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HOPS 1981/82

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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)
		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:

$$86\,°F = \frac{(86-32)\,5}{9} = 30\,°C \qquad 30\,°C = \frac{30 \cdot 9}{5} + 32 = 86\,°F$$

The most important data:

	1980	1981	Difference %
Cultivation Area/ha	**86.926**	**94.838**	**+ 9**
Hop Production/tons	**120.611**	**131.058**	**+ 9**
Alpha Production/tons	**7.269**	**8.049**	**+ 11**
Beer Produktion/Mio hl	**931.404**	**949.903**	**+ 2**

HOPS 1981/82

Political Situation

Relations between both the world powers, **U.S.A.** and the **Soviet Union,** cooled significantly. On 13 December 1981 in **Poland** a state of martial law was announced and the government was taken over by the military. The explosive situation in the **Near East** was demonstrated anew by the invasion of **Israeli troops into Lebanon.** In the conflict between **Iran** and **Iraq** the ground work is being laid for the defeat of **Iraq.**Another source of tension, **Afghanistan,** remains the same. New crisis areas were added in **Middle America** as well as military disputes between **Argentina** and **England** over the possession of the **Falkland Islands.**

The fear of the use of nuclear weapons and the desire for disarmament allowed peace movements to form in the **West.**

Economic Situation

In 1981 the world economy found itself in a continuing recession. Gross National Product of the main industrial nations showed at best zero growth. As a result of smaller oil consumption the market saw a drop in the crude oil prices. Due to worldwide high interest rates consumption and investment activity were discouraged. As a result thereof the rate of inflation dropped in most countries, although higher unemployment figures had to be taken into account.

To overcome economic difficulties different concepts are being applied at the present by the important western industrial countries: In the **U.S.A.** the **Reagan** administration is betting on the strength of free market economy with simultaneous tax cuts and restructuring of government outlays. However, control of the budget deficit and a resulting decrease in high interest rate levels has not yet been accomplished.

While the conservative government in **Great Britain** continues to follow its monetaristic influenced policies, **France** pursues the route of a socialistic-communistic government with nationalization as well as guided investment policies serving as the driving force. The socialistic countries also have not been spared from serious monetary and supply problems. It is evident that better standards of living, expensive social programs and ever-increasing armament costs cannot be achieved all at the same time.

In the **Federal Republic of Germany** the export trade balance for 1981 showed a surplus of DM 28.2 billion (1980 DM 9.1 billion), the balance of payments a deficit of DM 17.3 billion (1980 deficit DM 28.2 billion). While the average rate of inflation of 5.9 % was favourable when compared internationally, the number of unemployed rose sharply and reached a high of 8.2% in January 1982. Through its international commitments the German mark could not escape the rise in interest rates which came from the **U.S.A.** The Lombard rate fluctuated between 10 and 12%.

BITTER SUBSTANCE TABLE

Our central laboratory in Wolnzach determined the bittering substances of several selected varieties.

Variety	Crop 1981			Crop 1980		
	Total Resin %	Alpha %	% of Total Resin	Total Resin %	Alpha %	% of Total Resin
Hallertau Hallertau	11,7	4,3	36,8	10,8	3,9	36,1
Hallertau Hersbruck	11,6	4,1	35,3	10,4	3,6	34,6
Hallertau Hüller	14,8	5,9	39,9	11,8	4,5	38,1
Hallertau Perle	14,4	6,6	45,8	12,4	5,6	45,2
Hallertau Northern Brewer	14,6	7,2	49,3	15,2	7,6	50,0
Hallertau Brewers Gold	12,6	5,8	46,0	13,4	6,4	47,8
Hallertau Record	14,7	6,2	42,2			
Spalt	13,4	4,7	35,1	10,6	3,8	35,8
Tettnang	12,8	4,8	37,5	10,8	3,9	36,1
Saaz	11,1	3,9	35,1	10,3	3,6	35,0
Belgian Northern Brewer *)	16,0	8,1	50,6	15,0	7,5	50,0
Belgian Brewers Gold *)	14,7	6,6	44,9	13,0	5,5	42,3
English Northern Brewer *)	15,3	7,5	49,0			

*) These values are based on random analyses – therefore not absolutely representative.

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.

PRODUCTION OF BEER 1980/81

Country	1980 1000 hl	1981 1000 hl
EUROPE		
Fed. Rep. of Germany	92.309	93.723
USSR	65.000*	65.000*
United Kingdom	66.605	61.550
Dem. Rep. of Germany	24.000	24.000
Czechoslovakia	23.393	23.934
France	22.009	21.852
Spain	20.027	20.924
Netherlands	15.684	16.640
Belgium	14.500	15.000
Yugoslavia	11.712	12.000
Romania	8.500*	11.500*
Poland	11.185	11.300
Denmark	9.168	10.127
Italy	8.569	9.022
Austria	7.606	8.007
Hungary	7.800	7.800
Ireland	5.999	5.812
Bulgaria	5.400*	5.400*
Switzerland	4.080	4.150
Sweden	3.940	3.800
Portugal	3.360	3.676
Greece	2.500	2.900
Finland	2.822	2.800
Norway	2.008	1.900
Luxembourg	700	711
Malta	128	139
Albania	100*	100*
Iceland	33	36
	437.129	443.803
AMERICA		
USA	227.746	228.950
Brasil	29.500	29.500
Mexico	26.019	29.321
Canada	20.669	21.014
Venezuela	12.500	12.000
Colombia	12.300	12.000
Peru	5.343	5.261
Ecuador	2.524	2.983
Cuba	2.365	2.400*
Argentina	2.328	2.370
Chile	1.941	2.014
Bolivia	1.000	1.380
Dominican Rep.	860	920
Panama	800	918
Paraguay	600	740
Uruguay	695	700
Puerto Rico	735	650
Jamaica	595	595
Guatemala	800	550
Costa Rica	445	500
Honduras	478	478
Nicaragua	500	450
El Salvador	378	450
Trinidad	325	292
Dutch Antilles	140*	140
Surinam	130*	130*
Martinique	59	80
Windward-Leeward	60*	60
Guadeloupe	35	28
Haiti	25	25
	351.895	356.899
NEAR EAST		
Turkey	2.800	2.900
Iraq	565	565*
Israel	520	550
Cyprus	181	198
Lebanon	150	150
Syria	70	89
Jordan	85	85
	4.371	4.537

