

1985/86



**Joh. Barth & Sohn**

## Conversion Table

1 ha	= 2,934 bayerische Tagwerk
1 ha	= 2,471 acres
1 bayerisches Tagwerk	= 0,341 ha
1 acre	= 0,405 ha
1 hl = 100 l	= 26,42 gall = 0,8523 bbl (USA)
	= 22,01 gall = 0,6114 bbl (Brit.)
1 bbl (USA)	= 31 gall = 1,1734 hl
1 bbl (Brit.)	= 36 gall = 1,6365 hl
1 metr. ton = 1.000 kg	= 20 Ztr. = 2.204,6 lbs
1 Ztr. = 50 kg	= 110,23 lbs = 1,102 cwt (USA)
	= 110,23 lbs = 0,984 cwt (Brit.)
1 cwt (USA)	= 100 lbs = 45,359 kg
1 cwt (Brit.)	= 112 lbs = 50,8 kg
1 cental (Brit.) = 100 lbs	= 45,359 kg = 0,9072 Ztr.
1 kg	= 2,20462 lbs
1 lb	= 0,45359 kg

Conversion of thermometer degrees  
in Fahrenheit and Celsius:

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

$$30^{\circ}\text{C} = \frac{30 \cdot 9}{5} + 32 = 86^{\circ}\text{F}$$

## Currency Exchange Table

As of 10 June 1986 the Frankfurt Currency Exchange  
Market listed:

	Discount Rate	Spot Rate 6/10/86	
		G	B
New York *	6.5	2.2265	2.2345
London *	12	3.347	3.361
Dublin *	12.8	3.025	3.039
Montreal *	8.92	1.6008	1.6088
Amsterdam	4.5	88.715	88.935
Zurich	4	121.23	121.43
Brussels	8	4.888	4.908
Paris	9.5	31.32	31.48
Copenhagen	7	26.96	27.08
Oslo	8	29.275	29.395
Stockholm	8	30.91	31.07
Milan **	12	1.4520	1.4620
Vienna	4	14.213	14.253
Madrid	8	1.557	1.567
Lisbon	17.5	1.474	1.494
Tokyo	3.5	1.3295	1.3325
Helsinki	7	42.93	43.13
Athens *	20.5	1.574	1.616

\* = 1 unit, \*\* = 1000 units, all other 100 units

## The Most Important Data of the World Market

	1985	1984	Diff. %
acreage/ha	86.855	92.821	- 6,4
hop production/tons	124.050	128.728	- 3,6
alpha production/tons	7.056	8.175	- 13,7
beer production/1000 hl	983.624	968.098	+ 1,6

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## Political Situation

The summit between **U.S. President Reagan** and the **Soviet Party Secretary Gorbachov** was to initiate a better understanding and an exchange of views between the world powers.

In none of the world's trouble spots in the **Near East, Central America** and **Afghanistan** peace could be brought about. An increasing number of terrorist actions in the **Mediterranean Area** and in **Central Europe** led to the **U.S.** retaliatory strike against **Libya**.

The radioactive fallout caused by an accident in the **Soviet** power plant in **Chernobyl** on April 26, 1986, very impressively demonstrated to the world the risk associated with atomic power. Concern could be noted especially in the densely populated countries of **Eastern and Western Europe**.

With the entry of **Spain** and **Portugal** into the **European Community (EC)** on January 1, 1986, the extension of economic associations within the Community has come to an end for the time being. Yet, efforts to bring the member nations to a better economic, political and monetary integration were not very successful.

## Economic Situation

The 1985 **world economy** was characterized by a moderate, yet continuous **growth** with a downward **inflationary tendency**. The world's **gross product** went up by 2.8 %\*) (preceding year: 4.8 %), the **world trade** rose by 3,1 %\*) (preceding year: 7.5 %).

While the **Federal Republic of Germany** was able to considerably increase its exports due to the relatively high **Dollar exchange rate**, the **U.S. trade balance** showed another **record deficit** of \$ 148.5 billion for the year of 1985. More than half of this deficit resulted from economic transactions with **Japan** and the **European countries**. The downward correction by about one third of the external value of the **U.S. \$** in rela-

tion to other key currencies, particularly the **Yen**, was accelerated by a cooperation between the central banks of the major industrial countries. On April 7, 1986, the **European Currency Conference** reset the parity values of its currencies to the effect that **DM** and **Hfl** were practically evaluated by 3 % in relation to other **European currencies**.

An event of uppermost importance was the sharp decline of crude oil prices to half of their former level, starting in winter 1985. The consequences on world economy will become evident in the latter part of 1986, due to the changed pattern of monetary flows.

\*) States of the O.E.C.D.

The 1985 key data for the USA and the Federal Republic of Germany were as follows:

	USA	Fed. Rep. of Germany
GNP	+ 2.3 %	+ 2.5 %
Balance of trade	— \$ 148.5 bill.	+ DM 73.3 bill.
Balance of payments	— \$ 36.6 bill.	— DM 1.3 bill.
Rate of Inflation	3.9 %	2.0 %
Rate of interest per May 1, 1986	8.5 % (prime rate)	3.5 % Federal Bank Discount since March 7, 1986)
Rate of unemployment per Dec. 31, 1985	6.7 %	9.4 %

## Table of Bitter Constituents

Bitter constituent values of the most important European varieties:

variety	crop 1985			crop 1984		
	total resin %	alpha %	% in total resin	total resin %	alpha %	% in total resin
Hallertau Hallertau	10.6	3.5	33.0	11.7	4.2	36.0
Hallertau Hersbruck	11.2	3.3	29.5	12.0	4.3	35.8
Hallertau Hüller	13.2	4.9	37.1	12.9	4.9	38.0
Hallertau Perle	12.7	5.7	44.9	14.0	6.5	46.4
Hallertau Record	13.9	6.1	43.9	15.2	6.7	44.1
Hallertau Northern Brewer	14.5	6.8	46.9	16.5	8.1	49.1
Hallertau Brewers Gold	13.7	5.9	43.1	13.8	6.5	47.1
Tettnang	10.6	3.7	34.9	11.4	4.1	36.0
Spalt	10.8	3.9	36.1	11.6	4.2	36.2
Saaz	10.3	3.4	33.0	11.2	3.8	33.9
Yugoslavian Styrian Golding	12.6	5.8	46.0	17.0	6.5	38.2
Yugoslavian Super Styrian	16.7	8.0	47.9	18.8	9.0	47.9
Belgian Northern Brewer	15.4	7.4	48.1	17.1	8.5	49.7
Belgian Brewers Gold	12.7	5.6	44.1	13.9	6.5	46.8

The bitter content values of the most important English and US varieties are listed under the heading "England" resp. "USA".

The above stated values are considered as is, alpha acids measured conductometrically and determined in October/November after the harvest. They cannot form the basis of deliveries in the later course of the season.

