4	4.6	2.6	4.7	4.5	2.2	4.0	4.2	4.2	4.0	3.7	3.9
	Hallertau	4.5	4.8	3.1	5.0	4.8	2.6	4.3	4.7	4.5	4.2	4.1	4.3
Spalt	Spalt	4.4	4.6	3.1	4.4	4.3	2.8	4.6	4.1	4.4	3.7	3.9	4.0

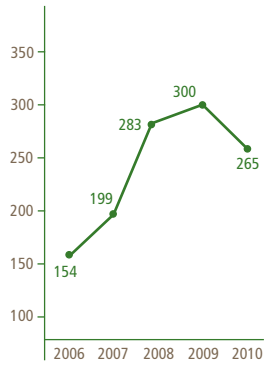
Alpha acid values in 2010 failed to match the very good results of the previous year, but remained in line with the average results of previous years.

If the figures for the years 2006 to 2010 are not complete, the 5-year average refers to the average figure for the years available.

values in %

CZECH REPUBLIC

Alpha production in mt



Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Saaz	4,627	-70	4,557	1.17	1.44	5,395.3	6,568.5
Premiant	293	-16	277	1.65	1.81	483.9	502.0
Sládek	277	0	277	2.05	1.94	567.9	538.2
Other Aroma	13	-6	7	0.51	1.06	6.7	7.4
Total Aroma	**5,210**	**- 92**	**5,118**	**1.24**	**1.49**	**6,453.8**	**7,616.1**
Agnus	58	3	61	2.13	2.08	123.8	127.0
Other High Alpha	15	-6	9	1.41	1.19	21.2	10.7
Total High Alpha	**73**	**-3**	**70**	**1.99**	**1.97**	**145.0**	**137.7**
Other	**24**	**-2**	**22**	**0.70**	**0.81**	**16.9**	**17.9**
CZECH REPUBLIC TOTAL	5,307	-97	5,210	1.25	1.49	6,615.7	7,771.7

Farm Structure

As a result of two farms discontinuing hop production, the total number of producers in crop year 2010 was 133. Taking into account the total planted area, an average of 39.2 ha of hops was farmed by each producer.

Acreage/Production/Alpha Content

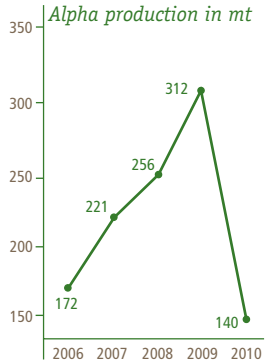
The acreage planted with hops declined further. The changes in the three hop-growing regions were as follows: **Saaz** -68 ha, **Tirschitz** +5 ha, **Auscha** -34 ha. Growing conditions were ideal from the start of flowering to the beginning of cone development. As a result, the average yield obtained from the **Saaz** variety was a record-breaking 1.44 mt/ha. The yield obtained in the previous five crop years had averaged only 1.10 mt/ha. Although the yield obtained from all varieties in crop year 2009 had already been well above the average, this level was exceeded again by nearly 20 % in crop year 2010. The alpha levels, on the other hand, remained below the long-term average (alpha acid values for crop year 2009 in brackets): **Saaz** 2.8 % (3.6 %), **Sládek** 5.8 % (7.2 %) and **Premiant** 6.6 % (9.4 %). The volume of alpha produced in crop year 2010 was 11 % below the previous year's level.

Market Situation

With production volume at an average level, nearly all the sales of hops produced in crop year 2010 were based on forward contracts. The volume actually produced presented growers with a new situation, particularly because Czech hops were proving to be difficult to market as a result of declining demand from traditional customers. For the first time in the history of the Czech hop industry, Chmelarstvi, the national growers' association, set up a "hop pool" to which growers could sell unsold lots of **Saaz** hops. The growers were paid 15 CZK/kg (0.60 EUR/kg) for lots supplied to this pool. Further advance payments were planned, but nothing had happened by the end of our reporting period in mid-April. According to data published in the Czech Republic, significant quantities in the pool remained unsold at the time of going to press. In order to relieve the strain on the market and to assure the hop growers of a longer-term future, there have been calls from certain quarters in the Czech hop industry for a reduction in the acreage of **Saaz** hops by up to 1,000 ha over the next two years. The growers' association Chmelarstvi has produced a set of "common rules for hop production and marketing" under which its members are obliged to adapt hop acreage to existing hop contracts. According to estimates, approx. 785 ha of the acreage planted with **Saaz** hops has been taken out of production in 2011.

POLAND

Alpha production in mt



Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Lubelski	514	-129	385	1.29	0.52	663.0	200.9
Other Aroma	190	-16	174	1.63	1.06	309.0	184.6
Total Aroma	**704**	**-145**	**559**	**1.38**	**0.69**	**972.0**	**385.5**
Marynka	890	-192	698	1.89	1.07	1,681.0	745.0
Other Bitter	51	-10	41	1.44	0.69	73.2	28.1
Total Bitter	**941**	**-202**	**739**	**1.86**	**1.05**	**1,754.2**	**773.1**
Hallertau Magnum	480	53	533	1.90	1.29	912.0	688.2
Other High Alpha	43	-7	36	1.24	0.56	53.0	20.0
Total High Alpha	**523**	**46**	**569**	**1.85**	**1.24**	**965.0**	**708.2**
POLAND TOTAL	2,167	-300	1,867	1.70	1.00	3,691.2	1,866.8

Rounding differences of the acreage may cause differences in addition.

POLAND

Farm Structure

Due to the difficult market environment, a large number of producers withdrew from hop farming after crop year 2009. In crop year 2010, the number of farms still involved in this specialised field was 868, i.e. 142 growers fewer. The average hop acreage per farm remained the same at 2.1 ha due to the fact that total acreage had declined correspondingly.

Acreage/Production/Alpha Content

Varietal structure was affected both by clearing and by variety switching. The largest reduction was seen for the **Marynka** variety, followed by **Lubelski**. On the other hand, the acreage planted with **Hallertau Magnum** hops increased. Total acreage decreased by 14 %.

Unusually heavy rainfall in May and again in June caused flooding of the Vistula River in Wilkow and the surrounding area. An area of approx. 140 km² was affected, leaving 26 villages in flood waters of between approx. 1 and 6 metres, depending on the location Some 14,000 people had to be evacuated. The floods hit one of Poland's most important hop growing regions. In the region of Wilkow the area planted with hops was 685 ha, of which approx. 440 ha was affected by the floods. In addition, during the month of August there were incidents of thunderstorms and torrential rain at various times and in different places which caused individual hop trellises to collapse.

Yields and quality were average, with the exception of the hops from the region affected by flooding. The results recorded for alpha content, however, were lower than those reported in crop year 2009: **aroma varieties** 3.7% (4.8 %), **bitter/high alpha varieties** 8.5 % (9.8 %). **Lubelski** hops in particular were disappointing, with an alpha content of only 2.3 %, which, taking acreage reduction and the lower production volume into account, meant that the **alpha yield was 84 % lower** than that of the previous year. The generally very low volume of Polish hops combined with the low alpha levels, brought alpha production down by 55 %.

Market Situation

Due to the insolvency of Poland's biggest hop merchant, Chmiel Polski, very many farms have lost all of their forward contracts. In addition, some of the farmers received no money for shipments of hops from the 2009 crop. Because of the collapse of the Polish hop market in 2008 and 2009, the government stepped in to support the hop growers with subsidies. Additionally, a state aid programme in the form of tax relief and low-interest loans was set up to provide support for all the farms affected by the floods.