Country	1980 1000 hl	1981 1000 hl
FAR EAST		
Japan	45.138	46.480
Philippines	7.101	7.200
People's Rep. of China	6.000*	7.000*
South-Korea	5.796	5.617
Taiwan	2.432	2.462
Malaysia + Singapore	1.730	1.850
Vietnam	1.500*	1.500*
India	1.200*	1.200*
Thailand	1.000	1.070
North-Korea	1.000*	1.000*
Hongkong	750	946
Indonesia	625**	815
Okinawa	280	280
Sri Lanka	77	80
Burma	40	40
Nepal	10	10
Pakistan	8	7
Laos	7	7
Bangladesh	5*	5*
	74.699	77.569
AFRICA		
South Africa	8.500	10.245
Nigeria	7.850	8.000
Cameroons	2.720	3.251
Zaire	2.975	3.003
Kenya	3.080	2.750
Ivory Coast	1.400*	1.600*
Ruanda + Burundi	1.165	1.278
Sambia	1.050	1.200
Zimbabwe	980	1.189
Tanzania	900	900*
Gabun	593	744
Angola	400*	671
Ethiopia	660	645
People's Rep. of Kongo	539	640
Algeria	600	600*
Mozambique	540	510
Upper Volta	500*	500*
Togo	400*	500
Egypt	500	440
Morocco	420	435
Benin	420	420
Senegal	350*	350*
Tunisia	320	330
Namibia	265	330
Ghana	400	300
Mauritius + Reunion	266	246
Madagascar	318	210
Central African Rep.	240	202
Liberia	172	150
Sierra Leone	122	150
Tchad	109	100
Guinea Bissao	90	100
Uganda	182	72
South Jemen	60	60
Niger	75	75
Seychelles	48	48
Malawi	40	40
Sudan	20	0
	39.269	42.284
AUSTRALIA/OCEANIA		
Australia	19.433	20.170
New Zealand	3.783	3.800
New Guinea	500*	500
Fiji	150	150
Tahiti	83	83
Samoa	54	58
New Caledonia	38	50
	24.041	24.811
WORLD	931.404	949.903

* Estimated ** Newer Data, 1980: 740.000 hl

World Production of Beer

In comparison with previous years world beer-consumption has diminished:

	1980	1981
Europe	+ 0.7 %	+ 1.5 %
America	+ 6.0 %	+ 1.4 %
Africa	+ 10.6 %	+ 7.8 %
Asia	+ 1.9 %	+ 3.9 %
Australia/Oceania	– 1.0 %	+ 3.2 %
Total	**+ 3.1 %**	**+ 2.0 %**

1981 CROP

Market Observations

Reviewing the 1981 world crop it can be stated that it surpassed 1980 figures by 8.7% in quantity, 10.7% in alpha content.

Beginning in 1981 an increasing calming of the world market situation could be observed. Starting with the harvest of 1981 the shift to a buyer's market could no longer be overlooked. Hop production again exceeded consumption. Further factors contributed to the situation:

- general lack of interest in buying because of stagnation of beer production and unsure future development
- further reduction of hop stocks in breweries due to high level of interest rate
- declining hopping ratio

Within the framework of generally decreasing price development, the picture on both of the main areas of the world market were different. The approaching slump made itself most noticeable where the largest expansion of acreage had occured during the past 3 years: in the **U.S.A.** There, the few uncontracted spot hops experienced complete lack of interest for months and finally found a hesitant market far below production costs by December 1981 through February 1982.

On the other hand, the **Federal Republic of Germany,** as the result of a poor 1980 crop, had continuous sales in mid September 1981 with moderate buying activity and a slightly downward price tendency. Most part of the crop could be removed from farmers by November. Stronger price declines were observed in this market only after the beginning of 1982. They concerned mainly the trade stocks.

Contract Market

The events of the 1981 spot hops caused a new orientation for the price structure of contracts after the 1982 crop to a much lower price level on all markets – mainly in the **U.S.A.**

On the basis of present world cultivation areas and under the assumption of normal yields, there is a danger in the future of a hop surplus. Adaptation of cultivated area to demand is unavoidable. Because, from experience, appeals to common sense bear little fruit, reduction of acreage can be forced only by the price. Hence, the hop growing areas where production is less contracted forward will be the most exposed and the first compelled to grubbing.

The percentage of contractually sold hops can be estimated as follows (based on present cultivated areas):

	1982	1983	1984	1985	1986	1987	1988	1989	1990
USA	93	77	50	38	14	10			
FRG (Germany)	85	85	85	85	75	30	20	10	5
Belgium	50	40	20	10					
Czechoslovakia	90	85	80	60	10				
Yugosl. (Slov.)	90	85	70	50	40	20			

Alpha Acid Production

In determining the alpha acid production of the world market, the following classifications were retained:

Group A) finest aroma hops (Saaz, Tettnang, Spalt)

Group B) aroma hops (Hallertau, Hersbruck, Huell, Perle, Strisselspalt, Lublin, Golding, Fuggle, Cascade and others)

Group C) hops without world market importance

Group D) bittering hops (Northern Brewer, Brewers Gold, Cluster, Bullion, Pride of Ringwood and others)

After classifying the quantities of hops harvested into the stated groups and based on average alpha acid values, the 1981 alpha production results are compared to last year as follows:

Group	1980 Share %	1980 Crop in Tons	1980 α % Ø	1980 α Tons	1981 Share %	1981 Crop in Tons	1981 α % Ø	1981 α Tons
A	10	12.251,5	3,65	447,2	12	16.113,6	3,6	580,1
B	24	28.515,6	4,63	1.320,3	25	32.783,3	4,5	1.475,2
C	23	27.991,8	6,00	1.679,5	20	25.916,9	6,2	1.606,8
D	43	51.852,0	7,37	3.821,5	43	56.244,0	7,8	4.387,0
Total	100	120.610,9	5,98	7.268,5	100	131.057,8	6,2	8.049,1