# World Beer Production 1984/85

Specification in 1000 hl

## EUROPE

Country	1985	1984
Fed. Rep. of Germany	93.294	92.286
USSR*	60.000	66.100
Great Britain	62.500	61.470
German Dem. Rep.*	25.500	26.000
Czechoslovakia	22.354	23.780
France	20.802	20.288
Spain	23.353	21.832
Netherlands	17.529	17.048
Belgium*	14.500	14.976
Yugoslavia	10.505	13.600 <sup>1</sup>
Rumania*	11.500	11.500
Poland	10.801	9.660
Denmark	7.924	8.670
Italy	10.306	9.409
Austria	8.677	8.213
Hungary	8.772	7.912
Ireland	5.508	5.449
Bulgaria*	5.500	5.500
Switzerland	4.110	4.116
Sweden	3.910	3.460
Portugal	3.817	3.665
Greece	2.970	3.000
Finland	3.022	2.956
Norway	2.031	1.938
Luxembourg	630	626
Malta	117	117
Albania*	100	100
Iceland	41	41
<b>TOTAL</b>	<b>440.073</b>	<b>443.712</b>

## AMERICA

Country	1985	1984
USA	226.825	226.490
Brazil	30.250	28.350
Mexico	27.392	25.082
Canada	22.126	23.012
Venezuela	10.300	11.820
Colombia	15.800	14.500
Peru	5.525	5.000
Ecuador	2.500	2.607
Cuba	2.600*	2.600
Argentina	4.600	3.979
Chile	1.887	1.776
Bolivia	636	735
Paraguay	1.150	1.100
Dominican Rep.	1.100	920
Panama	880	870
Uruguay	490	315
Puerto Rico	200	300
Jamaica	600	600
Guatemala	600	596 <sup>2</sup>
Costa Rica	600	490
Honduras	534	561
Nicaragua	550	575
El Salvador	550	329
Trinidad	200	250
Netherl. Antilles	124	117
Surinam	142	150
Martinique	66	70
Guadeloupe*	30	28
Haiti	23	20
Belize	25	40
Grenada	25	25
St. Kitts	25	25
Barbados	50	55
San Lucia	40	35
Falkland Islands	-	5
St. Vincent	7	-
<b>TOTAL</b>	<b>358.452</b>	<b>353.427</b>

## AFRICA

Country	1985	1984
South Africa	13.500	13.000
Nigeria	10.000	9.000
Cameroon	4.900	4.729
Zaire	3.000*	3.027
Kenya	2.700	2.400
Ivory Coast	1.300	1.310
Rwanda + Burundi	1.437	1.373
Zambia	743	804
Zimbabwe	1.165	850 <sup>3</sup>
Tansania	762	706
Gabon	1.060	727
Angola	700*	655
Ethiopia	935	726
People's Rep. of Congo	865	902
Algeria*	700	700
Moçambique	300	390
Upper Volta*	500	505
Togo	397	359
Egypt	420	400
Morocco	360	360
Benin	358	335
Senegal*	170	170
Tunisia	400	400
Namibia	340	300
Ghana	130	250
Mauritius	185	275
Reunion	98	275
Madagascar	325	230
Central African Rep.	300	220
Liberia	110	120
Chad	149	134
Sierra Leone	57	35
Guinea Bissau	31	26
Uganda	100*	169
People's Dem. Rep. Jemen	70	60
Niger	90*	90
Seychelles	42	38
Malawi	160	155
Gambia	12*	12
Botswana	181	200
Swaziland	160	150
Lesotho	188	200
Mali	80	-
<b>TOTAL</b>	<b>49.480</b>	<b>46.492</b>

## NEAR EAST

Country	1985	1984
Turkey	2.200	2.625
Iraq*	580	600
Israel	412	400
Cyprus	247	233
Lebanon	99	60
Syria*	90	90
Jordan	33	90
<b>TOTAL</b>	<b>3.661</b>	<b>4.098</b>

## FAR EAST

Country	1985	1984
Japan	47.461	46.689
Philippines	8.100	9.230
People's Rep. China	32.000*	20.000
South Korea	7.907	7.800
Taiwan	3.353	3.071
Malaysia	610	576
Singapore	391	426
Vietnam*	2.000	1.900
India	2.000	1.700
Thailand	1.200	1.610
North Korea*	1.000	1.000
Hong Kong	1.236	1.350
Indonesia	658	635
Okinawa	360	360
Iran**	100	100
Mongolia*	100	100
Sri Lanka	70	74
Burma*	40	40
Nepal	37	37
Pakistan*	10	10
Laos*	10	7
Bangla-Desh*	5	5
Kambodscha*	5	5
<b>TOTAL</b>	<b>108.653</b>	<b>96.720</b>

## AUSTRALIA/OCEANIA

Country	1985	1984
Australia	18.503	18.949
New Zealand	3.940	3.839
New Guinea	514	510
Fiji Islands*	165	164
Tahiti*	94	97
Samoa*	45	40
New Caledonia*	44	50
<b>TOTAL</b>	<b>23.305</b>	<b>23.649</b>

\*estimated

\*\*non alcoholic

<sup>1</sup> later correction to 10.878

<sup>2</sup> later correction to 710

<sup>3</sup> later correction to 964

## WORLD

1985	1984
<b>983.624</b>	<b>968.098</b>

## Output Development

The worldwide stagnation of beer output remained unchanged. The statistical plus of 1,6 % = about 15 Mio. hl is based on an increase in production of only a few countries. Yet, it must be kept in

mind that important data in these partial statistics had to be estimated, as no official figures are available. Here is the development of the situation on the various continents:

	1985	1984	1985	1984	+ (-)
	%	%	total	total	total
Europe	- 0,9	-1,6	440.073	443.712	(3.639)
America	+ 1,4	+0,3	358.452	353.427	+ 5.025
Africa	+ 6,4	+2,9	49.480	46.492	+ 2.988
Asia (Far East)	+12,3	+2,6	108.653	96.720	+11.933
Near East	-10,7	-1,3	3.661	4.098	(431)
Australia/ Oceania	- 1,5	-1,4	23.305	23.649	(344)
<b>Total</b>	<b>+ 1,6</b>	<b>-0,4</b>	<b>983.624</b>	<b>968.098</b>	<b>+15.526</b>

Specification in 1.000 hl

## World beer production table – information on our own behalf

As far as we know, our WORLD BEER PRODUCTION table is the only publication comprising all beer-producing countries. The disadvantage of this detailed breakdown is that often unsecured data must be given which are susceptible to subsequent corrections, for whatever reason that may be.

We have decided to reuse last year's table as originally published despite subsequent modifications, and to point out the new indications separately.

## Market Analysis

In spite of lower **hops** and **alpha** production, the dullness of international hop markets continued to prevail in 1985. Stagnating **world beer output** in the main consumer countries and a **brewery inventory** which was still too high gave little incentive to additional purchases.

The crops of the main exporters, **USA** and **FR of Germany**, could be sold, even though uncontracted spot hops of the 1985 crop only obtained some 30-50% of the production cost. As in the previous year, all **special** and **aroma varieties** could be sold at better prices. On the other hand remainders of **low alpha hops** from **Belgium, France, England** and above all from **Third-World countries** piled up unsold.

With a 6.4% **reduction in world acreage**, a step in the right direction was made. Since the tendency of hop self-supply continues in **Third-World countries**, leading there to an incremental increase of acreage, the policy of the two main hop producing countries is

of paramount importance. The following changes of hop acreage in 1985 could be observed:

<b>U.S.A.</b>	-9.96%
<b>FR Germany</b>	-0.15%

As can be seen, the **U.S. hop producers** reacted more quickly to market conditions. Another **reduction** of approxi-

mately the same extent will follow in 1986. In comparison, the **German farmers'** tendency to grubbing was not very marked. Despite the cultivation of **high alpha varieties** in the **U.S.** growing regions it can be concluded that a balance between supply and demand will be attained more quickly in the scope of action of **U.S. hops** than for **European bitter hops** or less demand **Third-World hops**.

The percentage of contractually sold hops is estimated to be as follows (%):

Crop	1986	1987	1988	1989	1990	1991
USA	98	83	60	35	20	10
Fed. Rep. of Germ.	70	65	50	35	35	30
Belgium	10	5	-	-	-	-
Czechoslovakia	90	70	50	-	-	-
Yugoslavia (Slov.)	80	70	60	50	50	-
England	60	50	20	20	20	-

Our contract estimate is based on the current growing areas; it does not make allowance for any future idling.