Due to the flooding there were no hops of the **Lubelski** variety available on the spot market. Most of the hops of the other varieties were sold. Unsold stocks of hops harvested in previous years either were destroyed in the flooding or are probably no longer useable. In the area where flooding caused complete crop failure, more than half of the farms are likely to discontinue hop growing.

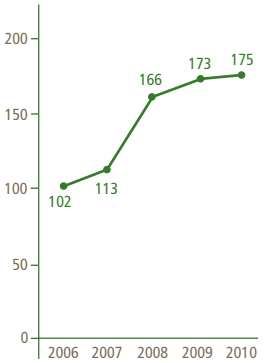
Damaged hop trellis systems covering an area of approx. 300 ha are currently being repaired. At the time of reporting, in mid-May, it remained unclear as to how much smaller acreage would be by the time of the 2011 harvest. An estimated 1,100 mt of hops have been contracted for crop year 2011.

Attempts are being made by the hop growers, involving the government, to exert pressure on the domestic breweries to achieve an undertaking to purchase Polish hops.

SLOVENIA

Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Development of production Production mt	
	2009	**+/-**	**2010**	**2009**	**2010**	**2009**	**2010**
Aurora	985	-140	845	1.61	1.79	1,581.9	1,516.7
Savinjski Golding	186	0	186	1.06	1.25	197.8	232.1
Styrian Golding (Celeia)	137	3	140	1.94	2.54	265.6	355.6
Bobek	160	-28	132	2.08	1.85	333.1	244.4
Other Aroma	39	-23	16	0.92	1.23	36.0	19.6
Total Aroma	**1,507**	**-188**	**1,319**	**1.60**	**1.80**	**2,414.4**	**2,368.4**
Magnum	64	0	64	1.07	1.10	68.3	70.1
Other High Alpha	8	0	8	2.11	2.90	16.9	23.2
Total High Alpha	**72**	**0**	**72**	**1.18**	**1.30**	**85.2**	**93.3**
SLOVENIA TOTAL	1,579	-188	1,391	1.58	1.77	2,499.6	2,461.7

Alpha production in mt



Farm Structure

The number of hop farms remained constant at 133, although there was a decline in hop acreage. The average area planted with hops fell from 11.9 ha per farm in crop year 2009 to 10.5 ha the following year.

SLOVENIA

Acreage/Production/Alpha Content

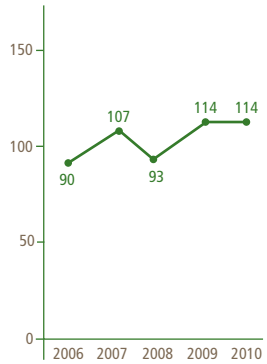
While the acreage planted with **high alpha hops** remained unchanged, the acreage devoted to **aroma varieties** decreased. The decline in acreage amounted to 12 % nationwide. In July, the weather was dry and mostly very hot. In this period, the irrigation systems installed on approx. 30 % of the hop acreage proved their worth. The weather conditions throughout the rest of the season were normal. The crop yield per hectare was significantly above the long-term average. Results for the **Aurora** variety in particular were well above average, both in terms of yield and in terms of alpha content (2010: 8.6 % / 2009: 8.0 %). The alpha contents of the other main varieties in Slovenia compared with the previous year as follows (2009 values in brackets): **Savinjski Golding** 3.3 % (3.8 %), **Styrian Golding (Celeia)** 4.1 % (4.0 %), **Bobek** 4.3 % (4.7 %). Despite the reduction in acreage, the alpha yields for all varieties remained unchanged year on year.

Market Situation

At the time of picking, less than half of the volume produced in crop year 2010 had been sold. The forward contract price for **Aurora** hops, the main variety, was 3.00 EUR/kg on average. Prices on the spot market ranged from 1.60 to 1.80 EUR/kg in later trading. While the varieties **Savinjski Golding** and **Styrian Golding** were still selling at 7.00 EUR/kg and between 4.20 and 5.30 EUR/kg respectively up to the end of 2010, approx. 70 mt of **Bobek** and approx. 300 mt of **Aurora** hops remained unsold at the time of reporting in April 2011. Stocks of approx. 100 mt of **Aurora** hops from the 2009 crop were also available in April 2011. Due to the market environment the hop growers found themselves in a very difficult financial position. In order to ensure the survival of the farms, the Slovenian Ministry of Agriculture has agreed to provide financial aid. Acreage is expected to decrease further by approx. 120 ha. The forward contract rate for this year's crop is once again below 50 %.

ENGLAND

Alpha production in mt



Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	**+/-**	**2010**	**2009**	**2010**	**2009**	**2010**
Golding	275	1	276	1.49	1.69	409.0	466.5
First Gold	167	-32	135	0.75	0.96	124.5	129.4
Fuggle	103	-11	92	1.66	1.85	170.5	169.9
Challenger	81	1	82	1.49	1.80	121.0	147.6
Other Aroma	203	26	229	1.14	1.12	231.0	255.4
Total Aroma	**829**	**-15**	**814**	**1.27**	**1.44**	**1,056.0**	**1,168.8**
Target	111	-3	108	1.62	1.67	180.3	180.3
Pilgrim	66	9	75	1.26	1.79	83.0	134.4
Other High Alpha	75	-2	73	1.67	1.71	125.1	124.7
Total High Alpha	**252**	**4**	**256**	**1.54**	**1.72**	**388.4**	**439.4**
ENGLAND TOTAL	1,081	-11	1,070	1.34	1.50	1,444.4	1,608.2

Farm Structure

At the time of the 2010 harvest, hops were grown on 56 farms. Following a decline in the number of hop farms by one, accompanied by a reduction in total acreage compared with crop year 2009, the average area planted with hops remained unchanged at 19 ha per farm.

Acreage/Production/Alpha Content

There were further changes in varietal planting patterns. Of the newly planted aroma varieties the most common were **Bramling Cross, Progress** and **Sovereign**. Thanks to favourable weather conditions for hop growing, particularly in East Kent, yields were above average among both the aroma varieties and the high alpha varieties. Although the alpha contents did not equal the very high levels recorded the year before, they remained on a par with the long-term average (2009 values in brackets): **Golding** 4.8 % (5.8 %), **First Gold** 8.2 % (8.3 %), **Fuggle** 4.5 % (4.6 %), **Challenger** 7.4 % (7.5 %), **Target** 10.5 % (11.3 %). The rise in production volume coupled with the fall in alpha content in 2010 compared with crop year 2009 meant that alpha yield remained virtually unchanged.

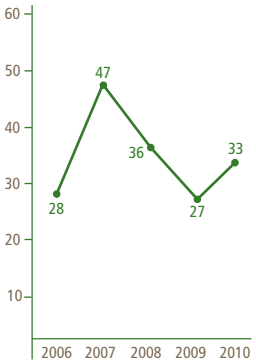
Market Situation

At the beginning of the 2010 harvest, the growers had already sold about 80 % of production volume at an average price of approx. 8.00 EUR/kg. Spot hops sold at an average price of 6.80 EUR/kg. English hops are grown mainly for the domestic brewing industry. Compared with hop-exporting countries, England is affected only to a limited extent by the world market. By early April, only small quantities of aroma hops were still available. Forward contracts account for approx. 80% of the production volume forecast for 2011. Acreage is expected to remain unchanged.