District	1980 Area cult. in ha	1980 in Tons per ha	1980 Crop in Tons = 1000 kg	1981 Area cult. in ha	1981 in Tons per ha	1981 Crop in Tons = 1000 kg
Hallertau	15.232	1,55	23.600,0	16.288	1,78	29.005,7
Spalt	794	1,26	1,004,6	817	1,67	1.365,6
Hersbruck	166	1,23	204,4	174	1,67	290,0
Jura	583	1,48	864,8	684	1,68	1.146,6
Tettnang	1.159	1,05	1.210,9	1.205	1,55	1.862,5
Others	20	1,53	30,6	21	1,59	33,3
Federal Republic of Germany	**17.954**	**1,50**	**26.915,3**	**19.189**	**1,76**	**33.703,7**
Kent	3.028	1,72	5.199,7	3.048	1,59	4.837,2
Hampshire	198	1,40	277,9	209	1,55	324,1
Sussex	231	1,51	348,7	238	1,45	344,9
Herefordshire	1.643	1,77	2.912,7	1.722	1,64	2.818,7
Worcestershire	592	1,71	1.010,3	591	1,72	1.014,5
England	**5.692**	**1,71**	**9.749,3**	**5.808**	**1,61**	**9.339,4**
Aalst	184	1,63	300,0	190	1,61	306,0
Poperinge	610	1,80	1.100,0	632	1,93	1.222,0
Vodelée	24	1,25	30,0	24	1,33	31,8
Belgium	**818**	**1,75**	**1.430,0**	**846**	**1,84**	**1.559,8**
Alsace	468	1,86	872,3	472	1,81	852,6
Burgundy	38	1,68	64,1	37	2,03	75,1
Nord	245	1,84	451,1	245	1,94	476,3
Various	6	2,60	15,6	6	2,20	13,2
France	**757**	**1,85**	**1.403,1**	**760**	**1,86**	**1.417,2**
Ireland	**75**	**1,02**	**76,5**	**72**	**1,07**	**76,9**
Greece*	**25**	**1,40**	**35,0**	**25**	**1,60**	**40,0**
EUROPEAN COMMUNITY	**25.321**	**1,56**	**39.609,2**	**26.700**	**1,73**	**46.137,0**
Saaz				7.571	1,14	8.638,1
Auscha				1.728	1,21	2.084,6
Tirschitz				691	1,20	829,2
Slovakia				1.267	1,05	1.333,6
	11.100	0,90	10.036,0	11.257	1,14	12.885,5
New Acreage without Yield	–	–	–	570	–	–
Czechoslovakia	**11.100**	**0,90**	**10.036,0**	**11.827**	**1,09**	**12.885,5**
Soviet Union**	**14.000**	**0,89**	**12.500,0**	**16.500**	**0,61**	**10.000.0**
Slovenia	2.212	1,48	3.268,3	2.259	1,73	3.903,0
Backa and Ilok	943	1,61	1.515,2	933	1,54	1.433,0
Yugoslavia	**3.155**	**1,52**	**4.783,5**	**3.192**	**1,66**	**5.336,0**
German Democratic Republic	**2.156**	**1,10**	**2.363,5**	**2.120**	**1,29**	**2.730,4**
Poland	**2.474**	**0,70**	**1.721,0**	**2.630**	**0,89**	**2.350,0**
Bulgaria**	**1.600**	**0,56**	**900,0**	**1.700**	**0,68**	**1.150,0**
Romania**	**1.200**	**1,00**	**1.200,0**	**1.400**	**0,80**	**1.115,0**
Hungary	**556**	**1,20**	**668,6**	**562**	**1,34**	**754,0**
León	1.797	1,19	2.136,8	1.988	1,26	2.509,5
Cantabrica + Galicia	55	0,25	13,5	15	0,90	13,5
Spain	**1.852**	**1,16**	**2.150,3**	**2.003**	**1,26**	**2.523,0**
Mühlviertel	59	1,27	74,9	65	1,42	92,5
Leutschach	71	1,12	79,2	71	1,21	85,9
Austria	**130**	**1,19**	**154,1**	**136**	**1,31**	**178,4**
Switzerland	**12**	**1,61**	**19,3**	**12**	**1,61**	**19,3**
Portugal	**190**	**1,36**	**258,1**	**177**	**1,74**	**308,0**
EUROPE	**63.746**	**1,20**	**76.363,6**	**68.959**	**1,24**	**85.486,6**
Washington	10.899	2,33	25.379,7	12.682	2,13	26.961,6
Oregon	2.503	2,20	5.512,1	2.894	1,94	5.625,9
Idaho	1.140	2,18	2.489,3	1.374	1,86	2.551,5
California	472	1,89	892,7	473	1,60	758,9
USA	**15.014**	**2,28**	**34.273,8**	**17.423**	**2,06**	**35.897,9**
Canada	**327**	**1,65**	**538,0**	**326**	**1,07**	**350,6**
Japan	**1.161**	**1,56**	**1.809,1**	**1.112**	**1,13**	**1.257,0**
Victoria	460	1,78	818,5	504	1,52	766,0
Tasmania	611	1,98	1.207,5	671	2,40	1.610,9
Australia	**1.071**	**1,89**	**2.026,0**	**1.175**	**2,02**	**2.376,9**
New Zealand	**156**	**1,80**	**281,1**	**185**	**1,64**	**302,8**
People's Republic of China**	**4.000**	**1,00**	**4.000,0**	**4.000**	**1,00**	**4.000,0**
Dem. People's Rep. of Korea**	**400**	**0,98**	**392,0**	**400**	**1,00**	**400,0**
Korean Republic**	**53**	**1,50**	**80,0**	**53**	**1,55**	**82,0**
Republic of South Africa	**220**	**0,64**	**140,8**	**227**	**0,75**	**170,0**
India***	**100**	**0,85**	**85,0**	**300**	**0,50**	**150,0**
Colombia**	**2**	**2,00**	**4,0**	**2**	**2,00**	**4,0**
Turkey	**476**	**0,98**	**467,5**	**476**	**0,90**	**430,0**
Argentina **	**200**	**0,75**	**150,0**	**200**	**0,75**	**150,0**
W O R L D	**86.926**	**1,39**	**120.610,9**	**94.838**	**1,38**	**131.057,8**

* Greece is a member of the Common Market (European Community) since 1 Jan 81

** Estimated

*** Newer data: 1980 crop: 150 ha, Ø yield 0.57 tons/ha

Note to cultivation area Backa:
a storm destroyed approximately 40% of the crop.

Alpha Acid Balance

Our annual alpha acid balance with the carried forward over or under supply of the market is a purely mathematical attempt to explore the consumption and demand figures statistically. Certainly, still other factors influence the market situation, primarily inventory policies of breweries or the hopping ratio per hl in gram alpha acid which cannot be determined exactly.

Our alpha acid statistics are, therefore, one of several possibilities for presentation of the market.

Pertaining to the hopping per hl in gram alpha acids, a further reduction to 7.6 gram alpha acids per hl for demand in the 1982 brewing year is assumed. The supposition is obvious that scant 1979 and 1980 crops have led the brewing industry to a cutting down on the bittering. This trend will continue when the market supply is adequate. The surplus of 550 tons alpha acids from the 1981 crop corresponds to a hop equivalent of 9,000 tons or 7 % of the world hop crop.

Accumulated Deficit from 1978	170,0 to α
Demand 1980	7.314,8 to α
Yield 1979	7.141,7 to α
Deficit	173,1 to α
Demand 1981	7.488,0 to α
Yield 1980	7.268,5 to α
Deficit	219,5 to α
Demand 1982 (estimated)	7.500,0 to α
Yield 1981	8.049,1 to α
Surplus	549,1 to α

COMMON MARKET (EUROPEAN COMMUNITY)

The agrarian sector is the most important financial factor of the **Common Market,** comprising 80% of the budget. Also in 1981, the cooperation of the ten partners during the determination of the agrarian prices carried decisive significance.

As per regulation (EG) No. 2068/81 of 20 July 1981, hop producers were guaranteed the following aid for the 1980 crop.

Aroma hops 250 ECU per ha (DM 664,15)
Bitter hops 200 ECU per ha (DM 531,32)
Other varieties 250 ECU per ha (DM 664,15)
(1 ECU = 2,6566 DM)

As per regulation No. 3093/81 of 29 October 1981, hops from **Canada** and the **People's Republic of China** received a certificate of equivalence. This means that hops from these countries are marketable within the Common Market.

In **England** an adjustment of the existing institution **"Hops Marketing Board"** to the Common Market Regulation Laws has become necessary. In effect since 1 April 1982, the English hop farmers established a producers' group based on voluntary membership. The new union calls itself the **"Hops Marketing Board Ltd.".**

FEDERAL REPUBLIC OF GERMANY

Growth, Crop Estimation and Weight

The climatic conditions during the vegetation period from March up to the harvest were extreme. After summer temperatures in the spring, a cold spell in April brought anew snow and night frost. Despite this, growth was adequate. Only the **Hallertau Northern Brewer** variety appeared to have suffered from the cold spell in spring. With the exception of isolated hail storms, the German cultivation areas reported no extraordinary storm damages.