# Acreage and Hop Production

area	1985			1984		
	acreage in ha	∅ tons per ha	crop in tons = 1000 kg	acreage in ha	∅ tons per ha	crop in tons = 1000 kg
Hallertau	16.681	1,87	31.146,0	16.721	1,86	31.091,6
Spalt	784	1,32	1.032,3	797	1,29	1.025,5
Hersbruck	140	1,54	215,0	151	1,38	208,4
Jura	733	1,98	1.449,3	719	1,99	1.434,5
Teffnang	1.239	1,47	1.823,2	1.219	1,46	1.777,0
others	20	1,56	31,1	21	1,13	23,7
<b>Fed. Rep. of Germany</b>	<b>19.597</b>	<b>1,82</b>	<b>35.696,9</b>	<b>19.628</b>	<b>1,81</b>	<b>35.560,7</b>
Kent	2.655	1,37	3.640,3	2.804	1,57	4.390,0
Hampshire	100	1,21	121,2	135	1,07	145,0
Sussex	208	1,21	251,9	216	1,53	330,0
Herefordshire	1.329	1,30	1.731,7	1.449	1,59	2.300,0
Worcestershire	457	1,65	751,9	490	1,50	735,0
<b>England</b>	<b>4.749</b>	<b>1,37</b>	<b>6.497,0</b>	<b>5.094</b>	<b>1,55</b>	<b>7.900,0</b>
Aalst	124	1,91	236,0	149	1,81	269,0
Poperinge	567	1,67	944,0	602	1,86	1.118,7
Vodelée	4	1,50	6,0	11	1,90	20,9
<b>Belgium</b>	<b>695</b>	<b>1,71</b>	<b>1.186,0</b>	<b>762</b>	<b>1,86</b>	<b>1.408,6</b>
Alsace	420	2,01	843,2	421	1,78	751,4
Burgundy	28	1,86	52,0	28	1,53	42,9
Nord	207	1,75	362,0	223	2,08	464,0
<b>France</b>	<b>655</b>	<b>1,92</b>	<b>1.257,2</b>	<b>672</b>	<b>1,87</b>	<b>1.258,3</b>
<b>Ireland</b>	<b>72</b>	<b>1,21</b>	<b>86,5</b>	<b>76</b>	<b>1,44</b>	<b>109,7</b>
<b>Greece</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>25</b>	<b>1,38</b>	<b>34,5</b>
<b>EEC</b>	<b>25.768</b>	<b>1,74</b>	<b>44.723,6</b>	<b>26.257</b>	<b>1,76</b>	<b>46.271,8</b>
Saaz	7.740	0,96	7.398,0	7.637	0,91	6.953,0
Auscha	1.720	1,27	2.191,0	1.663	0,94	1.565,0
Tirschitz	925	1,47	1.356,0	739	1,08	797,0
Slovakia	1.565	1,17	1.833,0	1.469	1,04	1.529,0
<b>Czechoslovakia</b>	<b>11.950</b>	<b>1,07</b>	<b>12.778,0</b>	<b>11.508</b>	<b>0,94</b>	<b>10.844,0</b>
<b>USSR*</b>	<b>15.000</b>	<b>0,90</b>	<b>13.500,0</b>	<b>16.500</b>	<b>0,61</b>	<b>10.000,0</b>
Slovenia	2.491	1,62	4.022,0	2.479	1,79	4.447,0
Backa and Ilok	860	1,21	1.040,0	920	1,60	1.475,0
<b>Yugoslavia</b>	<b>3.351</b>	<b>1,51</b>	<b>5.062,0</b>	<b>3.399</b>	<b>1,74</b>	<b>5.922,0</b>
<b>Germ. Dem. Rep.</b>	<b>2.420</b>	<b>1,40</b>	<b>3.396,0</b>	<b>2.370</b>	<b>1,33</b>	<b>3.155,0</b>
<b>Poland</b>	<b>2.503**</b>	<b>1,10</b>	<b>2.747,0</b>	<b>2.513</b>	<b>1,09</b>	<b>2.745,0</b>
<b>Bulgaria*</b>	<b>1.300</b>	<b>0,65</b>	<b>850,0</b>	<b>1.300</b>	<b>0,65</b>	<b>850,0</b>
<b>Rumania*</b>	<b>2.000</b>	<b>0,88</b>	<b>1.750,0</b>	<b>2.000</b>	<b>0,88</b>	<b>1.750,0</b>
<b>Hungary</b>	<b>518</b>	<b>1,19</b>	<b>615,1</b>	<b>532</b>	<b>1,10</b>	<b>579,5</b>
<b>Spain</b>	<b>2.003</b>	<b>1,62</b>	<b>3.248,2</b>	<b>2.003</b>	<b>1,42</b>	<b>2.844,7</b>
Mühlviertel	82	1,62	132,5	78	1,27	98,9
Leutschach	70	1,64	115,0	70	1,56	109,0
<b>Austria</b>	<b>152</b>	<b>1,63</b>	<b>247,5</b>	<b>148</b>	<b>1,40</b>	<b>207,9</b>
<b>Switzerland</b>	<b>22</b>	<b>1,42</b>	<b>31,2</b>	<b>17</b>	<b>1,36</b>	<b>23,1</b>
<b>Portugal</b>	<b>174</b>	<b>2,18</b>	<b>379,7</b>	<b>178</b>	<b>2,00</b>	<b>356,0</b>
<b>Albania*</b>	<b>70</b>	<b>1,00</b>	<b>70,0</b>	<b>70</b>	<b>1,00</b>	<b>70,0</b>
<b>EUROPE</b>	<b>67.231</b>	<b>1,33</b>	<b>89.398,3</b>	<b>68.795</b>	<b>1,24</b>	<b>85.619,0</b>
Washington	7.904	2,09	16.533,0	9.343	2,12	19.769,3
Oregon	2.237	1,63	3.649,0	1.992	1,58	3.150,1
Idaho	1.274	1,78	2.271,0	1.289	1,91	2.460,3
California	—	—	—	53	1,60	84,7
<b>USA</b>	<b>11.415</b>	<b>1,97</b>	<b>22.453,0</b>	<b>12.677</b>	<b>2,01</b>	<b>25.464,4</b>
<b>Canada</b>	<b>291</b>	<b>1,56</b>	<b>453,8</b>	<b>329</b>	<b>1,09</b>	<b>357,7</b>
<b>Japan</b>	<b>1.051</b>	<b>1,79</b>	<b>1.884,0</b>	<b>1.068</b>	<b>1,78</b>	<b>1.897,1</b>
<b>Australia</b>	<b>776</b>	<b>2,50</b>	<b>1.937,0</b>	<b>1.322</b>	<b>1,98</b>	<b>2.614,0</b>
<b>New Zealand</b>	<b>211</b>	<b>1,95</b>	<b>412,0</b>	<b>190</b>	<b>2,35</b>	<b>446,0</b>
<b>People's Rep. of China*</b>	<b>3.500</b>	<b>1,43</b>	<b>5.000,0</b>	<b>6.000</b>	<b>1,67</b>	<b>10.000,0</b>
<b>Dem. People's Rep. of North Korea*</b>	<b>600</b>	<b>1,00</b>	<b>600,0</b>	<b>580</b>	<b>1,00</b>	<b>578,0</b>
<b>Republic of South Korea</b>	<b>488</b>	<b>1,43</b>	<b>696,5</b>	<b>473</b>	<b>1,25</b>	<b>591,0</b>
<b>South Africa</b>	<b>410</b>	<b>1,22</b>	<b>500,0</b>	<b>385</b>	<b>0,95</b>	<b>367,0</b>
<b>India*</b>	<b>325</b>	<b>0,55</b>	<b>180,0</b>	<b>325</b>	<b>0,55</b>	<b>180,0</b>
<b>Colombia*</b>	<b>2</b>	<b>2,00</b>	<b>4,0</b>	<b>2</b>	<b>2,00</b>	<b>4,0</b>
<b>Turkey</b>	<b>300</b>	<b>0,94</b>	<b>281,3</b>	<b>420</b>	<b>0,86</b>	<b>360,0</b>
<b>Argentina*</b>	<b>255</b>	<b>0,98</b>	<b>250,0</b>	<b>255</b>	<b>0,98</b>	<b>250,0</b>
<b>WORLD</b>	<b>86.855</b>	<b>1,43</b>	<b>124.049,9</b>	<b>92.821</b>	<b>1,39</b>	<b>128.728,2</b>

\* estimate

\*\* acreage for baby hops included

## Alpha Acid Production

The alpha acid production of the world can be subdivided into the following groups of varieties:

group A: finest aroma hops (Saaz, Tettnang, Spalt)  
 group B: aroma hops (Hallertau, Hersbruck, Hüll, Perle, Strisselspalt, Golding, Fuggle, Cascade, and others)

group C: hops of no importance in the world market  
 group D: bitter hops (Northern Brewer, Brewers Gold, Cluster, Bullion, Pride of Ringwood, high-alpha hops of USA and UK).