FRANCE

Area	Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
		2009	+/-	2010	2009	2010	2009	2010
Alsace	Strisselspalt	288	-70	218	1.78	1.49	511.6	325.0
	Other Aroma	194	87	281	1.16	1.23	224.4	346.1
	Total Aroma	**482**	**17**	**499**	**1.53**	**1.34**	**736.0**	**671.1**
	Bitter	4	7	11	2.44	1.80	8.8	19.8
	High Alpha	17	22	39	1.83	1.34	31.5	52.3
	Total Alsace	502	46	549	1.55	1.35	776.3	743.2
Nord	Aroma	12	1	13	1.28	1.65	15.4	21.4
	Bitter	4	0	4	1.43	1.69	6.3	7.4
	High Alpha	14	0	14	1.39	1.44	19.8	19.5
	Total Nord	31	1	31	1.34	1.56	41.5	48.3
FRANCE TOTAL		533	47	580	1.53	1.36	817.8	791.5

Alpha production in mt



Rounding differences of the acreage may cause differences in addition.

Farm Structure

In 2010 the number of hop-producing farms remained constant at 86. As a result of an increase in planting, the average hop acreage per farm rose from 6.2 ha to 6.7 ha.

Acreage/Production/Alpha Content

While hop acreage remained unchanged in Northern France, restructuring of the variety range continued in the Alsace growing region. The acreage planted with **Strisselspalt** hops was further reduced in favour of the aroma varieties **Hallertau Tradition, Fuggle** and **Golding**. In addition to the increase in aroma hop acreage, some hop gardens that had been lying fallow were replanted with bitter and high alpha varieties.

At the end of June 2010 one quarter of the hop acreage in Alsace was damaged – 80 ha very severely – by a violent hailstorm. The hop plants recovered, however, thanks to favourable growing conditions. Average yields were adversely affected as a result of the variety switching measures.

With an alpha acid content of 2.3 % (previous year 2.0 %), the main variety **Strisselspalt** reached a level that was slightly above the long-term average. This and the increased planting of varieties with high alpha contents led to a year-on-year rise in alpha yield of 25 %.

Market Situation

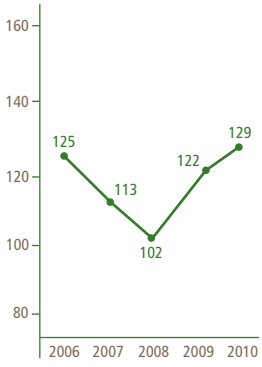
At the time of picking, growers held forward contracts accounting for a share of 75 % of the 2010 production volume. In April 2011 approx. 100 mt of hops, mainly harvested in the high-yielding crop years 2008 and 2009, remained unsold. The Alsatian hop growers will in future be offering the brewers a new alternative in the form of the new aroma variety **Aramis**. In terms of aroma and plant characteristics it is similar to **Strisselspalt** and it promises to deliver an alpha content of 7.5 %, with an expected yield of 1.7 mt/ha. After several series of trials, 20 ha was planted in the autumn and a further 30 ha is to follow in the current year. Nevertheless, total acreage in 2011 is expected to be approx. 60 ha down year on year. This is due to further removal of **Strisselspalt** and acreage reduction of **Hallertau Tradition** hops.

Somewhat more than half of the production volume expected for the 2011 crop has been sold on the basis of forward contracts.

SPAIN

Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Aroma	**1**	**0**	**1**	**0.35**	**0.40**	**0.3**	**0,4**
Nugget	457	35	492	2.18	2.05	996.7	1,010.7
Columbus	7	4	11	2.33	1.95	16.3	21.4
Magnum	4	0	4	1.50	1.53	6.0	6.1
Total High Alpha	**468**	**39**	**507**	**2.18**	**2.05**	**1,019.0**	**1,038.2**
SPAIN TOTAL	469	39	508	2.17	2.04	1,019.3	1,038.6

Alpha production in mt



SPAIN

Farm Structure

Hop growing in Spain is concentrated in the region around León in 34 villages, 6 of which account for 60 % of total acreage. The average planted acreage per farm in crop year 2010 was 2.2 ha, as opposed to 2.1 ha the previous year.

Acreage/Production/Alpha Content

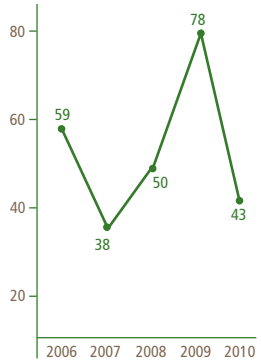
Total acreage was increased by 8.3 %. Production volume turned out better than had initially been expected. The weather conditions in August in particular made for slightly above-average yields for **Nugget**, the main variety, even though the very good results obtained the previous year could not be equalled. On the other hand, the alpha content recorded for **Nugget** (12.4 %) significantly exceeded that of the previous year (11.9 %). The alpha yield for all the other varieties increased by 6 %, while production volume remained virtually unchanged.

Market Situation

The Spanish brewing industry purchased the entire crop at a price of approx. 4.80 EUR/kg, and was thus able to meet approx. 50 to 55 % of its alpha requirements. There will be a slight increase in acreage in 2011. As part of a programme of variety switching, the main variety **Nugget**, with a current share of 97 % of total acreage, will see its share reduced to only 50 to 60 % over the next several years. The variety intended for planting in its place is **Columbus**.

UKRAINE

Alpha production in mt



Variety Group	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Aroma	930	-80	850	1.11	0.71	1,034.80	599.60
Bitter/High Alpha	416	-82	334	0.75	0.56	310.00	186.20
UKRAINE TOTAL	1,346	-162	1,184	1.00	0.66	1,344.80	785.80

Farm Structure

In crop year 2010 hops were grown on 62 farms, with 30 to 40 of these farms accounting for most of the acreage. Based on the total number of producers, the average acreage planted with hops was just below 20 ha per farm.

Acreage/Production/Alpha Content

Data regarding acreage, production volume and alpha content vary depending on the source. Hop farming encompasses a very wide range of varieties.

Aroma varieties: **Zagrava, Nationalnyi, Slovyanka, Zlato Polesie, Clon 18, Gaidamatskyi, Starovolynski, Triumph, SW-Aroma, UA-Aroma**.

Bitter/alpha varieties: **Promin, Polesky, Alta, Zmina, Magnat, Tur, Alpha Ray, UA-Bitter, Potiyivskyy, Obolonskyi, Ruslan**.

There is reason to believe that not all the hop plants were trained in crop year 2010. The acreage actually farmed may have been some 200 ha lower than the figure quoted in the table. Likewise it cannot be ruled out that the production volume was actually 200 mt lower. The weather conditions were too hot and too dry while the hops were in bloom. This resulted in reduced production volume and low alpha yield.

Market Situation

Hop farming in Ukraine is subsidised with state funds. The subsidies amount to between 2,000 and 3,000 EUR per hectare of farmed hopland. The state also subsidises purchases of harvesting machinery.

Some stocks of hops from 2010 and previous crop years remained unsold. Due to lack of demand from the domestic market the growers are looking to the world market for buyers.

RUSSIA

Variety Group	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Aroma	120	226	346	0.67	0.16	80.00	54.00
Bitter/High Alpha	150	-76	74	0.80	0.16	120.00	12.00
RUSSIA TOTAL	270	150	420	0.74	0.16	200.00	66.00

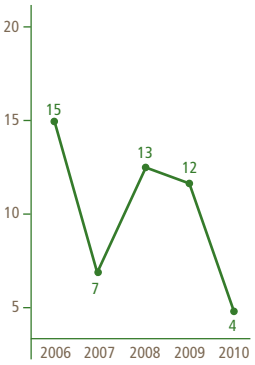
RUSSIA

Farm Structure
One producer stopped growing hops, leaving 14 growers in crop year 2010. As a result of hop acreage being increased during the same period, the average farmed area planted with hops rose from 18 ha to 30 ha per farm.