The harvest began prior to August 26th and was completed by approximately the middle of September. In comparison to estimates the following weights in the individual German areas resulted:

Area	Estimate/tons	Weight as of 31 March 82/tons
Hallertau	27000	29005,7
Spalt	1265	1365,6
Hersbruck	275	290,0
Jura	1000	1146,6
Tettnang	1775	1862,5
Others	31	33,3
Total	31346	33703,7

The estimated result was surpassed by 2,358 tons or 7.5%. The reason for the higher weight results as compared to the estimates was partly due to the volume weight of the hop cones which were heavier than expected.

In the German districts, the following varieties were planted and produced the following crop quantities:

Area	Variety	ha	Ø Yield/Tons	Crop/Tons
Hallertau	Hallertauer	1821	1,39	2539
	Hersbrucker	4252	1,93	8222
	Hüller	1352	1,81	2443
	Perle	468	1,18	552
	Northern Brewer	5618	1,70	9594
	Brewers Gold	2369	2,13	5037
	Others	408	1,52	619
Jura	Hallertauer	203	1,70	346
	Hersbrucker	260	1,63	423
	Northern Brewer	41	1,78	73
	Brewers Gold	113	1,95	220
	Others	67	1,27	85
Spalt	Hallertauer	499	1,67	833
	Spalter	266	1,68	448
	Others	52	1,63	85
Hersbruck	Hallertauer	88	1,69	149
	Hersbrucker	65	1,65	107
	Northern Brewer	11	1,73	19
	Others	10	1,50	15
Tettnang	Hallertauer	272	1,49	405
	Tettnanger	925	1,56	1445
	Others	8	1,63	13

Cultivation Area

The cultivation area for the 1981 crop amounted to 19,189 ha in the **Federal Republic of Germany.** It was 1,235 ha larger than last year. The following table shows the distribution of the individual varieties of the cultivation area.

AreaofCult.	AreaDevelopment			AromaHops						BitteringHopsandOthers		
	Area 1980 ha	NewArea ha	Area 1981 ha	Hallertauer ha	Spalter ha	Tettnanger ha	Hersbrucker ha	Hüller ha	Perle ha	North. Brew. ha	Brewers Gold ha	Others ha
Hallertau	15232	1056	16288	1821	28	2	4252	1352	468	5618	2369	378
Jura	583	101	684	203	–	–	260	34	31	41	113	2
Spalt	794	23	817	499	266	–	5	9	4	6	27	1
Hersbruck	166	8	174	88	–	–	65	2	2	11	6	–
Tettnang	1159	46	1205	272	–	925	8	–	–	–	–	–
Others	20	1	21	7	–	8	–	4	–	–	2	–
Total	17954	1235	19189	2890	294	935	4590	1401	505	5676	2517	381

In the **Hallertau** the area under cultivation changed per variety as compared to last year as follows:

Variety																				
Hallertau			Hersbruck			Hüller			Perle			Northern Brewer			Brewers Gold			Record/Spalter		
1980	1981	+/–	1980	1981	+/–	1980	1981	+/–	1980	1981	+/–	1980	1981	+/–	1980	1981	+/–	1980	1981	+/–
1971	1821	–150	3770	4252	+482	1375	1352	–23	220	468	+248	5534	5618	+84	1981	2369	+388	381	408	+27

The cultivated area was mainly expanded in the varieties **Hallertau Hersbruck, Hallertau Perle** and **Hallertau Brewers Gold.** A decline is noted for the **Hallertau Hallertau** and **Hallertau Hüller varieties.**

Despite the shift of individual varieties in its growing districts, the **Federal Republic of Germany** still planted more aroma than bitter hops. The following table shows the ratio of aroma to bitter hops:

Total Area ha		Aroma Hops				Bitter Hops				Others			
1980	1981	1980/ha	1980 %	1981/ha	1981 %	1980/ha	1980 %	1981/ha	1981 %	1980/ha	1980 %	1981/ha	1981 %
17.954	19.189	9904	55	10.615	55	7686	43	8193	43	364	2	381	2

Market Development

Again in 1981 dealers had to accept short deliveries from farmers which amounted to between 4 and 8% depending on the variety. The under-deliveries had though – as opposed to last year – other reasons than those of yield. Further concern was caused by the excessive water content of part of the delivered hops. In order to retain the quality of the hops redrying had to be undertaken.

The trading activity on the spot market already began during picking. The price level at first was influenced by the previous year. During the months October/November the purchasing activity of the brewing industry slackened and revived in December. In demand were the bitter varieties – especially **Hallertau Northern Brewer.** With the exception of scattered lots of aroma hops the production in the country was sold out by beginning of 1982.

Adequate supply of non-contractual hops led to a gradual decline of prices in the months after harvest. Due to the great demand and relatively small supply, for the first time in years the quotations for **Hallertau Northern Brewer** were higher than those for **Hallertau aroma hops.**

Our market report stated the following spot hops quotations:

Area/Variety	09.09.	17.09.	30.09.	07.10.	21.10.	05.11.	26.11.	07.12.	11.12.	15.12.	02.02.	05.03.
HALLERTAU /Aroma Hops	685.–	690.–	680.–	680.–	630.–	630.–	580.–	520.–	570.–	570.–	540.–	520.–
/Northern Brewer	785.–	790.–	780.–	780.–	730.–	730.–	670.–	580.–	580.–	sold out	sold out	sold out
/Brewers Gold	580.–	590.–	580.–	580.–	580.–	540.–	540.–	540.–	540.–	sold out	sold out	sold out
SPALT	850.–	820.–	850.–	850.–	800.–	640.–	600.–	520.–	570.–	570.–	580.–	560.–
TETTNANG	850.–	820.–	820.–	820.–	790.–	640.–	640.–	640.–	640.–	640.–	640.–	620.–

Contract Market

The declining quotations for spot hops caused at first a certain reduction of the contract prices, too. Due to lively demand the tendency became firm, however. Especially in demand were **Hallertau Northern Brewer** and **Hallertau aroma varieties.**

ENGLAND

Growth

The cold spring with snow in April and a wet early summer influenced growth. A substantial improvement of the climatic conditions only took place in the months of August and September. The hops recovered relatively fast their retarded growth and one expected a similar crop yield as that of the previous year.

A production of 9,250 - 9,600 tons was estimated on an acreage which had been expanded in total by 116 ha.

Market Development

The English crop was stated at 9,339.4 tons, 8,332 tons of which were assigned to the Hops Marketing Board. The remaining hops are grown by the breweries.

The quality altogether was good; especially the bitter values were higher than last year. Several varieties selected by us had the following alpha values in 1981:

Variety	1981 Alpha Acid %	1980 Alpha Acid %
Wye Targets	11,50	10,78
Yeoman*)	10,97	–
Challenger	7,79	7,25
Goldings (Kent)	5,46	4,97
Bramling Cross	6,28	5,46
Bullion (Kent)	8,81	7,80

Alpha acids as is, conductometrically measured, values of September after the harvest

*) The variety Yeoman was recently introduced, values from the 1980 crop were, therefore, not available.