Thus a comparison of the alpha production of 1985 with that of the previous year resulted in the following bitter constituent grouping in the world hop crop:

group	1985				1984			
	share %	crop tons	$\alpha$ % $\phi$	$\alpha$ tons	share %	crop tons	$\alpha$ % $\phi$	$\alpha$ tons
A	7	15,633	3.3	516	7	14,819	3.8	563
B	14	25,077	3.9	978	14	24,620	4.8	1,182
C	24	31,300	5.3	1,659	25	33,432	6.2	2,073
D	55	52,039	7.6	3,903	54	55,857	7.8	4,357
Total	100	124,049	5.8	7,056	100	128,728	6.4	8,175

There were no important shifts within the individual groups. The decrease of group C hops was due to the estimated reduction of acreage in China.

## Alpha Acid Balance

The world beer output which slightly increased as compared with the preceding year required some 7,100 tons of alpha on an assumed basis of 7.2 grams alpha per hl. These requirements were contrasted by a production of some 8,200 tons from the 1984 crop.

Thus the alpha acid balance reveals the following picture:

1983 demand (hopping rate 7.3 gr alpha/hl) 7,100.0 tons alpha  
 1982 production surplus 8,471.0 tons alpha  
 1,371.0 tons alpha  
 1984 demand (hopping rate 7.2 gr alpha/hl) 7,000.0 tons alpha  
 1983 production surplus 7,540.0 tons alpha  
 540.0 tons alpha  
 1985 demand (hopping rate 7.2 gr alpha/hl) 7,100.0 tons alpha  
 1984 production surplus 8,175.0 tons alpha  
 1,075.0 tons alpha  
 1986 demand (estimated hopping rate 7.2 gr alpha/hl) 7,100.0 tons alpha  
 1985 production deficit 7,056.0 tons alpha  
 44.0 tons alpha

For the first time since the 1980 crop, the lower alpha acid production in the 1985 harvest brought about a small deficit in the supply of bittering substances for the world market.

## European Community

The European Community granted an aid of 300 ECU per ha on all varieties for the 1984 crop to all hop growers within the EEC, except for the member nation Greece. One ECU corresponded to DM 2.38516.

The amount of aid for the 1985 harvest was not yet known at the time of copy deadline.

Following aid for the 1984 crop was granted to the members of the EEC (figures in 1,000 ECU):

Fed. Rep. of Germany	5,888
France	202
Belgium	230
UK	1,527
Ireland	22
Greece	4
<b>Total</b>	<b>7,873</b>

The subsidiary to hop growers amounted to the following amounts in the preceding years :

	1000 ECU	1000 DM
1980	5,744	15,260
1981	5,089	13,105
1982	7,623	11,050
1983	7,664	19,267
1984	7,873	18,778

An amendment of Regulation No. 3332/85 dated Nov. 28, 1985 enables the producer groups to use the subsidiary also for structural measures on the hop market. Another modification resulted from Regulation No. 2600/85, published in the Official Bulletin of Sept. 16, 1985. The quality feature "cone bracts of hops" was removed from the minimum quality requirements for the certification of hops.

## Federal Republic of Germany Growth, Estimated Harvest and Actual Weight

The 1984/85 winter was long with extremely low temperatures. In the night from January 7th to 8th, 1985 a temperature of minus 34°C (about 93°F) was measured which is rather unusual for this degree of latitude.

So cutting and stringing of the hops could not be done before the end of March/early April. Furthermore the wet and cold April weather had sprouted the hops only hesitantly. Training began some time around May 10th. Subsequent warm temperatures and ample rain did favour the growth. But later cool weather came to affect the development of laterals. July brought summery weather with much sunshine and from early to mid-August sufficient precipitation favoured the formation of cones.

Harvesting began some time around August 26th.

Estimated harvest figures were as follows as compared with the actual quantity harvested:

Area	Estimate tons	Quantity harvested tons
Hallertau	29,100	31,146.0
Spalt	1,025	1,032.3
Jura	1,400	1,449.3
Tettwang	1,730	1,823.2
Hersbruck	195	215.0

As the table shows, the estimates were partly surpassed by far. The underestimation in the Hallertau was attributed to the fact that although less hops were grown in the center areas than the year before, the peripheral areas were reporting higher harvest figures.



## Varieties

In Germany the following varieties were cultivated and resulted in the following harvest figures:

area	variety	ha	Ø-yield/tons	amount harvested/tons
<b>Hallertau</b>	Hallertau	1.052	1.22	1.287
	Hersbruck	4.531	1.98	8.986
	Hüll	1.125	1.65	1.857
	Perle	1.237	1.92	2.380
	Northern Brewer	5.626	1.67	9.433
	Brewers Gold	2.720	2.45	6.686
	others	391	1.32	518
<b>Jura</b>	Hallertau	102	1.30	134
	Hersbruck	347	2.16	749
	Hüll	24	0.90	22
	Perle	77	1.93	149
	Northern Brewer	58	1.41	82
	Brewers Gold	125	2.52	315
<b>Spalt</b>	Hallertau	481	1.39	669
	Spalt	243	1.22	297
	Perle	20	1.11	22
	others	41	1.07	44
<b>Hersbruck</b>	Hallertau	70	1.50	106
	Hersbruck	46	1.63	75
	others	23	1.50	35
<b>Tett nang</b>	Hallertau	300	1.71	513
	Tett nang	933	1.39	1.301
	Hersbruck	6	1.55	9
<b>remainder</b>		21	1.48	31

## Acreage

In the Federal Republic of Germany following acreage development resulted:

area	acreage development			aroma varieties					bitter varieties and others		
	acreage 1985 ha	+ / - ha	acreage 1984 ha	Hallertau ha	Spalt ha	Tett nang ha	Hersbruck ha	Perle ha	Nothern Brewer ha	Brewers Gold ha	others ha
Hallertau	16.681	-40	16.721	1.052	19	-	4.531	1.237	5.626	2.720	1.496
Jura	733	+14	719	102	-	-	347	77	58	125	24
Spalt	784	-13	797	481	243	-	7	19	5	22	7
Hersbruck	140	-11	151	89	-	-	46	5	12	6	2
Tett nang	1.239	+20	1.219	300	-	933	6	-	-	-	-
others	20	- 1	21	6	-	5	-	1	1	2	5
<b>total</b>	<b>19.597</b>	<b>-31</b>	<b>19.628</b>	<b>2.010</b>	<b>262</b>	<b>938</b>	<b>4.937</b>	<b>1.339</b>	<b>5.702</b>	<b>2.875</b>	<b>1.534</b>

Source: Verband Deutscher Hopfenpflanzer, „Statistik über die Hopfenvermarktung 1985“.

The greatest varietal shift was found to have taken place in the variety Hallertau which declined by 194 ha and in the variety Perle which increased by 244 ha. The changes in the other regions and varieties are insignificant.

The relation between bitter- and aroma varieties remained unchanged:

varieties	1985	1984
Aroma varieties	54 %	54 %
Bitter varieties	44 %	44 %
Miscellaneous	2 %	2 %

## Market Development

Before harvesting began, the market was under the impression of an ample oversupply of the brewing industry from the previous years.

But low crop estimates and poor 1985 bitter values subsequently brought about a brisk change of the underlying tendency. So the traders had to replenish their supplies of alpha-standardized product sales. Some varieties

had therefore entered a bottleneck phase, which brought about price increases. On the other hand, the brewing industry held back with additional purchases on the spot market.

Upon completion of the trade's replenishing phase, the market calmed down. Price-lowering effects were increasingly exerted by unsold hop quantities from other European regions. The quotations

continued to decline until the turn of the year, and the brewing industry's function on the market was more and more that of a stockpiling purchaser of the remaining spot hops.