Acreage/Production/Alpha Content
According to the data obtained, hop acreage in crop year 2010 returned to the level recorded in 2008. The extreme summer temperatures of 40 °C and over without any rainfall for a period of two months resulted in the loss of 80 % of the usual production volume. The alpha contents, on the other hand, were above average: aroma varieties 4.8 % (previous year 4.2 %), bitter and high alpha varieties 12.0 % (previous year 6.8 %). Compared to crop year 2009, alpha production decreased by 65 % in 2010.

Market Situation
The low crop yields resulting from the weather conditions made it impossible for the growers to honour existing forward contracts in full. Consequently, there are no stocks left. Acreage may be down by as much as 100 ha in crop year 2011. 40 % of the crop has been forward-contracted.

Alpha production in mt

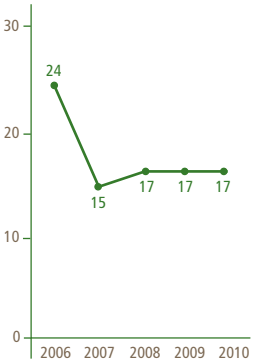


As of this year, the following **Country Special** report will feature a hop-growing country to which we would not normally devote a separate country report due to its small size.

COUNTRY SPECIAL - ROMANIA

Variety Group	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Development of production Production mt	
	2009	+/-	2010	2009	2010	2009	2010
Aroma	75	-9	66	0.89	0.97	67.00	64.00
Bitter/High Alpha	173	6	179	0.78	0.84	135.00	150.00
ROMANIA TOTAL	248	-3	245	0.81	0.87	202.00	214.00

Alpha production in mt



General
In Romania, hops are grown mainly in the northern central region of the country. The hop-growing areas are located near the towns of Sighisoara, Alba Iulia and Sibiu.

Farm Structure
There are eight hop farms in operation and there is one farm in the region of Ocna Mureş with 100 ha of trellises which is currently idle. The average hop acreage per farm is 80 ha. However, an average of only 30 ha per farm was worked in 2010. A government decree prohibits any trellises in the hop gardens from being dismantled – even in the event that the hop plants have been removed.

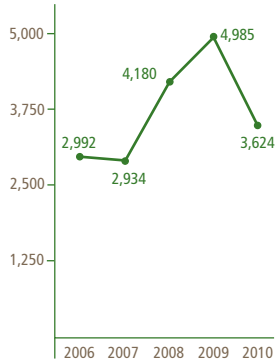
Acreage/Production/Alpha Content
Hop farming in Romania had its heyday in the early 1990s (1993: 2,625 ha). Today, trellis systems stand on an area of 713 ha, of which only 245 ha is planted with hops, however. In crop year 2010 average yields were very low as a result of varietal switching and also due to hail and moisture damage. Total hop production volume was 214 mt. The alpha content was 6.8 % in the aroma varieties and 9 % in the alpha varieties, which was below the long-term average.

Varietal range
The following varieties were grown in crop year 2010: the aroma varieties **Hueller** (35 ha), **Perle** (31 ha) and **Aroma** (acrage included in PE), the bitter variety **Brewers Gold** (89 ha) and the high alpha varieties **Hallertau Magnum** (62 ha) and **Hallertau Merkur** (28 ha).
As part of a national project, extensive research work on all aspects of hop farming has been carried out at the University of Agricultural Sciences in Cluj-Napoca. This includes the development of new hop varieties. As a result of the government's termination of the funding for hop research, there is no longer any money available for propagating the new local breeds such as **Napoca, Transsylvania, Alpha, Productiv** and **Super Alpha de Cluj**. The only locally bred variety in the current varietal range is **Aroma**.

Market Situation
The owners of the farms maintain direct contacts with Romanian breweries. However, it is no longer possible for them to market their entire produce in their own country. This is because the breweries now belong to international brewing groups and source their hops on the world market. As a result some stocks from the 2010 crop remain unsold. Existing forward contracts: 2010: 160 mt, 2011 to 2013: 150 mt.

USA

Alpha production in mt



Due to the conversion of acres into hectares (ha) and lbs into metric tons (mt) there are slight statistical deviations or rounding differences in the sum totals.

** As of 2002 the growers in the Idaho region have only had to report total acreage and total production volume. Therefore variety group distribution has been estimated.*

Area	Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Development of production Production mt	
		2009	+/-	2010	2009	2010	2009	2010
Washington	Willamette	1,100	-398	702	1.63	1.51	1,794.5	1,061.8
	Cascade	817	-118	699	2.38	2.14	1,941.5	1,493.2
	Cluster	203	-44	159	2.65	2.30	538.6	366.3
	Palisade	142	9	151	3.09	2.72	438.8	411.3
	Centennial	121	23	144	1.66	2.01	201.4	290.0
	Mount Hood	39	-14	25	1.75	1.36	68.4	34.1
	Golding	17	2	19	0.92	1.52	15.7	29.5
	Other Aroma	376	264	640	1.85	1.34	696.0	860.3
	Total Aroma	**2,815**	**-276**	**2,539**	**2.02**	**1.79**	**5,694.9**	**4,546.5**
	CTZ	4,614	-1,441	3,173	3.51	2.84	16,201.6	9,019.6
	Summit	1,310	-49	1,261	3.01	2.47	3,946.5	3,109.5
	Galena	976	-199	777	2.08	2.03	2,026.2	1,576.3
	Chelan/SGalena/Tillicum	648	39	687	3.30	2.87	2,138.8	1,974.0
	Nugget	416	-81	335	2.31	2.03	960.6	679.9
	Millenium	225	0	225	2.77	2.44	622.8	550.1
	Chinook	155	24	179	2.04	2.20	316.8	394.4
	Warrior	122	-2	120	2.36	1.99	288.1	238.7
	Other High Alpha	692	-140	552	2.60	2.92	1,801.4	1,612.4
	Total High Alpha	**9,159**	**-1,850**	**7,309**	**3.09**	**2.62**	**28,302.8**	**19,154.9**
	Total Washington	11,974	-2,126	9,848	2.84	2.41	33,997.7	23,701.4
Oregon	Willamette	999	-351	648	1.75	1.72	1,748.1	1,114.0
	Golding	55	18	73	1.56	1.52	85.7	110.9
	Mount Hood	64	5	69	1.87	1.84	119.7	127.2
	Cascade	62	-2	60	1.94	1.88	120.0	112.8
	Centennial	0	32	32	0.00	2.27	0.0	73.5
	Palisade	0	18	18	0.00	2.19	0.0	39.8
	Other Aroma	304	-164	140	1.76	1.68	533.7	235.6
	Total Aroma	**1,483**	**-443**	**1,040**	**1.76**	**1.74**	**2,607.2**	**1,813.8**
	Nugget	718	-50	668	2.85	2.30	2,048.9	1,534.3
	Chelan/SGalena/Tillicum	72	0	72	2.86	2.70	205.8	194.4
	Millennium	139	-111	28	2.86	2.61	398.2	73.2
	Other High Alpha	61	1	62	2.23	2.24	136.1	139.0
	Total High Alpha	**989**	**-159**	**830**	**2.82**	**2.34**	**2,789.0**	**1,940.9**
	Total Oregon	2,472	-602	1,870	2.18	2.01	5,396.2	3,754.7
Idaho*	**Total Aroma***	**732**	**-559**	**173**	**1.52**	**1.64**	**1,114.9**	**283.3**
	Total High Alpha*	**899**	**-129**	**770**	**2.71**	**2.56**	**2,436.4**	**1,967.7**
	Total Idaho	1,631	-688	943	2.18	2.39	3,551.3	2,251.0
Total Aroma*		**5,030**	**-1,276**	**3,754**	**1.87**	**1.77**	**9,417.0**	**6,643.6**
Total High Alpha*		**11,047**	**-2,138**	**8,909**	**3.04**	**2.59**	**33,528.2**	**23,063.5**
USA TOTAL		16,077	-3,415	12,662	2.67	2.35	42,945.2	29,707.1

Farm Structure

The number of growers (decision-making entities) for crop 2010 decreased by only one to 73 entities. This net reduction is the result of the departure of 7 smaller growers who had entered the hop industry during the high priced market of 2007 as offset by the entry of 6 new growers. The new growers, however, exclusively represent next generation growers who are taking on and making independent decisions on small sections of their parents' farms as part of an orderly generational transition. As a result, the average farm size has dropped from 217 ha in 2009 to 174 ha in 2010.