The domestic brewing industry absorbed the largest portion of the English hop production. The remainder was exported. Price level of the English market is determined by the Hops Marketing Board which establishes the quotations. Thereby, the so-called "first basis price" is subject to an index clause, i.e. a later price adaptation. Normally the Hops Marketing Board offers the breweries advanced contracts approximately three years before the harvest at first basis price. This is done with indexed adaptation to actual delivery time. Index premium for hops from the 1981 crop amounted to 33.68% on top of the first basis price. Such index clause is calculated from the average rise in wholesale prices, retail prices and wages in the forest and fish industries.

Only minimum shifts occurred in variety cultivation, mainly in favour of the new, alpha rich breeds:

Variety/ha	Goldings		WGV		Fuggles		Bramling Cross		Northern Brewer		Bullion	
Area	80	81	80	81	80	81	80	81	80	81	80	81
Kent	290	304	290	250	48	47	324	306	20	17	95	82
Sussex	5	6	1	1	32	29	17	17	4	2	21	18
Hampshire	–	–	–	–	2	2	–	–	32	32	4	4
Herefordshire	97	100	–	–	429	444	–	–	126	114	62	59
Worcestershire	90	91	–	–	63	65	–	–	46	46	46	36
Breweries	34	33	26	21	–	–	36	33	42	60	94	96
Total	516	534	317	272	574	587	377	356	270	271	322	295

Variety/ha	Wye Northdown		Wye Challenger		Wye Target		Wye Saxon		Others		Total	
Area	80	81	80	81	80	81	80	81	80	81	80	81
Kent	146	140	246	261	916	977	109	79	213	246	2697	2709
Sussex	10	8	33	30	81	94	2	1	25	31	231	237
Hampshire	130	140	30	29	–	–	–	–	–	2	198	209
Herefordshire	425	447	329	346	–	–	–	–	1	6	1469	1516
Worcestershire	164	161	103	106	–	–	–	–	–	5	512	510
Breweries	89	89	77	86	89	113	4	4	94	92	585	627
Total	964	985	818	858	1086	1184	115	84	333	382	5692	5808

The following table shows the varietal distribution for 1981, stated in percentages and in comparison to the previous year:

Variety	% 1980	% 1981
Goldings	9	9
WGV	6	5
Fuggles	10	10
Bramling Cross	7	6
Northern Brewer	5	5
Bullion	6	5
Wye Northdown	17	17
Wye Challenger	14	15
Wye Target	19	20
Wye Saxon	2	1
Others	6	7
Total	101 *	100

* more than 100 due to rounding off

FRANCE

Growth and Crop Development

The weather conditions in the cultivation districts of **Alsace** and **Nord** were moderate during the vegetation period. An improvement occurred in the final weeks prior to harvest. In **Alsace** a hail storm destroyed 85 ha on June 3, and caused a shortage of 80 tons, mainly **Brewers Gold** hops.

The harvest yield in France is estimated at 1,425 tons on an area which was expanded by 3 ha. The quality was described as average to good.

Market Development

In the cultivation area of **Alsace Brewers Gold** and **Strisselspalt** hops had already been sold by advance contracts. The damage to the crop by hail could thus only be compensated for by cutting back on contracts with breweries. After **Hallertau Northern Brewer** had been sold out the bitter varieties of the Departement **Nord** were in demand. Quotations were noted in August 1981 at FF 1,400.- for **Brewers Gold** and FF 1,850.- for **Northern Brewer.** On September 15, the market reported FF 1,700.- for **Northern Brewer.**

Variety Cultivation

Only in the growing area of **Alsace,** a slight change in comparison to the previous year resulted in aroma hops. In addition, it must be taken into account that the actually newly planted area was larger in fact, but were compensated by similar acreages which were grubbed.

Variety/ha/tons	Aroma			Brewers Gold			Northern Brewer + others			Total		
District	ha 80	ha 81	to 81	ha 80	ha 81	to 81	ha 80	ha 81	to 81	ha 80	ha 81	to 81
Alsace	179	187	254,8	235	233	524,3	54	52	73,5	468	472	852,6
Nord	1	1	1,5	181	181	367,3	63	63	107,5	245	245	476,3
Burgundy	7	6	5,5	29	29	67,0	2	2	2,6	38	37	75,1
Others	-	-	-	6	6	13,2	-	-	-	6	6	13,2
Total	187	194	261,8	451	449	971,8	119	117	183,6	757	760	1417,2

BELGIUM

Growth and Crop Development

After a cold spring and an overly wet summer, satisfactory temperature conditions in August brought a great improvement in growing conditions. An average crop was therefore expected because of a good or even very good plant growth prior to harvest. The estimate came up to a presumed crop yield of 1,450 tons on a total acreage of 846 ha which had been expanded by 28 ha.

Market Development

The Belgian varieties **Northern Brewer** and **Brewers Gold** are traditionally for the most part not under contract. For the 1981 crop demand for these varieties developed only eventually, since demand was first satisfied by German bitter varieties. For Belgian merchandise market activities arose only after **Hallertau** bitter hops had become scarce. At the end of the year 1981 the Belgian varieties were sold out except for small quantities.

The price development shows clearly how quotations moved downward from the months of August until December, then stabilized with improved demand.

Variety	Aug. 1981	Sept. 1981	Oct. 1981	Dec. 1981	Jan. 1982	Feb. 1982
Northern Brewer DM	800	615	670	450	470	520
Brewers Gold DM	570	425	415	365	350	350

per 50 kg, ex cultivation area, packed goods. The quotations are converted from Belgian francs into German marks at the applicable daily rate of exchange.

For the coming crops one estimates the advance contractually sold amounts from this cultivation area as follows:

1982: 50 %　　1983: 40 %

Variety Cultivation

The entire crop of 1559,8 tons consisted of:

Variety	Amount 1981
Brewers Gold	approx. 707 tons
Northern Brewer	approx. 547 tons
Replant Hallertau	approx. 203 tons
Others	approx. 103 tons

The **Brewers Gold** variety registered the largest share; the **Replant Hallertau** and **"Others"** varieties play only a secondary role.

Only insignificant changes occured compared to last year for the cultivated area per variety.

Variety/ha	Total		Brewers Gold			Northern Brewer			Hallertau			Record			Others		
District	1980	1981	1980	1981	% 1981	1980	1981	% 1981	1980	1981	% 1981	1980	1981	% 1981	1980	1981	% 1981
Poperinge	610	632	299	314	50	249	261	41	44	43	7	6	6	1	12	8	1
Aalst	184	190	22	22	12	50	51	27	68	72	38	33	33	17	11	12	6
Vodelée	24	24	4	4	17	5	5	21	2	2	8	-	-	-	13	13	54
Total	818	846	325	340	40	304	317	37	114	117	14	39	39	5	36	33	4

CZECHOSLOVAKIA

Growth

The districts of **Saaz** and **Auscha** reported during the growth period normal climatic conditions. In the district of **Slovakia** a certain retarded plant growth occurred due to very dry weather.

On 9 and 10 August cloudburst-rainfalls damaged approximately 1,000 ha hop acreage. 65 ha were also affected by hail and 100 ha suffered damages of trellises by storms. Initial crop expe ctations of 13,000 tons were, therefore, reduced to 12,000 tons.

Market Development

The harvest brought a yield of 12,885.5 tons. Despite the larger quantity as compared to the last estimate, no 1981 hops were offered after the harvest by the State Sales Organization. The market remained without quotation.