In spring 1986 the German market was sold out, except for some small remainders.

Our market report mentioned the following quotations for spot market hops:

area/variety	6/85	8/85	9/85	10/85	11/85	12/85	1/86	2/86
HALLERTAUS Hersbrucker	290.-	430.-	380.-	o.N.	370.-	370.-	370.-	280.-
HALLERTAUS Perle	290.-	430.-	380.-	350.-	330.-	330.-	330.-	250.-
HALLERTAUS Northern Brewer	280.-	430.-	330.-	330.-	330.-	310.-	310.-	250.-
HALLERTAUS Brewers Gold	220.-	300.-	230.-	200.-	160.-	160.-	160.-	160.-
SPALT	570.-	580.-	620.-	o.N.	560.-	560.-	560.-	580.-
TETTANG	570.-	580.-	620.-	o.N.	580.-	580.-	580.-	580.-

o.N. = no price available

The above quotations are to be understood for 50 kgs of packed hops, ex warehouse, excluding packing material and VAT.

## ENGLAND

### Growth, Harvest and Market Development

Spring was relatively cold. This unfavourable spell of weather continued also during the following months. A moist August was the reason for partly premature harvest. The longed-for sunshine finally came at the time of picking.

The advance contracts could be fulfilled for the varieties **Golding**, **Fuggles** and **Wye Northdown**. Yet, the ha-yields for **Wye Challenger** were that low that some contracts could not be met in full. The situation was similar for the variety **Wye Target**. Also the bitter contents of the varieties were reported to be lower than the results in the previous year. The values are as follows:

Variety	acids alpha % 1985	acids alpha % 1984
Wye Target	10.8	11.4
Yeoman	9.7	10.8
Challenger	7.3	8.2
Golding (East-Kent)	5.2	5.8
Bramling Cross	5.3	6.5
Bullion (Kent)	8.5	9.2

Alpha acids as is, conductometrically measured; figures of September.

As in the previous harvests, the **Wye Target** and **Yeoman high** alpha hops could be sold easily on the world market. On the other hand, some 380 tons of **aroma hops** resp. **hops with low alpha acids** were still unsold at the time of copy deadline of this report.

Advance contracts for the coming crops are estimated to be as follows:

Crop	tons	% of 1985
1986	3,750	58
1987	2,900	45
1988	890	14
1989	210	3

The following table "**varietal cultivation**" demonstrates that the acreage for the variety **Yeoman** increased by 40 ha while the total cultivation area declined by 349 ha. All other varieties lost ground. In 1986 the cultivation area is expected to decline by another 500 ha.

## ENGLAND

### Varietal Cultivation

variety/ha	total		WGV		Fuggles		Bramling Cross		Northern Brewer		Bullion		Wye Northdown	
	85	84	85	84	85	84	85	84	85	84	85	84	85	84
Kent	2370	2476	138	151	39	40	78	103	4	7	3	9	80	88
Sussex	208	216	-	-	18	19	5	6	-	-	-	3	-	3
Hampshire	100	135	-	-	3	3	-	-	-	5	-	-	74	96
Herefordshire	1171	1268	-	-	433	425	-	-	11	28	3	27	306	359
Worcestershire	369	400	-	-	75	82	2	10	14	15	-	5	101	112
brewery cultivation	531	599	14	17	-	-	-	-	43	49	78	89	47	57
<b>total</b>	<b>4749</b>	<b>5094</b>	<b>152</b>	<b>168</b>	<b>568</b>	<b>569</b>	<b>85</b>	<b>119</b>	<b>72</b>	<b>104</b>	<b>84</b>	<b>133</b>	<b>608</b>	<b>715</b>

variety/ha	Wye Challenger		Wye Target		Wye Saxon		Yeoman		Goldings		others	
	85	84	85	84	85	84	85	84	85	84	85	84
Kent	144	174	1065	1111	8	17	409	388	316	309	86	79
Sussex	16	21	109	106	-	-	46	45	6	6	7	7
Hampshire	4	11	-	-	-	-	-	-	-	-	20	20
Herefordshire	258	288	17	16	-	-	15	7	91	94	37	24
Worcestershire	87	91	-	-	-	-	-	-	82	89	10	6
brewery cultivation	62	74	164	161	1	3	47	37	9	26	64	76
<b>total</b>	<b>571</b>	<b>659</b>	<b>1355</b>	<b>1394</b>	<b>9</b>	<b>20</b>	<b>517</b>	<b>477</b>	<b>504</b>	<b>524</b>	<b>224</b>	<b>212</b>

Totals may not agree with addition of individual items because of rounding.

## FRANCE

### Growth and Market Development

Weather conditions were not favourable for hops during the spring months. Following cold May and June weather delayed the development and the blossom. It was, however, possible to overcome this retardation later and in **Alsace** the crop was finally quite good. In the area **Nord** storms damaged the crops.

Sixty five percent of the French crop had been sold in advance on a contract basis. The remaining non-contracted hops mostly involved **Northern Brewer** and **Brewers Gold** from the area **Nord**. In spring 1986 still some 250 tons were unsold.

## FRANCE

### Cultivation of varieties

The acreage cultivated per variety in contrast to the previous year had changed as follows:

variety/ha	total		aroma hops		Brewers Gold		Northern Brewer	
	85	84	85	84	85	84	85	84
Alsace	420	421	185	171	204	219	31	31
Nord	207	223	–	–	161	177	46	46
Burgundy	28	28	3	3	24	25	1	–
total	655	672	188	174	389	421	78	77

The quantity harvested can be broken down into varieties as follows:

variety/to	total		aroma hops		Brewers Gold		Northern Brewer + others	
	85	84	85	84	85	84	85	84
Alsace	843.2	843.2	271.9	271.9	529.2	529.2	42.1	42.1
Nord	362.0	362.0	–	–	295.0	295.0	67.0	67.0
Burgundy	52.0	52.0	4.0	4.0	47.5	47.5	0.5	0.5
total	1,257.2	1,257.2	275.9	275.9	871.7	871.7	109.6	109.6

(Totals may not agree with addition of individual items because of rounding)

For 1986 a further acreage reduction to about 585 ha was reported.

## BELGIUM

### Growth, Crop and Market Development

After a very cold winter with excessive snowfalls, the conditions remained unfavourable until the harvest. In August, heavy storms destroyed some trellises in the **Poperinge** cultivation area. This is the reason for the extremely poor ha-yield in this region.

The total crop quantity of 1,186 tons can be broken down into varieties as follows:

Variety	tons
Hallertauer	171
Northern Brewer	359
Brewers Gold	601
Other varieties	55
<b>Total</b>	<b>1,186</b>

At the time of copy deadline of this report, about 350 tons were unsold, 90 % of which were of the variety **Brewers Gold**. Since the marketing prospects for Belgian bitter hops are not very promising a presumable decrease of acreage area by about 100 ha is reported for 1986.

To improve the marketing chances of Belgian hops on the home market, the foundation of a **Marketing Fund** was published in early 1986. In accordance with the stipulations of this Fund an annual compulsory amount of bfrs 1,000.– is to be paid, while the Belgian brewing industry has to pay a "variable amount" of bfrs 30.– for each 50 kilos of hops imported into Belgium. It remains to be seen whether the introduction of such a Marketing Fund conflicts with the judicial situation in the **European Community**. Up to now, no other EC member has lodged an objection against these marketing measures.

The price development of the individual varieties of the 1985 crop was as follows:

Month		Brewers Gold	Northern Brewer	Hallertauer
September 1985	bfrs	4,600	5,700	7,200
October 1985	bfrs	3,300	5,700	7,400
November 1985	bfrs	3,000	4,800	–
December 1985	bfrs	2,500	3,300	–
January 1986	bfrs	1,700	3,200	–

The prices are understood for 50 kgs net, packed, ex warehouse.