Acreage/Production/Alpha Content

The USDA acreage survey for 2010 showed a remarkable decrease of 21 % or 3,415 ha year over year to only 12,662 ha and, as such, has contracted to within 152 ha of crop 2007, i.e. the year before the "great expansion". In the past 100 years, there has only been two times where the US acreage dropped from one crop to the next by such magnitudes: One being during World War I, in 1917, and the other in 1953 when a marketing order was discontinued, which had stipulated how many hops could be sold on the spot market.

Overall production declined even more than the underlying acreage. The volume of hops harvested in 2010 was only 29,707 mt compared to the all time record of 42,945 mt the year before. This translates into a record year over year reduction of 31 %. Growers' acreage adjustment efforts focused on the alpha variety complex, **Columbus-Tomahawk-Zeus (CTZ)**. Its reduction was responsible for close to half of the acreage decrease with approx. 1,500 ha and more than half of the overall decline in volume with approx. 7,500 mt compared to the year earlier. Another variety which was taken out on a large scale was the aroma variety **Willamette**. It saw its acreage reduced by 750 ha and close to 1,400 mt. The varieties **Galena, Nugget** as well as **Cascade** among others also suffered acreage decreases. There were, however, some varieties that were increased, albeit slightly. These included **Centennial, Citra®, Bravo®, Chinook, Simcoe®** and **Super Galena®**. (It is noteworthy that most of the varieties whose acreage expanded in 2010 originated from private breeding programmes.)

Variety Development

In the last five years the acreage of the main varieties developed as follows:

Variety	2006 ha	2007 ha	2008 ha	2009 ha	2010 ha
Willamette	2,823	2,824	2,985	2,100	1,349
Cascade	484	559	891	900	799
Centennial	86	86	102	121	177
Palisade®	22	37	126	142	169
Cluster	146	152	174	207	159
Other Aroma	1,373	1,483	1,464	1,561	1,100
Total Aroma	**4,934**	**5,141**	**5,742**	**5,030**	**3,754**
Columbus-Tomahawk-Zeus (CTZ)	2,911	3,448	5,213	5,004	3,510
Summit®	27	256	972	1,310	1,261
Nugget	1,067	1,135	1,318	1,134	1,003
Chelan/SGalena®/Tillicum	259	244	641	887	946
Galena	1,733	1,418	1,207	1,083	841
Apollo®	-	-	391	414	401
Chinook	174	153	167	245	254
Millenium	473	414	429	365	253
Other High Alpha	306	302	470	606	441
Total High Alpha	**6,950**	**7,369**	**10,809**	**11,047**	**8,909**
USA TOTAL	11,884	12,510	16,551	16,077	12,662

The acreage for individual varieties has in some cases been estimated due to the fact that only the total acreage is reported by Idaho.

There may be differences in the sum totals due to acreage figures being rounded up or down.

Overall production of alpha decreased from crop 2009 to crop 2010 by more than 1,300 mt to 3,624 mt of alpha. This significant drop was the result of a combination of acreage and yield reductions compared to the prior year. The actual alpha contents for the crop actually increased from an average of 11.6 % to 12.2 %, as particularly the variety complex of **CTZ** saw a return to more typical alpha levels of more than 14 %. (CTZ had disappointed for the last three years and it was widely believed that this variety was no longer able to achieve the alpha performance of a "super alpha variety"). But the average crop alpha contents also increased due to a greater proportion of newer super alpha varieties, such as **Summit®, Apollo®** and **Bravo®**, all proprietary alpha varieties that have been introduced within the last few years. An improvement in alpha contents for crop 2010 was also noted in certain aroma varieties, such as **Willamette, Cascade** and similar varieties.

Alpha Acid Table

Variety	2006	2007	2008	2009	2010	Average
Willamette	4.6%	4.5%	4.7%	4.3%	4.8%	4.6%
Cascade	6.1%	5.7%	6.2%	5.6%	6.5%	6.0%
Cluster	7.0%	6.5%	6.4%	7.0%	6.8%	6.7%
Galena	12.1%	11.6%	11.9%	11.6%	11.5%	11.7%
Nugget	13.2%	12.3%	12.3%	12.2%	12.3%	12.5%
Columbus-Tomahawk-Zeus (CTZ)	15.2%	13.2%	13.3%	13.5%	14.1%	13.9%
Summit®	–	15.7%	15.8%	14.8%	16.3%	15.7%
Bravo®	–	–	15.5%	15.5%	15.5%	15.5%
Apollo®	–	–	17.0%	17.0%	17.0%	17.0%

USA

Crop Development

Washington: By late March, irrigation water projections estimated that there would be a 26 % reduction in the water supply for the Washington growing areas which created slight concerns about the upcoming crop. However, during April there was significant snowfall in the mountains which greatly improved the water outlook. But temperatures in late May and early June were cooler than normal, delaying plant growth and caused new concerns about the crop's yield potential. By early July, the industry could see that the plant growth was behind 10 to 14 days and needed to improve in order to produce a normal crop. Plant growth did not completely catch up, but the bloom set was outstanding. In the end, the growing season's weather pattern did impact yields negatively and causing yields to barely fill contracts.

Oregon: Autumn and early winter temperatures were colder than normal in Oregon. This trend changed to a warmer pattern from February through March. While snow pack remained below normal, heavy precipitation in April and May provided plenty of irrigation water. Along with the precipitation, however, came downy mildew pressures which continued to plague the Oregon crop until late summer. By mid July, it was apparent that the crop was lacking in vine development but it was hoped that the exceptionally heavy bloom set would offset the weaker growth. These hopes were mostly met, as the crop produced yields within long-term averages but lower than last year's strong crop.

Quality: The strong push by merchants and processors to continuously improve the quality of US hops was partially successful for crop 2010. The significant reduction of acreage, particularly of the variety complex of **CTZ**, helped ensure a harvesting in line with proper varietal maturity windows. As a result, visual quality aspects of most varieties returned to their typical ranges prior to the "great expansion" 2007/2008.

Contract Market

The 2010 contract market was similar to 2009 in that market activities focused on restructuring existing contracts instead of entering into new ones for purchasing hops. The scope of particularly the 2010 alpha contract restructuring efforts was much bigger than the year before and ultimately resulted in one of the largest alpha acreage decreases in US history. Growers realised that it was in their best interest to make use of the various programmes offered that included contract buyouts (the contract price minus the cost of production) and/or contract roll forwards (reduced volumes to be delivered in the near term for the same or more volumes in later years). In addition to alpha contract restructuring, a brewery direct programme also offered a cancellation fee for large volumes of contracted quantities of the aroma variety **Willamette** for the 2010 crop. Also this programme was effective in taking out the desired acreage.