Variety Cultivation

According to own data, the entire acreage of the three Czechoslovakian areas was cultivated only with hops of the **Saaz** related aroma varieties.

YUGOSLAVIA

Growth

Slovenia reported cold at first, later hot and dry growth periods. A somewhat lesser crop yield than in the previous year was expected for the variety **Golding,** while the **Super Styrian** developed from normal to good. Despite an expansion of the acreage by 37 ha (185 ha of which are baby yards), the crop estimate was less than last year, amounting to 3,250 tons. Picking began on August 20 and was completed on September 6.

In the Backa region the crop expectations were looking good until on August 10 a violent storm devastated a large part of the district and destroyed about 40% of the crop. The crop expectation was reduced to 960 tons.

Market Development

Slovenia harvested 3,903 tons of which 1,677 tons were **Goldings** and 2,226 tons were **Super Styrians.** The hops had been sold 100% by advanced contracts. Also from **Backa** no hops were offered on the spot market because of crop loss. The quality of the 1981 hops from the district **Slovenia** was good to very good with an alpha content of approximately 5.9% for **Goldings** and 8.2% for **Super Styrians.** The quality of the **Backa** hops could only be evaluated as average.

Variety Cultivation

In **Slovenia** 1,084 ha **Goldings** and 1,175 ha **Super Styrians** were planted in 1981. The year before the area for **Goldings** was reported consisting of 1,111 ha and 1,101 ha of **Super Styrian.**

POLAND

Growth

A relatively good growth period followed a rather cold spring. However, sometimes too high temperatures caused early bloom. Only a few hop plants grew beyond the trellises. The crop expectation was, therefore, only average. It was estimated at 2,250 to 2,400 tons. The hop acreage was extended by 156 ha. Start of picking was announced for the 26th and 27th of August.

Market Development

The crop yield amounted to 2,350 tons. No hops were offered on the spot market because, in addition to the obligations from advanced contracts, supplementary commitments from the 1980 crop failure had to be satisfied. As regards quality, the Polish 1981 crop hops were average similar to prior years.

Cultivation Area

The table shows that the expansion of the cultivated area almost exclusively applied to the aroma variety **Lublin,** while the acreage for **Pulawi** hops declined significantly. The 15 ha "Others" are planted with a new aroma variety named **Estera.**

ha Variety	1980 absolute	%	1981 absolute	%
Lublin	2161	87	2365	89
Pulawi	263	11	200	8
Northern Brewer	50	2	50	2
Others	–	–	15	1
Total	2474	100	2630	100

GDR (German Democratic Republic)

Growth

Unsatisfactory weather conditions in spring and summer led to only an average growth. In particular, the variety **Northern Brewer** was not able to reach the trellises everywhere and the development of lateral branches was weaker than that of other varieties. The hops were reported as healthy. Approximately 3,000 tons was expected on a 36 ha smaller cultivated area. Picking was announced for the beginning of September.

Market Development

The total crop of 2,730.4 tons was taken over by the domestic brewing industry. The quality was described as average. The alpha content, calculated from the average of all varieties, is supposed to be 7.6% (6.6% for the previous year).

Variety Cultivation

The cultivation areas in the GDR are:

District	Acreage	Crop yield
Halle/Magdeburg	894 ha	1.155,3 tons
Erfurt	554 ha	679,6 tons
Dresden/Leipzig	635 ha	854,9 tons

A smaller area is further located near **Gera/Karl-Marx-Stadt** with 37 ha.

The trend to grow bitter hops continues.

Variety	Crop Year ha/1978	Crop Year ha/1979	Crop Year ha/1980	Crop Year ha/1981
Aroma	922	804	658	550
Bitter	1182	1356	1498	1570
	2104	2160	2156	2120

The aroma varieties are mostly **Saaz** roots. The bitter hops belong to the varieties **Northern Brewer** and **Bullion.**

USA

Growth, Crop Estimate and Weight

Until the beginning of July unfavorable weather conditions prevailed. Cool nights caused slower growth than usual. Beginning in late summer the conditions improved. The water supply, on the other hand, was adequate throughout the entire year.

Washington

At the beginning of the year there were reports of worm attacks and mildew. The improved growth conditions in summer, however, made this problem superfluous. Good late summer weather led to an abundant crop.

Oregon

A cool and wet spring as well as the following, unusually high temperatures caused fast growth with relatively thin leaf development, and heavy cones which were attacked by insects to a certain extent. Baby yards showed an excellent stand. The mildew problem was controlled by the use of a new plant protection agent.

Idaho and California

These districts suffered from unfavorable weather conditions throughout the entire growing period which caused below average yields.

The general quality of the hops was good. The alpha acid average increased from 6.8 to 7.2 % as compared to last year. Expansion of acreage of high alpha varieties and a better bitter content of the varieties **Cluster, Bullion** and **Cascade** manifested itself here.

As compared to the estimates in August and September the US 1981 crop yielded the following quantities:

Crop Estimate	August 1981		September 1981		Final Weight	
Area	Mill. lbs.	Met. to.	Mill. lbs.	Met. to.	Mill. lbs.	Met. to.
Washington	59,470	26.975	59,470	26.975	59,439	26.961,6
Oregon	12,960	5.879	12,960	5.879	12,384	5.625,9
Idaho	6,120	2.776	6,120	2.776	5,610	2.551,5
California	2,610	980	1,920	871	1,680	758,9
Total	80,710	36.610	80,470	36.501	79,113	35.897,9

Market Development

The nominal price level on the basis of $ 2.70 – $ 3.00 per lb was able to hold steady during the first half of the year. However, the market showed no activity. Despite lacking demand, the cultivated area rose again in the spring by another 2,409 ha. This area expansion, as well as an apparent surplus of inventory in some large breweries could not avoid their effect on the market. At the end of harvest in September 81 about 4 million lbs (1,542.5 tons) of unsold spot hops were kept in the hands of the farmers. Further 3 – 4 million lbs had also to be added, which were rolled back to the market by overstocked breweries.

In domestic buying almost no movement was noticed from the 1981 harvest until November. At the end of the year prices fell drastically. The farmers were forced to sell larger parts of their spots below production cost between $ 0.50 and $ 0.65 per lb including premium. Up to April 1982 there were still approximately 4,300 bales (390 tons) unsold in farmers' hands. Most of it was extracted at the expense of the growers.

The market prices for the 1981 crop showed the following development.

Variety	July	September	November	December	January/April
Yakima Cluster/Cascades	2.70	2.00	1.00	–.65	–.50
Oregon Bullions	2.70	1.50	1.00	–.65	sold out
Oregon Fuggles	2.90	2.75	2.75	sold out	sold out
Eroica/Galenas	–	–	1.75	1.25	1.00

$ per lb

Contract Market

After more than a year's lull in the market, small quantities of **Yakima Cluster** of the 1984/85/86 crops were changed hands at $ 1.40, $ 1.50 and $ 1.60 per lb in February 1982. The varieties **Galena** and **Eroica** achieved higher prices. Only **Oregon Fuggles** and **Willamettes** enjoyed continuous demand at $ 2.30/2.55 for the 1982–1986 crops. In general, however, the market remained extremely quiet.