## YUGOSLAVIA

### Styria

Relatively low temperatures in April and early May had little positive effect on the growth of hops. Blossom was quite different and the gardens were showing a moderate stand before the harvest. The greatest shortfall occurred with the variety **Styrian Golding**. On the other hand, the remaining varieties brought a normal yield.

The acreage under cultivation was as follows as compared with the preceding year:

Variety	85 ha	84 ha
Styrian Golding	906	910
Aurora	1,192	1,155
Other varieties	393	414
<b>Total</b>	<b>2,491</b>	<b>2,479</b>

Varietal crop quantities can be shown as follows:

Variety	tons
Styrian Golding	1,148
Aurora	2,202
Other varieties	672
<b>Total</b>	<b>4,022</b>

No acreage changes are expected for the 1986 harvest but varietal shifts might occur.

### Bačka

Rather unfavourable weather conditions after a severe winter affected the yields. The summer was hot with little air humidity. This resulted in the formation of small cones with a relatively low lupulin content.

The growing area declined by 60 ha as compared with the preceding year. Another decline of the acreage under cultivation down to 810 ha is expected for 1986.

The growing areas and varieties were distributed as follows:

Variety	area (ha)	crop (tons)
Bačka	630	756
Neo Planta	130	143
Other varieties	100	141
<b>Total</b>	<b>860</b>	<b>1,040</b>

## CZECHOSLOVAKIA

The growth and development of the plants were normal. Temperatures averaged the degrees customary during the last years; precipitation, however, was below average. This is especially true for April, May and June. Yet, in July and particularly in August this precipitation deficit could be compensated for.

The acreage of the four Czechoslovakian growing areas were extended once more. The average yield per ha was better than in the preceding year and therefore the crop was higher by 1,934 tons.

## POLAND

A cold winter with little snow was followed by a relatively warm spring. There was sufficient precipitation, which was far above the average of many years at the end of spring. In June and early July a cooler temperature spell followed and only in the second half of July until mid-August the general conditions improved. Yet, excessive rainfall hindered harvesting at the end of August.

The quantities harvested can be broken down as follows:

Variety	Surface ha	Quantity harvested
Lublin	2,273	2,551
Pulawy	70	76
Other varieties	90	120
Baby hops	70	0
<b>Total</b>	<b>2,503</b>	<b>2,747</b>

The acreage under cultivation is reported to be 2,500 ha for 1986. The individual varieties are as follows:

Variety	Surface ha
Lublin	2,345
Pulawy	45
Other varieties	110

## SPAIN

On an unchanged cultivation area the crop harvested was by 10% higher. The bitter content was 6% - 6.5%, as is.

The total crop distributed over the individual varieties can be shown as follows:

Variety	Quantity harvested/to
H7	1,102
H3	2,136
Aroma	10
<b>Total</b>	<b>3,248</b>

For 1986 an acreage of only 1,600 ha is reported.

After the entry of this country into the Common Market, a 7-year transition phase was laid down for hops. During this phase the import tariffs between Spain and the EEC countries must be removed. The Spanish hop growers will be granted a subsidiary already from the 1986 crop onwards, which will be paid directly to the farmers. It is also planned to consent a special assistance for the promotion of producer groups which partly will be borne by the member nation itself. The interim solutions and the organizational adaptation to the European Community also applies to the new member nation **Portugal**.

## German Democratic Republic

On a cultivation area that was increased by 100 ha, the first growth of the hops was delayed by cool weather. Varied temperatures were not favourable to the development of the plants. So at the beginning of harvest, in early September, the Northern Brewer hops had just reached the height of the trellises.

Between the bitter hop varieties the Northern Brewer variety, called **Nordischer Brauer** in the GDR, has gained dominance in the meantime. The cultivation of aroma hops covering the varieties **Saaz, Saladin and College Cluster** shrank further according to the information we have at hand.

At present the new breed "**Braustern**" is being introduced as another bitter hop variety, while a suitable substitute for the Saaz variety is under research.

## AUSTRIA

### Mühlviertel

A record crop was yielded on a cultivation area that was 4 ha larger than the year before. The result would even have been more favourable, had not a storm shortly before harvest done a great deal of damage in the gardens. The losses are estimated to be approx. 6 - 7 ha respectively 6 tons.

Besides the good quantity the hops were also of excellent quality. There were almost no damages done by aphids, and downy mildew occurred very seldom.

The total acreage of 82 ha is made up by 76 ha commercial areas and 6 ha trial gardens for baby hops.

**Malling** and **Sanntaler** continue to be the main varieties grown on about 90% of the cultivation area.

The entire Mühlviertel crop is taken up by the Austrian brewing industry. 97.6% of the crop was adjudged to be Class I. They were sold at schilling 79.04/kg.

The Mühlviertel hops showed the following bitter contents as compared with the 1984 crop:

Variety	alpha % 1985	alpha % 1984
Aurora	9.0	9.3
Apollo	9.1	8.4
Northern Brewer	7.0	10.1
Brewers Gold	8.1	8.9
Malling	8.6	7.8
Sanntaler	4.0	5.2
Hersbruck late	5.7	5.7
Perle	8.8	8.3

### Styria (Leutschach)

On an unchanged acreage, Styria also reported a record harvest. In August a storm did damage to the trellises on about 5 ha.

## PORTUGAL

The growing conditions started to be normal, but turned out to be less favourable later on. This finally resulted in an average crop yield with healthy plants. In Portugal the only variety planted is **Brewers Gold**, which is distributed over the two growing regions **Braga** and **Bragança** as follows:

	Braga	Bragança
Area (ha)	77.0	97.0
Quantity		
harvested (tons)	155.7	224.0
Average yield (tons/ha)	2.0	2.3

The hops showed an alpha content of 7.0 %, as is, measured by conductometer.

## RUMANIA BULGARIA

We still lack information about hop cultivation in these countries. Therefore, both the acreage and the yields must be estimated.

## SOVIET UNION

The data available about hop cultivation in this country are still contradictory. It is, however, reported that relatively good crops were yielded during the last two years. On the other hand, the acreage is said to be somewhat smaller than it was assumed so far.

The development of beer output can be expected to have decreased, since the governmental anti-alcohol campaign certainly has its effect on the consumption of beer.

## HUNGARY

On an acreage which was reduced by 14 ha, the quantity harvested was increased by 35.6 tons as compared with the preceding year due to a better yield per ha.

The acreage and quantity harvested can be broken down into the aroma and bitter varieties as follows:

Varietal group	acreage ha	quantity harvested/ton
Aroma	248	177.5
Bitter	270	437.6
<b>Total</b>	<b>518</b>	<b>615.1</b>

## GREECE

This member nation of the European Community relinquished all hop cultivation due to a crop failure in 1984.

## OTHER COUNTRIES

### AUSTRALIA

The growing period of hops from the 1985 crop was marked by excellent conditions leading to a per-ha yield that was above average. Yet, the bittering substances were generally lower than in the previous years.

In Australia, the high-alpha variety **Pride of Ringwood** continues to be the only one grown.

### NEW ZEALAND

Similarly to Australia, there were excellent growing conditions with a relatively dry spring and a warm summer with rainfalls. During picking it was dry again. The bitter contents were higher than in the previous years.

In New Zealand the varieties **Green Bullet** and **Sticklebrack** are grown beside high-alpha hops.

### PEOPLE'S REPUBLIC OF CHINA

We presume that the cultivation of hops has been drastically stepped down during the last years owing to the lack of marketing chances for Chinese hops on the world market. Since no reliable information is available, it must be emphasized that any statement concerning this country is indeed highly uncertain.

The acreage under cultivation might cover some 3,000 to 3,500 ha and the quantity harvested is supposed to be approx. 5,000 tons. Beer output has presumably increased considerably and various sources estimate the production to be 25 to 35 million hl. Therefore the domestic requirements for Chinese hops are between 4,000 and 4,500 tons. This means that the People's Republic of China only has a minor quantity of hops available for export.