Despite the focus on acreage removal, there were a few contracts placed for mostly specialty varieties. As such, **Cluster** sold for 4.41 USD/kg plus leaf/stem and **Chinook** for 5.62 USD/kg plus leaf/stem, both for 2010. Other contracts included **Mt. Hood, Centennial, Cascade** and **Horizon**. There were also reports of three year **Nugget** contracts, starting with 2.87 USD/kg plus leaf/stem in 2010.

Spot Market Crop 2010

As hop growers aimed to produce only contracted quantities, and yields from crop 2010 were just within expectations, little to no spot quantities were produced. In those cases where spot quantities were produced, the limited amounts made for a very short lived spot market. As such, **Mt. Hood** achieved prices from 7.72 USD to 8.27 USD plus leaf/stem per kg, **Cascade** 4.30 USD plus leaf/stem per kg and **Centennial** ranged between 8.27 USD and 8.49 USD/kg. No alpha hops were traded.

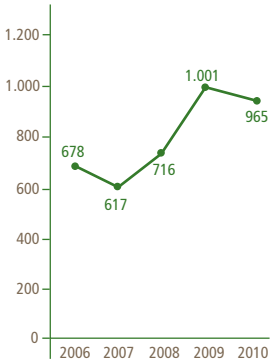
CHINA

Farm Structure

In crop year 2010, 58 farms were involved in hop growing – a year-on-year reduction of two farms. In the **Xinjiang** growing region hops were produced by 34 farms, 6 of which were private and 28 state-owned. In the **Gansu** region there were 24 hop farms, 14 of which were private and 10 state-owned. Seven of the 10 state-run farms have formed a cooperative, bringing together their hop growing and hop processing activities in order to establish a stronger market position for themselves in marketing their produce. On average an area of 95 ha per farm was devoted to hop growing. In crop year 2009 this figure had been 100 ha.

Area	Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
		2009	+/-	2010	2009	2010	2009	2010
Xinjiang	Tsingdao Flower	2,169	-55	2,114	2.75	2.40	5,970.0	5,074.0
	Kirin Flower	503	-13	490	3.24	2.98	1,632.0	1,462.0
	SA-1	360	-33	327	1.94	2.14	700.0	700.0
	Marco Polo	453	-200	253	2.65	2.96	1,200.0	750.0
	Other Aroma	120	-1	119	3.19	2.77	383.0	330.0
	Total Xinjiang	3,605	-302	3,303	2.74	2.52	9,885.0	8,316.0
Gansu	Tsingdao Flower	1,683	-237	1,446	3.07	2.92	5,161.0	4,217.0
	Marco Polo	308	-21	287	1.67	2.66	514.0	762.0
	Nugget	260	-8	252	1.41	0.96	366.0	241.0
	Other High Alpha	119	50	169	0.84	3.00	100.0	507.0
	Other Aroma	48	-3	45	2.29	1.73	110.0	78.0
	Total Gansu	2,418	-219	2,199	2.59	2.64	6,251.0	5,805.0
Total Aroma		**528**	**-37**	**491**	**2.26**	**2.26**	**1,193.0**	**1,108.0**
Total Bitter		**4,355**	**-305**	**4,050**	**2.93**	**2.66**	**12,763.0**	**10,753.0**
Total High Alpha		**1,140**	**-179**	**961**	**1.91**	**2.35**	**2,180.0**	**2,260.0**
CHINA TOTAL		6,023	-521	5,502	2.68	2.57	16,136.0	14,121.0

Alpha production in mt



There are no reliable statistics on acreage and production volume in China. The figures presented here which, due to the size of the Chinese hop-growing regions, are often based on estimates, have been gathered using our own sources.

Acreage/Production/Alpha Content

Acreage was reduced in both the Chinese hop growing regions. Compared to the previous year, the reduction amounted to 9 %. The varieties mainly affected by the reduction in acreage were **Tsingdao Flower** (-292 ha) and **Marco Polo** (-221 ha).

The **Xinjiang** hop growing region is divided by the Tian-Shan mountain range running from east to west. This is the cause of differences in climatic conditions within the growing region. In crop year 2010 the hops in the north were not uncovered until 15 April, 14 days later than usual. After a period of relatively normal weather, temperatures in June and July rose to as much as 48 °C. With weather conditions subsequently returning to normal, the hops ripened and were harvested at the usual time. In the southern part of the region temperatures in the month of June were very high, as in the north. In the south, however, it rained very heavily throughout the entire growing period, particularly in July. The growing conditions described above resulted in below-average crop yield in Xinjiang, both compared with the previous year and compared with the long-term average yield.

In the **Gansu** hop growing region, spring work was delayed as a result of heavy snowfall and a cold spell in March. The hop plants had still not made up for the resulting growth lag by the time of harvest. Although there was a year-on-year increase in the total yield for all varieties, the figure fell slightly short of the long-term average.

The alpha content of the main variety **Tsingdao Flower** was 6.2 %, compared with 5.5 % the year before. The alpha content of this variety was higher in the Gansu region than in the Xinjiang region, as had been the case in crop year 2009.

In spite of the higher average alpha contents in all varieties (2010: 6.8 % / 2009: 6.2 %), the shortfall in alpha resulting from reduced acreage and lower production volume could not be compensated for. The total volume of alpha produced was 4 % down year on year.

Market Situation

The forward contract market in China cannot be compared with other hop growing countries. Buyers and producers only sign negotiable purchasing agreements which in each case define the quantity and quality of the hops, but do not state a fixed price, however.

At the time of reporting in April 2011, payment for only part of the quantities from the 2010 crop delivered had been settled by the breweries. The average producer prices paid were 12,000 CNY/mt (1,350 EUR) for hops of the **Tsingtao Flower** variety, 16,000 CNY/mt (1,800 EUR) for **high alpha hops** and 20,000 CNY/mt (2,250 EUR) for **aroma hops**.

Since 2009 the buyers in the brewing industry have been trying to achieve a reduction in the purchase quantities of Chinese hops defined in the agreements signed in 2007 and 2008 because there is no longer sufficient demand. The hopping rates in the breweries have been reduced to 1.2 to 1.5 g alpha/hl.

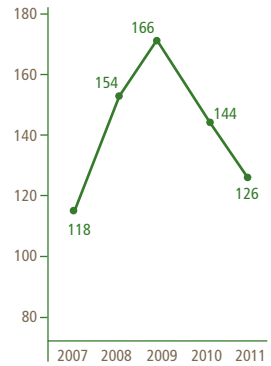
The quantity of unsold hops from the 2009 and 2010 crops held by hop merchants is estimated to be 4,500 to 5,000 mt. In addition, the breweries hold stocks of approx. 2,000 mt in the form of hop pellets.

It is estimated that purchase agreements exist for a volume of some 3,500 to 4,000 mt of hops from the coming 2011 crop.

An adjustment of hop acreage is urgently called for. In spite of the rising volume of beer output, demand for Chinese hops is likely to decline further still in the future. The increasing use of magnesium oxide (MgO) in conjunction with hopping will encourage this trend.

CROP 2011: AUSTRALIA

Alpha production in mt



Rounding differences of the acreage may cause differences in addition.

