

1982/83

HOPS



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 30 June 1983 the Frankfurt Currency Exchange
Market listed:

	Discount Rate	Spot Rate 6/30/83	
		G	B
New York *	8.5	2.5379	2.5459
London *		3.885	3.899
Dublin *	14.35	3.144	3.158
Montreal *	9.48	2.0690	2.0770
Amsterdam	4.5	89.13	89.35
Zurich	4	120.73	120.93
Brussels	9	4.987	5.007
Paris	9½	33.22	33.38
Copenhagen	8.5	27.76	27.88
Oslo	9	34.79	34.91
Stockholm	8.5	33.24	33.40
Milan **	17	1.682	1.692
Vienna	3¾	14.169	14.209
Madrid	8	1.745	1.755
Lisbon	19	2.190	2.210
Tokyo	5½	1.0590	1.0620
Helsinki	9.5	45.78	45.98

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

The Most Important Data of the World Market

	1982	1981	Difference %
acreage/ha	97.462	94.739	+ 2,7
hop production/tons	146.116	131.017	+ 11,5
alpha production/tons	8.471	8.049	+ 5,2
beer production/million hl	968.448	949.903	+ 2,0

Table of contents

Political Situation – Economic Situation Table of Bitter Constituents	1
World Beer Production – Table World Beer Production – Index	2
Market Analysis	3
World Hop Production – Table	4
Alpha Acid Balance European Economic Community	5
Federal Republic of Germany	5/6
England	7
France Belgium	8
Czechoslovakia – Yugoslavia – Poland – German Democratic Republic	9
USA	10/11
Canada	12
Other Countries	12/13
Crop 83 and Outlook	13

Nuernberg, July 1983



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Political Situation

The continuation of the strained relations between the two world powers, the **United States of America** and the **Soviet Union**, provided the background for numerous unresolved regional problems. **Afghanistan**, the **Near East**, and **Central America** continue to be trouble spots.

In **Europe** the socialist government of **France** increasingly fell on economic, and with that, political hard times. Meanwhile the reelection of the Thatcher government in **England** and the election of the Christian-Liberal coalition in the **Federal Republic of Germany** made apparent an emergence of a conservative constellation.

Economic Situation

Although the recession of the world economy continues to linger on there is an indication – coming from the **United States** – of certain strength of recovery. Along with the clearly decreased inflation rates most industrialized countries also had to accept ever higher rates of unemployment, however. The general level of interest rates was lowered but high two-digit international rates prevented a recovery of the economy. The insolvency of several heavily indebted countries in **Latin America** and **Eastern Europe** posed very difficult problems. On the other hand the reduction in the price of oil down to \$ 29.00 per barrel and the decrease in oil consumption brought relief for all consumer countries.

The foreign trade balance of the **Federal Republic of Germany** in 1982 resulted in a surplus of DM 51 billions (1981: DM 28.2 billions), the balance of payments in goods and services showed a surplus of DM 8 billions. (Deficit: DM 17.3 billions.) With a percentage of 10.2 (8.2) of unemployment the rate of price increases was 5.3% (5.9%). The low Lombard discount rate of 5% maintained by the German Federal Reserve Bank had to be paid far dearly with considerable drainage of money into the **U.S.** Consequently the value of the Dollar increased to DM 2.54. (30. 6.)

Table of Bitter Constituents

Bitter constituent values of some important European varieties:

variety	crop 1982			crop 1981		
	total resin %	alpha %	% in total resin	total resin %	alpha %	% in total resin
Hallertau Hallertau	10.6	3.7	34.9	11.7	4.3	36.8
Hallertau Hersbruck	10.3	3.4	33.0	11.6	4.1	35.3
Hallertau Hüller	12.4	4.7	37.9	14.8	5.9	39.9
Hallertau Perle	12.2	5.3	43.4	14.4	6.6	45.8
Hallertau Northern Brewer	14.5	7.0	48.3	14.6	7.2	49.3
Hallertau Brewers Gold	11.9	5.0	42.0	12.6	5.8	46.0
Hallertau Record	13.5	5.4	40.0	14.7	6.2	42.2
Spalt	12.2	4.2	34.4	13.4	4.7	35.1
Tettnang	10.5	3.7	35.2	12.8	4.8	37.5
Saaz	10.9	3.6	33.0	11.1	3.9	35.1
Yugoslavian Styrian Golding*	13.5	5.6	41.5	—	5.3	—
Yugoslavian Backa*	12.4	3.3	26.6	—	3.1	—
Belgian Brewers Gold	13.0	4.7	36.2	14.7	6.6	44.9

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

The bitter constituent values of the most important English varieties are listed under the heading "England".