In the coming years the following percentages of crops are under contract as per estimate of the **US Department of Agriculture:**

1982	1983	1984	1985	1986	1987
93 %	77 %	50 %	38 %	24 %	15 %

Thus an unfavorable starting position for the 1983/85 crops exists in comparison to European hop growing areas. In the views of the hop farmers there are differing opinions concerning the future form of the market regulations, above all regarding the distribution of base allotments. Pertaining to this the **US Secretary of Agriculture** has developed new guidelines which he wants to see implemented on the hop market. In order to bring the market into balance again and to make possible cost-covering prices for growers, reduction of acreage is unavoidable.

Variety Cultivation

The area cultivated increased by a total of 2,409 ha, of which 73 % were in the state of Washington, which now covers 75 % of the US hop cultivation.

The following tables show the absolute and percentual distribution of the total acreage by growing area and variety:

Acreage per variety/ha

State	Clusters		Bullion		Cascades		Ero/Gal		Fuggles		Comets		Others	
	ha '80	ha '81	ha '80	ha '81	ha '80	ha '81	ha '80	ha '81	ha '80	ha '81	ha '80	ha '81	ha '80	ha '81
Washington	7,380	8,342	1,705	1,824	1,415	1,794	–	336	–	–	250	223	150	155
Oregon	17	–	609	1,130	467	578	–	–	974	1,100	2	2	11	29
Idaho	422	677	–	15	198	198	–	379	–	–	–	–	235	105
California	445	442	–	–	–	–	–	–	–	–	28	32	–	–
TOTAL	8,264	9,461	2,314	2,969	2,080	2,570	–	715	974	1,100	280	257	396	289

Due to the conversion of acres into hectares slight differences with respect to the total acreage resulted in above table.

Acreage per variety/%

State	Clusters		Bullion		Cascades		Ero/Gal		Fuggles		Comets		Others	
	% '80	% '81	% '80	% '81	% '80	% '81	% '80	% '81	% '80	% '81	% '80	% '81	% '80	% '81
Washington	68	66	13	14	13	14	–	2	–	–	2	2	1	1
Oregon	1	–	24	40	19	20	–	–	39	39	–	–	–	1
Idaho	37	49	–	1	17	14	–	28	–	–	–	–	21	8
California	94	93	–	–	–	–	–	–	–	–	6	7	–	–
TOTAL	55	54	18	17	14	15	–	4	6	6	2	2	3	2

CANADA

Cold weather in the spring and extreme rain in June/July brought unusual growing conditions. Therefore, the **Canadian** crop yielded only 66 % of last year's production. The only cultivation district is the **Fraser Valley** in **British Columbia.**

The entire 1981 crop was sold through forward contracts. Also the subsequent crops are for the most part under contract. The following table shows acreage development and crop yields for the 1981 **Canadian** crop as compared to the previous year.

Variety	1980 Acreage **ha**	1980 Yield **lbs.**	1981 Acreage **ha.**	1981 Yield **lbs.**
B.C.Bramlings	171	682,700	171	383,600
Brewers Gold	49	173,000	49	125,600
B.C.Kents	40	97,400	40	133,500
B.C.Fuggles	62	199,400	62	113,200
TOTAL	322	1,152,500	322	755,900

OTHER COUNTRIES

SPAIN

Increase of acreage is carried out exclusively in the area of **Leon** which expanded by 191 ha. Growing areas in **Cantabria** and **Galicia,** inspite of being 40 ha smaller than last year, produced the same crop yield as in the previous year. Already in 1980 some hop gardens were idled. The growth of the Spanish hops was affected in the months of June and July by excessive heat. This referred mainly to the hop gardens without artificial irrigation systems.

Final yield of the crop with 2,523.0 tons was close to the estimate. 757.5 tons of the variety **H-7** and 1,764.5 tons of the variety **H-3** were harvested. The remainder consisted of aroma hops.

The quality was generally good and was classified as class I. The alpha content in the month of December was 7%. The domestic brewing industry is obligated to acquire the entire Spanish crop.

SOVIET UNION

Official figures from this important hop growing country are not available. Reports of other agricultural products seem to indicate that the 1981 crop did not come up to the expected yield, despite a presumably larger acreage.

The districts of cultivation are located in the **Ukraine,** the area around **Moscow** and the **Altai mountains.** Problems of obtaining figures for this country are referred to on the last cover page of this report.

AUSTRIA

Mühlviertel

The area cultivated was expanded by 6 ha in comparison to last year. Eight varieties of hops were grown, five of them are bitter varieties.

During the growth development similar conditions prevailed here as in **Germany.** The spring was too cold and brought frost damage in some parts. The conditions during the later growth and maturing period were more favorable, thus, a satisfactory crop could be harvested.

The cultivated varieties are:

Bitter Hops: Malling, Apollon, Northern Brewer, Brewers Gold, Aurora

Aroma Hops: Sanntaler, Hersbruck Late, Saaz

Leutschach

With 86 tons harvested the aroma variety **Golding** predominated. The bitter varieties **Atlas** and **Apollo** played only a secondary role. For 1982 an increase of the acreage of 1 to 2 ha is expected.

All harvested hops from **Austrian cultivation** areas were taken over contractually by the domestic brewing industry.

ROMANIA

In recent years this country has become almost self-supplying. Only supplemental quantities may be procured in the future on the world market when own crops are short. By 1985 it is intended to expand the cultivated acreage to 3.000 ha in order to be able to cover the planned beer production by domestically produced hops with a calculated average yield of 1.5 tons/ha.

HUNGARY

The demand of the Hungarian brewing industry could be mostly satisfied by domestic production. The production area of a total of 562 ha consisted of 252 ha of aroma hops and 310 ha of bitter hops. The crop yield in 1981 was 277 tons for the aroma hops with an average alpha content of 2.9 % and 477 tons for the bitter hops with an average alpha content of 6.1 %.

BULGARIA

Figures covering hop cultivation are not available from this country. In the meantime, the requirements of the brewing industry are probably covered by domestic production. The crop yield is estimated at 1,100 to 1,200 tons.

PORTUGAL

After a dry winter a relatively cold spring delayed development of plants. By summer the growing conditions normalized, though, yields below normal were harvested. The hop growing areas are located in the district of **Braga** with 100.6 ha and the district of **Braganca** with 76.8 ha. **Brewers Gold** was cultivated as the only variety. They showed an alpha content of 8.7 % in **Braga** and 9.2 % in **Braganca.**

SWITZERLAND

Growth developed similarly to the **German** cultivation areas. The Swiss crop produced an average quality and was graded as class I. The Swiss breweries took up all hops – almost exclusively aroma hops of the varieties **Tettnang** and **Hallertau** – at the price of SFR 650.–.

AUSTRALIA

Victoria

In the district of **Victoria** a continuously mild winter and warm to hot summer was reported. The amount of rain came to approximately 56 mm annually. The hops are watered by irrigation. In November training work is begun. Harvest time is the beginning of March and picking lasts about one month.