Area	Variety	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Development of production Production mt	
		2010	+/-	2011	2010	2011	2010	2011
Tasmania	Super Pride	68	-5	63	2.22	2.53	151.2	159.2
	Pride of Ringwood	63	-5	58	2.90	3.21	183.2	186.1
	Millennium	59	-11	48	2.07	2.23	122.1	106.3
	Other	32	0	32	2.08	1.70	66.4	54.1
	Total Tasmania	222	-22	200	2.36	2.52	522.9	505.7
Victoria	Topaz	99	-16	83	2.99	2.72	296.5	225.5
	Super Pride	63	8	71	2.22	1.62	140.4	115.0
	Pride of Ringwood	32	28	60	2.19	2.00	70.0	120.0
	Cluster	16	7	23	1.93	1.84	31.3	41.7
	Other	16	1	17	2.35	2.07	37.6	36.1
	Total Victoria	226	28	254	2.54	2.12	575.8	538.3
Total Aroma		**32**	**16**	**48**	**1.62**	**1.64**	**51.1**	**78.1**
Total Bitter		**95**	**23**	**118**	**2.66**	**2.59**	**253.2**	**306.1**
Total High Alpha		**321**	**-32**	**289**	**2.47**	**2.28**	**794.4**	**659.8**
AUSTRALIA TOTAL		448	6	454	2.45	2.30	1,098.7	1,044.0

Farm Structure

The number of hop producers remained unchanged. Hops were grown on eight farms, with an average area of just under 57 ha per farm, as opposed to 56 ha in crop year 2010.

Acreage/Production/Alpha Content

There were only minor changes in the total hop acreage. In **Tasmania** there was a reduction in acreage, whereas in the hop growing region of **Victoria** acreage was increased. Some movement also took place within the varietal groups. A reduction in high alpha varieties was offset by an increase in aroma varieties and in the bitter variety **Pride of Ringwood**. The traditional high alpha variety **Victoria** was taken out of production completely. There was increased planting of aroma varieties such as **Cascade** and **Southern Hallertau** as well as **Galaxy** and **Summer**, which are in great demand due to their fruity flavour input. **Stella**, another member of this new varietal group known as "flavour hops", was harvested commercially for the first time and proved to be promising, both in terms of growth behaviour and in terms of yield.

Once again, the weather conditions in the two Australian hop growing regions were very different. In **Victoria**, an early hail storm was followed by a long period of rain. This resulted in high water saturation in many hop yards for the major part of the vegetation period and consequently, in some cases, in massive infrastructure damage. In the north-east of Victoria, 650 mm of rainfall was measured in the period January to March. The long-term average is only 140 mm. The average crop yield was 17 % lower than in crop year 2010. Further south, in the **Tasmanian** growing region, temperatures were lower than usual. The effects of the rainfall here were not as great as on the Australian mainland. The lack of sun delayed the ripening of the hops. In the end, there was a year-on-year increase of 7 % in yield per hectare.

The alpha contents in crop year 2011 were mainly below those of crop year 2010, but nevertheless exceeded the average of the last five years. The **Millennium** variety, on the other hand, disappointed growers with a significantly below-average value. **Pride of Ringwood** 9.3 % (9.6 %), **Super Pride** 14.0 % (14.7 %), **Millennium** 12.6 % (15.0 %), **Topaz** 15.5 % (15.5 %). The alpha yield in crop year 2011 was 12 % lower than in the previous year.

Market Situation

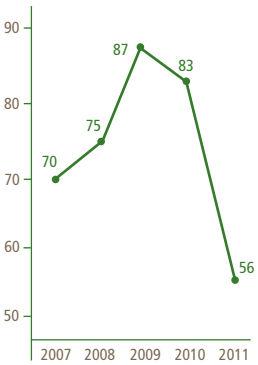
Almost the entire production volume had already been sold by the time of harvest. At the time of going to press in May, 85 % of the 2012 crop had already been sold by forward contract. The acreage planted with aroma and flavour hops is being increased further.

A series of extensive trials are being conducted in Australia: for example, on the effects of a change in trellis construction, on the installation of a drip irrigation system for water and liquid fertiliser, on the planting of annual agricultural crops between the hop rows to increase the organic carbon content in the soil and on the revival of integrated pest control. In addition, the use of a new organic fertiliser is being tested. The fertiliser in question is a non-synthetic type which is produced on the basis of various organic substances and can be used successfully as an alternative to conventional synthetic fertilisers. Tests with this product showed an improvement in soil structure and an increase both in soil water storage capacity (which means a lower irrigation requirement) and in carbon binding. Higher soil fertility has a positive effect on the health and resistance of the plants.

CROP 2011: NEW ZEALAND

Variety Group	Development of acreage Acreage ha			Development of production Ø Yield mt/ha		Production mt	
	2010	+/-	2011	2010	2011	2010	2011
Aroma	223	-73	150	1.92	2.02	429.0	303.0
High Alpha	122	-2	120	2.65	1.96	323.0	235.0
Other	34	-4	30	1.21	1.17	41.0	35.0
NEW ZEALAND TOTAL	379	-79	300	2.09	1.91	793.0	573.00

Alpha production in mt



Farm Structure

As in the previous year, 19 farmers ran hop growing operations in New Zealand. As a result of acreage reduction, the area planted with hops decreased from an average of 20 ha to 16 ha per farm.

Acreage/Production/Alpha Content

Acreage was reduced by 21 %. The weather conditions were very dry in the spring and throughout the summer, which adversely affected both growth and yield among certain varieties. The alpha contents in 2011 fell short of the levels recorded in 2010 (in brackets), but were in line with the long-term average values: **NZ Hallertau Aroma** 7.6 % (8.0 %), **NZ Pacific Gem** 15.1 % (16.0 %). The alpha yield fell by 33 % as a result of the reduction in acreage, the lower production volume and the lower alpha content.

Market Situation

The current oversupply of alpha acid on the market, and the low price levels associated with it, resulted in hop acreage being reduced. It was intended to achieve a production volume with which growers would be able to honour existing forward contracts, while keeping only a limited quantity of New Zealand specialty aroma hops available for the spot market. Of the volume produced in crop year 2011 spot hops accounted for only 5 % after harvest.

Provided that production volume is normal, approx. 80 % of the 2012 crop has been sold by forward contract. The New Zealand hop growers see their future in the production of specialty aroma varieties.

HOP PLANT DEVELOPMENT 2011

Germany

The winter of 2010/2011 began with unusually severe frost and heavy snow. January and February, on the other hand, were characterised by repeated thaws. By the time the growing period began there were sufficient reserves of water in the soil. Mild temperatures in March encouraged the hop plants to sprout early. It remained excessively warm and, in addition, precipitation was only about half its usual level. The hop plants developed quickly and on most farms training was completed in the first week of May. In terms of development the plants were about ten days ahead of the long-term average. At the time of going to press, at the end of May 2011, plant development had not been affected by the continuously (mainly) dry weather.

On the evening of 6 June 2011, a fierce storm hit the south-eastern Hallertau region bringing hail and heavy rain. Hop acreage of between 800 and 1,100 hectares (approx.) was damaged to varying degrees of seriousness.

USA

Snow accumulation in the mountains during the winter months was above normal, assuring sufficient irrigation water during the growing season for all three states. The temperatures in the spring were lower than usual, which delayed plant development. It is expected that the plants will quickly make up for the growth gap as soon as temperatures return to normal levels.

Germany

The reduction of hop acreage is progressing only slowly and in small steps. In 2011 the hop growing acreage is only 158 ha smaller than it was one year ago. The acreage of high alpha and bitter varieties has been reduced by 228 ha and 32 ha respectively. That of aroma and other varieties, on the other hand, has been increased by 95 ha and 6 ha respectively. Within the last three years hop acreage in Germany has decreased by 467 ha.