Beside the traditional Chinese varieties referred to by No. **641** and **644**, trials are also being made with European varieties. Especially the **Hüll** and the **Brewers Gold** hops are said to have well adapted to the **Xinjiang** cultivation region. The classical aroma hops are not likely to play a role in cultivation for the time being.

### INDIA

The total hop crop was reported to be 180 tons in 1984. We had already estimated this quantity then. Also in 1985, a similar quantity is likely to have been harvested on an unchanged acreage.

### KOREAN REPUBLIC (SOUTH KOREA)

This country has once again slightly increased its acreage and also the ha-yield was higher than the year before. The crop is taken over by the two national breweries as follows:

Brewery	ha	Quantity harvested/tons
Oriental Brewery	271.0	461.0
Chosun Brewery	216.5	235.5

### SOUTH AFRICA

40 ha of the entire acreage were baby hops in the first or second year of cultivation. 60% of the acreage is covered by the late variety **Pride of Ringwood**, the remainder is used for **Southern Brewer**. **Pride of Ringwood** had an alpha value of 10% after the harvest, **Southern Brewer** 9%.

On 40% of the acreage artificial illumination is in use, which is said to have caused an increase in production of 15%. This method allegedly also improves the alpha content.

### JAPAN

At first the growth of the hops proceeded under satisfactory conditions, until the general situation deteriorated in summer with relatively ample rain and low temperatures. Then the temperatures became warmer again and the precipitation volume decreased. The general conditions changed several times and quickly.

The sixth typhoon in 1985, in early July, came too soon to influence the crop. So the gardens were able to overcome this event.

The Japanese brewing industry takes over the entire production according to the following review:

Brewery	Acreage (ha)	Production tons
Kirin	651.9	1,335.5
Sapporo	213.2	373.5
Asahi	173.1	350.3
Suntory	13.1	24.8
<b>Total</b>	<b>1,051.3</b>	<b>1,884.1</b>

First class hops were taken over by the individual breweries at the following purchasing conditions:

Kirin	2.372 YEN/kg
Sapporo	2.344 YEN/kg
Asahi	2.344 YEN/kg
Suntory	2.372 YEN/kg

### TURKEY

On a total acreage that was 120 ha smaller, 150 ha each were covered by the varieties **Brewers Gold** and **Late Clusters**. The crop quantities were as follows:

121.3 tons	<b>Brewers Gold</b> and
160.0 tons	<b>Late Clusters</b> .

The hops showed an alpha content of 7.0 - 7.5%.

### CANADA

The only hop cultivation district is in British Columbia, near Vancouver.

The main varieties cultivated are Fuggles, Bramling and Kents. This also explains the relatively low average yield of 1.52 tons per ha. High-alpha hops were grown for the first time in the crop year 1985 on 11 ha, 9.5 ha of which were new acreage.

# USA

## Growth

Weather and general growing conditions were normal. At first winter temperatures were below normal; however, all areas experienced some very early warm trends followed by some early Summer cool spells. Moisture was less than normal but was compensated for by irrigation. Harvest conditions were good.

### Yakima

Winter temperatures were cold and a blanket of snow remained on the ground from December 1, 1984 until mid-February 1985. Early Spring temperatures were above normal and hence the hop plants were slightly ahead of schedule. The early Spring progress was somewhat delayed as a late Spring cold spell stunted growth. Some hops were frozen back and had to be re-trained. Early Summer experienced drier than usual

conditions. Adequate snow-pack permitted irrigation to compensate for lack of rainfall. The dry weather continued into late Summer and throughout harvest. Picking began in late August and growers experienced few problems.

### Oregon

Temperatures for Fall and Winter were some of the coldest on record. Early Spring temperatures averaged about 60°F with less than normal moisture. Mid to late Spring continued with below normal moisture necessitating growers to irrigate. A brief period of sub-freezing temperatures in May slowed plant growth with noticeable stunting of Galenas. Despite relatively dry weather, mildew was very much in evidence. The arrival of hot temperatures helped control mildew. After about a month, Galenas began growing again and finally reco-

vered. Early Summer continued dry with rainfall below normal. Fuggle harvest began about August 19. The weather during harvest was cool. This was the second year Oregon had considerably below normal rainfall.

### Idaho

Early Spring snow and rain showers prevailed up to late April. Temperatures warmed in late May and early June and showers ended. Late Summer temperatures were normal to high. Irrigating became necessary. Heavy rains during harvest delayed access to the fields.

### California

As usual, temperatures were hot. Irrigation water was readily available. The crop grown on 20 acres only was average.

## Quality

Picking quality was good. Average Alpha of the crop stayed at 8.3% but only because of the increased percentage of high alpha varieties in the total crop. Individually most of these varieties were down a few tenths of a percent. The Clusters averaged 7.3% compared to 7.6% for the prior year. Cascades were 4.6% compared to 6.2% in 1984.

Total Alpha production for the 1985 crop was 1,872 metric tons or 11.4% less than 1984. Hop production was down from the 1984 crop which was 56,200,000 pounds compared to 49,600,000 pounds in 1985.

## Spot Market

Prices for spot hops opened in late September 1985 at 30 ct/lb for Clusters and 50 ct/lb for high Alpha varieties. Very few Oregon Fuggles/Willamettes were traded at 80 ct/lb. Approximately 2 million lbs were grown for the spot market with only about 100,000 lbs remaining unsold in growers hands at year end. The high US inventories and lack of export demand continued to depress spot prices. Hop inventories as of Sept. 1st were officially reported as follows:

1981	34.4 mill lbs
1982	41.0 mill lbs
1983	61.6 mill lbs
1984	68.5 mill lbs
1985	65.5 mill lbs.

## Contract Market

Throughout the first 9 months of the year of 1985 prices were mostly nominal. Under pressure to sell growers offered larger quantities with very few transactions resulting. If there was activity it focused on:

- contract renegotiations or switches to help growers stretch high price contracts into later years combined with some new contracts
- special growing contracts to bring new varieties in the ground (Perle, Tettang, Chinook).

## Prices \$/lb. Yakima Cluster)\* without premium

	85	86	87	88	89	90	91
January 85							
-Sept	0.80	1.--	1.15	1.20	1.25	1.30	1.40
Sept/Dec	-	-	1.05	1.15	1.20	1.25	1.35

\* High Alpha varieties + 5 ct/lb

The availability of bank credit is becoming a severe limitation to many hop growers ability to raise their full acreage beyond existing contract coverage.



## USA

### Crop (to) 1985

#### Varietal Structure

High Alpha hops again increased their share from 24% to 32%. Only 1% of the acreage remained in Bullions and Brewers Gold. Clusters still being the leading variety fell to 41% while Fuggle varieties increased their share from 12% to 14% as replantings in Oregon yielded for the first time.

Variety	Washington	Oregon	Idaho	Total
Clusters	9.927	20	781	10.728
Bullions	132	165	-	297
Cascades	1.603	199	112	1.914
High-Alpha	4.553	780	1.201	6.566
Fuggles	-	2.463	-	2.463
Others	318	22	177	485
total	16.533	3.649	2.271	22.453

Acreage per variety and yield/ha in the U.S. hop growing areas are as follows:

#### Acreage per variety/%

Variety	Washington		Oregon		Idaho		Total**	
	85	84	85	84	85	84	85	84
Clusters	54	55	-	3	30	34	41	45
Bullions	2	10	3	6	-	1	1	8
Cascades	10	10	5	9	6	5	9	9
High-Alpha	31	24	21	6	55	54	32	24
Fuggles	-	-	70	75	-	-	14	12
others	3	1	1	1	9	6	3	2
total	100	100	100	100	100	100	100	100

#### Acreage per variety/ha

Variety	Washington		Oregon		Idaho		Total**	
	85	84	85	84	85	84	85	84
Clusters	4.306	5.045	10	56	384	426	4.700	5.567
Bullions	128	886	60	128	-	15	188	1.029
Cascades	801	872	101	187	73	61	975	1.120
High-Alpha	2.408	2.206	472	125	706	677	3.586	3.008
Fuggles	31	38	1.577	1.484	-	-	1.608	1.522
Others	230	97	17	12	111	111	358	220
total	7.904	9.144	2.237	1.992	1.274	1.290	11.415	12.466

#### Yield/ha (to)

Variety	Washington		Oregon		Idaho		Total**	
	85	84	85	84	85	84	85	84
Clusters	2,3	2,3	2,0	2,5	2,0	1,9	2,3	2,3
Bullions	1,0	2,3	2,8	2,9	-	2,3	1,6	2,3
Cascades	2,0	2,1	2,0	1,9	1,5	1,8	2,0	2,1
High-Alpha	1,9	1,9	1,7	1,8	1,7	2,0	1,8	1,9
Fuggles	-	-	1,6	1,4	-	-	1,5	1,4
Others	1,4	2,0	1,3	1,6	1,6	1,4	1,4	1,9
total	2,1	2,2	1,6	1,6	1,8	2,0	2,0	2,1

\*\* The figures of 1984 include the area of California.