Tasmania

Tasmania has three hop growing regions: **Northwest-, Northeast-** and **South Tasmania.** The amount of rain was between 650 and 1,200 mm. The winters are relatively wet and mild, while the dry weather of the summers makes artificial irrigation necessary. Spring work and time of harvest are about same as in **Victoria.**

These climatic constants in the **Australian** cultivation areas with simultaneous irrigation make possible an annually stable crop yield and hop quality. Almost the entire **Australian** crop consists of the variety **Pride of Ringwood** which produced in 1981 an alpha content of between 9.1 and 9.8 %.

NEW ZEALAND

The entire crop of 302.8 tons in 1981 consisted of about 288.5 tons of seedless hops and 14.8 tons of seeded hops. The main varieties of the seedless hops were:

Variety	tons
Green Bullet	98.5
Sticklebract	91
Roborgh Super Alpha	96

Moreover, the most important seeded hop variety, the **Smooth Cone,** yielded a crop of 13 tons.

The **New Zealand** brewing industry took up 156 tons of the crop. The average alpha content is said to amount to 11.5 %.

PEOPLE'S REPUBLIC OF CHINA

There are no definite figures available for this country which probably disposes of important hop growing areas.

Earlier remarks and observation of the activities of **China** on the world market allow the conclusion that the hop area has significantly expanded in recent years. It can be presumed that about 4,000 ha were cultivated for the 1981 crop. The crop yield could amount to some 3,000 – 4,000 tons.

Own requirements of the country could be placed at about 1,500 tons. Export hops are grown in **Sinkiang** (a province about 3,500 km northwest of **Peking). It can be assumed they are deriving from US roots of Cluster** and **Bullion** varieties. Further hop districts which cover the domestic demand are located in the regions of **Shandong, Hebei** and in **Mongolia.**

When comparing the yield per hectare it must be taken into account that the trellises of the **Chinese** hop gardens are only 2 m in height. Therefore, the yields are considerably lower than in other countries where hop yards of 6 - 8 m height are in common use.

JAPAN

On a cultivated area reduced by 49 ha a crop yield of around 2,000 tons was expected. At the beginning of September a typhoon destroyed part of the hop yards. Damages were estimated at between 750 and 900 tons. The entire crop of 1,257.0 tons was taken over by the **Japanese** brewing industry.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA (North Korea)

Not much is known about this hop growing country. The hop growing district may be situated near the **Chinese** border at **Tsingtao.** Besides meeting its own demand, some quantities may have been delivered to other **Socialist countries.** Probably this pertained to hops of the **Cluster variety.**

ARGENTINA

The cultivation area 1981 is unknown. For the 1982 crop which has already been completed, it is reported as 200 ha. The crop yield was supposed to be 170 tons.

The varieties **Late Clusters, Spalt Atlas** (a Styrian root), **Cascade Seedless** and **Bullion** are grown.

INDIA

The **Indian** growing district is located in **Kashmir.** Since breakdown into individual districts has been disclosed for the first time it can be reported as follows:

Growing Area Kashmir

District	ha	Crop Yield
Srinagar	20.0	8.0 tons
Badgam	174.0	109.0 tons
Baramulla	96.0	30.0 tons
Kupwara	6.0	2.0 tons
Anantnag	2.0	0.5 tons
Pulwana	2.0	0.5 tons
Total	300.0	150.0 tons

Most of the cultivated hops are of the variety **Late Clusters.** They are reported to contain an alpha acid content of 7.5 – 8.5%.

The domestic brewing industry takes up the entire Indian crop. Part of the hop growing is accomplished by breweries themselves.

SOUTH AFRICA

In this country hop production is promoted in order to become more independent of imports than now. By 1985 a production of 750 tons is targeted. The varieties **Late Clusters** and a domestic breed, the so-called **Southern Brewer** (aroma variety) are planted. Both hop varieties should contain an alpha acid content of 9 %.

One problem with hop cultivation in this country is the short span of daylight so that hop gardens have to be artificially illuminated for some time.

TURKEY

The variety **Late Clusters** makes up for 427 ha, 90% of the cultivation. Further 49 ha were planted with **Brewers Gold.** The entire crop is taken over by the Turkish brewing industry.

1982 CROP AND OUTLOOK

In the **southern hemisphere** the 1982 hop crop has already been harvested. **Australia** reports a crop yield in **Victoria** of 881 tons (crop 1982) on a cultivated area of 1,378 ha and **Tasmania** approximately 1,746 tons (crop 1982).

Up to now figures for **New Zealand** are not known.

In the **northern hemisphere** spring work has been completed. The further growth is continuing in a normal way. Unusual weather conditions have not yet been reported. Due to the European winter with heavy snow the ground is well moistened and favorable conditions for further development of plants should prevail.

In the **Federal Republic of Germany,** a slight increase of acreage may be expected. The same applies to **Czechoslovakia,** while the other European growing districts ought to remain the same – except for the unknown figures from **Socialist countries** like the **Soviet Union, China, Romania** and **Bulgaria.** In the **USA** the acreage should decrease in the neighbourhood of 500 ha.

Considering this world hop acreage, the International Hop Growing Convention published the following resolution:

„On a worldwide level the hopping ratio continues to fall further but the world growing area has increased from 87,180 ha in 1980 to 95,470 ha in 1981.

The dull forward contract market makes it clear to us that there is too much hop acreage in the world (probably around 5,000 ha) and the members are urgently requested not to plant more hops but preferably to grub, in order to restore the balance on the market."

Nuremberg, July 1982
JOH. BARTH & SOHN

Printed in Germany

The publication of our Hop Report involves obtaining data from all parts of the world. We wish to express our gratitude to all who assisted us.

ON BEHALF OF OUR OWN INTERESTS

The company of JOH. BARTH & SOHN has compiled for 70 years the beer and hops statistics in an annual report. Thereby a multitude of sources, both official and unofficial, have to be processed.

The problem in reporting has always been less the compiling of official figures which are mainly obtained from Western nations. Difficulties are caused by the correct assessment of figures of hop and beer production, from those countries which do not possess official statistics, or, such as in the case of the socialist-world, which do not make these figures available.

Nevertheless several of these countries are very important to form a judgment of the hop world market. In order to come to an estimate despite missing sources, it is necessary to collect the following observations:

reports of diverse kinds on these countries, such as visitor's reports, traveler's observations, etc.

publications in technical periodicals

behavior on the world market

suggested domestic demand based on realistic estimate of the national beer consumption.

It is unavoidable, that some of our published estimates are not accurate in particular cases. The example of the **Soviet Union** shows this clearly: According to observations, beer consumption should come to between 60 and 70 million hl, and the hop production at 9,000 – 11,000 tons. After careful consideration we have assumed the mid-point from this range. Taking into account the hop imports of the Soviet Union a relative verification is given for the data on which this report is based.

Also **China** must be considered as a further factor of uncertainty in judging the world beer consumption and world hop production.

There are reports saying that plans exist to expand the brewing industry of this highly populated nation of 800 million – 1 billion people. At the same time an expansion of the hop cultivation is planned. Only inaccurate reports are available about the extent. Up to now **China** is still exporting hops. Both examples show plainly how cumbersome it is to assess the general supply and demand situation on the world hop market. The uncertainty in judging these important members of the world market can lead to an over – or under – supply of hops with great impact on the price level of the market.