USA

According to the official hop acreage survey by the US Department of Agriculture (USDA) published on 9 June 2011, hop acreage in the USA has been reduced by 515 ha. This net reduction is mainly the result of the removal of acreage for Willamette, Galena and the CTZ variety group totalling 1,013 ha. However, this reduction in acreage has been partly offset by an increase in the planting of special aroma varieties and new alpha varieties totalling approx. 498 ha in 2011.

World

In 2011 hops are grown on an area of approx. 49,050 ha worldwide. In comparison with crop year 2010 this constitutes a further reduction by approx. 3,100 ha. Acreage has therefore fallen below the level recorded in 2006 when after years of decline a record low of 49,466 ha was reached and it became necessary to increase acreage again due to a scarcity of hops. On the basis of production volume being average worldwide, however, the present acreage will be sufficient to meet the demand for alpha acid. This is possible because of the vigorous planting of hop varieties with high yields and mainly high alpha acid values in recent years. Nevertheless the brewing industry should make provision for the risk of poor harvests due to weather influences or pests and diseases and/or due to continued acreage reduction measures. A sound base of forward contracts helps to limit this risk.

Currency Exchange Rates

These exchange rates can only serve as an indication. They vary from bank to bank and are not binding.

1 EUR equals (reference by ECB):

	on 1 June 2010	on 1 June 2011		on 1 June 2010	on 1 June 2011
USA	1.2155 USD	1.4408 USD	Canada	1.2766 CAD	1.3948 CAD
Australia	1.4595 AUD	1.3410 AUD	Poland	4.1140 PLN	3.9570 PLN
China	8.3021 CNY	9.3336 CNY	Switzerland	1.4183 CHF	1.2182 CHF
United Kingdom	0.8347 GBP	0.8775 GBP	Russia	38.0290 RUB	40.2340 RUB
Japan	110.6500 JPY	117.1100 JPY	Czech Republic	25.6280 CZK	24.5010 CZK

Conversion Table

Area:	
1 hectare (ha) = 10,000 m²	= 2.934 Bavarian „Tagwerk“
1 hectare (ha) = 10,000 m²	= 2.471 acres
1 Bavarian „Tagwerk“	= 0.341 ha
1 acre	= 0.4047 ha

Length:	
1 yard	= 3 feet = 36 inches = 91.44 cm
1 mile	= 1.609 km

Volume:	
1 hl = 100 l	= 26.42 gall = 0.8523 bbl (USA)
1 hl = 100 l	= 22.01 gall = 0.6114 bbl (Brit.)
1 barrel (bbl/USA)	= 31 gall = 1,1734 hl
1 barrel (bbl/GB)	= 36 gall = 1,6365 hl

Weight:	
1 metr. ton (mt) = 1,000 kg	= 20 cwt (D) = 2,204.6 lbs
1 Zentner cwt (D) = 50 kg	= 110.23 lbs = 1.102 cwt (USA)
	= 110.23 lbs = 0.984 cwt (GB)
1 hundredweight (cwt/USA)	= 100 lbs = 45.36 kg
	= 0.9072 Ztr.
1 hundredweight (cwt/GB)	= 112 lbs = 50.800 kg
	= 1.0160 Ztr.
1 centner (GB)	= 100 lbs = 45.36 kg
	= 0.9072 Ztr.
1 kg	= 2.20462 lbs
1 lb	= 0.45359 kg

Pressure:	
1 bar = 14.5038 psi	1 psi = 0.06895 bar

$86^\circ F = \frac{(86 - 32) \times 5}{9} = 30^\circ C$ $30^\circ C = \frac{30 \times 9}{5} + 32 = 86^\circ F$

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ORGANIC HOP FARMING – WORLDWIDE

Organic farming is increasing in importance around the world. The "International Federation of Organic Agriculture Movements" (IFOAM) is the international umbrella organisation for organic agriculture. According to this organisation's mission statement, organic agriculture is based on the principles of **health, ecology, fairness** and **care** (www.ifoam.org).

The history of **organic hop** farming worldwide as such only began as recently as the middle of the 1980s in Bavaria when initially two farms in the Hallertau region, followed soon afterwards by two Franconian farms in the region known then as the Hersbruck Mountains switched from conventional to organic hop growing. Three of these genuinely pioneering farms are still in operation today. In the USA the first organic hops were produced in Yakima Valley in crop year 2000 and have experienced rapid growth ever since – with 10 % of the major hop farms in the USA now farming at least part of their hop acreage according to ecological standards.

Organic hops can be recognised by the certificate (seal) showing them to be hops from controlled production without the use of any chemical/synthetic plant protection agents and fertilisers. The methods primarily employed involve the application of special cultivation measures and the use of beneficial organisms and of messenger substances such as pheromones to attract or confuse insects. By ensuring the health of the soil, it is possible to make the plant more resistant to diseases and pests. If any plant protectants are used, they are approved organic agents.

Country	Number of farms	Acreage (ha)	Hop production estimate (mt)
Hallertau	5	27.13	33.2
Tettnang	1	6.80	6.4
Hersbruck	2	46.18	58.5
Total Germany	**8**	**80.11**	**98.1**
Poland	1	4.56	5.2
England	4	16.72	16.5
Austria	2	5.70	6.4
Belgium	1	13.93	12.5
Denmark	1	0.20	0.2
European Union	**17**	**121.22**	**138.9**
Switzerland	1	2.50	3.3
Europe	**18**	**123.72**	**142.2**
USA	27	51.00	80.7
Canada	8	2.60	0.7
New Zealand	2	10.00	16.0
WORLD	55	187.32	239.6

At present there are hundreds of state and private organic standards worldwide. They guarantee that a product has been produced organically.

In cooperation with Dr. Florian Weihrauch of the Bavarian State Institute for Agriculture's hop research centre in Hüll, we have for the first time been able to calculate the extent of organic hop production worldwide among the individual hop-growing countries. On the basis of crop year 2010, a total of **55 growers** in **10 countries** were involved in this special form of agriculture. They farmed a total of **187 ha** and harvested **approx. 240 mt of certified organically grown hops**. A **wide range of varieties** are grown, but in most cases they are aroma varieties.

Organic hop acreage amounts to less than 0.4 % of world hop acreage and the volume produced accounts for less than 0.3 % of the total world crop.
Demand from breweries of organic beer can easily be met with this volume at the moment.
In addition, farms in several countries are in the process of switching to or expanding organic hop growing.

Country	Number of farms	Acreage (ha)	Certification/ Expansion by
Germany	-	0.95*	2011
France	1	19.00	2012
Netherlands	1	1.20	2012
Czech Rep.	2	7.00	2012
USA	-	96.00*	2012
New Zealand	-	approx. 2.50*	2013
TOTAL	4	approx. 127	

* Expansion

The reason for the large-scale acreage expansion plans in the USA is a change in the legal guidelines. In this case, on 28 October 2010 the National Organic Standards Board (NOSB) of the United States Department of Agriculture (USDA) submitted a recommendation to the National Organic Program (NOP) that from 1 January 2013 the use of organically produced hops be made mandatory in the production of organic beers. This recommendation was accepted by the NOP on 17 December 2010. Currently, it is permitted that up to 5 % of the raw materials in organic beers may come from conventional farming.

Unfortunately it is not possible at present to make a definitive statement on world production of **organic beer**. In many countries the breweries operating in this niche have not formed an organisation. This will have to change if they are to gain more influence. We will continue to follow this segment with interest.

Please note our report„Market Leaders and their Challengers in the Top 40 Countries" with the table of the 40 biggest brewing groups worldwide.

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