Totals may not agree with addition of individual items because of rounding.

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## USA

### Average price returned to US hop growers

The U.S.D.A. (US Dept. of Agriculture) annual report on the season's average grower price per pound recorded the first decline since 1966:

	\$/lb
1981	1.51
1982	1.74
1983	1.93
1984	2.15
1985	1.98

While the absolute level of \$ 1.98/lb represents a very comfortable return the figure is the result of very uneven distribution of high and low priced contracts amongst growers. With the expiration of high price contracts a substantial decline of average grower price must be expected during the next years.

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### Hop Marketing Order (HMO)

The status of the HMO continues to be unresolved and much confusion surrounds the issues. The events up to date were as follows:

July 1st, 1985 Announcement by the U.S.D.A. in the Federal Register to unilaterally terminate the HMO effective December 31, 1985.

December 1985 Congress passes an Act making it illegal to the U.S.D.A. to unilaterally suspend Marketing Orders unless 60 days notice is given.

January 1986 U.S.D.A. rescinds termination.

February 1986 U.S.D.A. files intention to rescind the HMO.

May 1986

Hop growers are polled as to their wishes regarding the future of the HMO.

June 1986

Majority of hop growers wishes to continue a marketing order for statistical purposes only with all volume and entry restrictions to be suspended.

At this time it appears as if the Hop Marketing order as it has operated since 1966 has ended.

(U.S.D.A. = US Dept. of Agriculture)

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### Outlook USA for 1986

Trained acreage for crop 1986 will be 24,935 acres according to last survey approx. 3,500 acres less than 1985. If yields will be normal a crop of 43-44 mill lbs can be envisaged. Figuring hop imports and exports as well as domestic consumption a reduction of 6-10 mill lbs of inventory appears to be a realistic expectation.

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## Crop 86

### AUSTRALIA

The entire quantity harvested was 1,605 tons in 1986 with an average alpha of 9.9 %.

A dry and mild winter was followed by favourable spring conditions. There was ample rain in summer, in Tasmania record precipitations were reported. Yet, during harvest the weather conditions were excellent again and there was hardly any rain. Despite this, however, the crop did not come up to expectations in Tasmania. In comparison, Victoria reported satisfactory results.

### SOUTH AFRICA

The acreage under cultivation was enlarged by another 38 ha. In comparison, the crop quantity decreased to 446 tons.

The 20 % lower yield reflects the unfavourable weather conditions during the growing period. After the warm months of October and November, a very rainy period, bringing frequent winds and hailstorms, predominated in December and January. Then, during picking, extremely hot temperatures up to 40°C were reported. The farmers were paid R 6.3 per kg for the 1985 crop and R 7.0 per kg for the 1986 crop. With a rate of inflation of more than 20 %, and lower yields/ha as mentioned above hop farmers in this country are encountering certain economic problems.

### NEW ZEALAND

The quantity harvested in 1986 is reported to be 275 tons. The average alpha is 13.3%.

An excellent spring was followed by a very moist summer which, however, did not affect the growth of the hops. During harvest the weather conditions were ideal and so the crop was of extremely good quality.

### EUROPE

In December and January relatively mild winter weather prevailed and also the following cold spell in February did not cause any damage, since a sufficient snow cover protected the root-stocks. In the following months, above all in May, excellent weather conditions favoured the growth of the hops. Temperatures were relatively high and precipitations were sufficient. A short cold spell in June hampered for some time the further development, but in the middle of June again warm weather prevailed. At the time of copy deadline hops in all European hop growing regions looked good.

### 1986 Outlook

After two years of a largely stagnating world beer output, a slight increase can again be expected for 1986. The number of countries reporting increased sales figures is higher than in 1985.

The tendency towards reducing the acreages under cultivation is likely to continue. As far as can be seen now, hop acreage in the Common Market area is expected to be reduced by 1,000 ha, while cultivation area in the U.S.A. is supposed to be reduced by some 1,400/1,500 ha.

In comparison, brewery inventories which still continue to be high are a burden to the market. Cultivation of varieties with high bitter contents is expected to be increased once more.

## Do you still remember 1945?

The **Federal Republic of Germany** is exporting some 25,000 tons of hops every year, that is two thirds of its total crop. With an average selling price of approx. DM 500,- per Ztr. (Ztr. = 50 kgs) this results in an export value of DM 250 millions. Admittedly this amount is of only negligible importance in the trade balance which in 1985 soared to a surplus of **DM 74 billions**.

That was not always so. In a world hungering for raw materials and after the end of World War II, 1945 hops quickly became one of the first and few export commodities of the wartorn and almost powerless country.

Acreage reductions during the war, impoverishment of the soil and an extreme draught in summer 1945 were also reflected by a slump in hop production. Our records show the following figures of the **1945 crop**:

	Surface/ha	Crop/tons
<b>U.S. zone of occupation</b>		
Hallertau	3,592	3,290
Spalt	620	521
Hersbruck	259	175
Jura	40	25
Tettwang (Bavaria)	25	25
	4,536	4,036

	Surface/ha	Crop/tons
<b>French zone of occupation</b>		
Tettwang	450	350
Württemberg.-RHW*	133	125
Palatinate	25	25
	608	500
<b>Germany total</b>	<b>5,144</b>	<b>4,536</b>
(1985:	19,597	35,697)

\*) Rottenburg, Herrenberg, Weil der Stadt

Quite early, on August 6th 1945 the Food and Agricultural Administration of Bavaria had ordered, with the consent of the **U.S. Military Government**, a continuation of the "**reichsnährständischen Marktordnung**" governing acreages, prices and distribution. The price for the purchasing of 1945 crop was fixed at **Reichsmark 260,-** per Ztr.

As hops were in short supply the distribution was mainly carried out in accordance with the **Military Government** instructions. On October 6th, 1945 the U.S. Military Government seized the hops still on stock from the 1944 crop and the entire 1945 crop. They were packed in ballots of 150 kgs each and mostly exported to USA, England, Belgium and Denmark. Another preferred allotment was given to so-called NAAFI-breweries working for occupation troops.

Much the same were the actions of the **French Military Government** controlling a large part of Tettwang and the hop cultivation of the RHW area which today does no longer exist. On October 4th, 1945 they seized all available hops, had most of them shipped to France, supplied military breweries and released the remainder for normal consumption. The relatively small remainders were apportioned under a quota schema to the three Zones of Occupation and the brewery associations there distributed them to German breweries via **ration cards**. Since only "**thin beer**" was allowed to be produced, the requirements of the exhausted and largely destroyed German brewing industry were low in fact. At least there is no case known where a brewery had to stop its operation due to lack of hops. In case of emergency some bales of hops could still be obtained on the black market.

The system of military government controlled exportation and distribution continued through 1946. Only with the 1947 hop crop were the hop exporters residing in the U.S. zone allowed to enter into direct sales contact with foreign countries. The U.S. Military Government had set up a **Joint Export Import Agency** (JEIA) which, while still controlling the hop export quantity- and pricewise, started a shift towards a free export economy. After the Monetary Reform of June 20th, 1948 this shift was finally accomplished with the 1948 hop crop.