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 1981/82

Specification in 1000 hl

EUROPE

Country	1982	1981
Fed. Rep. of Germany	94.816	93.723
USSR	68.000*	65.000*
Great Britain	59.780	61.550
German Dem. Rep.	25.000	24.000
Czechoslovakia	24.921	23.934
France	22.410	21.852
Spain	21.499	20.924
Netherlands	16.180	16.640
Belgium	15.000	15.000
Yugoslavia	13.402	12.000
Romania	11.500*	11.500*
Poland	10.300	11.300
Denmark	8.498	10.127
Italy	10.153	9.022
Austria	8.278	8.007
Hungary	7.825	7.800
Ireland	5.591	5.812
Bulgaria	6.000*	5.400*
Switzerland	4.240	4.150
Sweden	3.900	3.800
Portugal	3.780	3.676
Greece	2.850	2.900
Finland	2.694	2.800
Norway	1.976	1.900
Luxembourg	650	711
Malta	134	139
Albania	100*	100*
Iceland	35	36
	449.512	443.803

AMERICA

USA	228.050	228.950
Brazil	29.500	29.500
Mexico	27.583	29.321
Canada	23.667	21.014
Venezuela	12.000	12.000
Colombia	13.438	12.000
Peru	5.493	5.261
Ecuador	2.384	2.983
Cuba	2.400*	2.400*
Argentina	2.237	2.370
Chile	1.818	2.014
Bolivia	1.650	1.380
Paraguay	1.050	740
Dominican Rep.	920	920
Panama	970	918
Uruguay	800	700
Puerto Rico	650	650
Jamaica	650	595
Guatemala	636	550
Costa Rica	500	500
Honduras	437	478
Nicaragua	450	450
El Salvador	415	450
Trinidad	325	292
Netherl. Antilles	128	140
Surinam	147*	130*
Martinique	70	80
Windward-Leeward	50	60
Guadeloupe	30	28
Haiti	20	25
	358.468	356.899

AFRICA

Country	1982	1981
South Africa	12.000	10.245
Nigeria	10.380	8.000
Cameroon	3.370	3.251
Zaire	2.780	3.003
Kenya	2.500	2.750
Ivory Coast	1.600*	1.600*
Rwanda + Burundi	1.302	1.278
Zambia	1.100	1.200
Zimbabwe	1.325	1.189
Tansania	700	900*
Gabon	705	744
Angola	560	671
Ethiopia	676	645
People's Rep. of Congo	750	640
Algeria	700*	600*
Moçambique	450	510
Upper Volta	500	500*
Togo	482	500
Egypt	425	440
Morocco	360	435
Benin	357	420
Senegal	350*	350*
Tunisia	330	330
Namibia	339	330
Ghana	300	300
Mauritius + Reunion	256	246
Madagascar	200	210
Central African Rep.	200	202
Liberia	130	150
Chad	122	100
Sierra Leone	61	150
Guinea Bissau	30	100
Uganda	95	72
People's Dem. Rep. Jemen	80	60
Niger	75	75
Seychelles	42	48
Malawi	40	40
Sudan	0	0
	45.672	42.284

WORLD

968.448 949.903

NEAR EAST

Country	1982	1981
Turkey	3.200	2.900
Iraq	600*	565*
Israel	630	550
Cyprus	241	198
Lebanon	86	150
Syria	90*	89
Jordan	85	85
	4.932	4.537

FAR EAST

Japan	47.335	46.480
Philippines	7.700	7.200
People's Rep. China**	12.300	7.000*
South Korea	5.988	5.617
Taiwan	2.825	2.462
Malaysia + Singapore	1.950	1.850
Vietnam	1.500*	1.500*
India	1.300*	1.200*
Thailand	1.222	1.070
North Korea	1.000*	1.000*
Hong Kong	1.015	946
Indonesia	800	815
Okinawa	300	280
Iran	108***	—
Sri Lanka	80	80
Burma	40*	40*
Nepal	10	10
Pakistan	7	7
Laos	7*	7*
Bangla-Desh	5*	5*
	85.492	77.569

AUSTRALIA/OCEANIA

Australia	19.682	20.170
New Zealand	3.801	3.800
New Guinea	540	500
Fiji Islands	150	150
Tahiti	92	83
Samoa	60	58
New Caledonia	47	50
	24.372	24.811

*estimated

** Up to now the output of the People's Republic of China had to be estimated. Semi-official sources now list an output of 12.300 thl for 1982; 1981 the output supposedly was 9.100 thl.
(thl = thousand hl)

***non-alcoholic

WORLD BEER PRODUCTION

The world beer output increased by 2% compared to the previous year's figures. The increase varied from one continent to the other.

*Please note our remark on the People's Republic of China in our table on World Beer Production for a proper evaluation of the increase.

	1982	1981
Europe	+ 1.4%	+1.5%
America	+ 0.5%	+1.4%
Africa	+ 7.8%	+7.8%
Asia	+10.2%*	+3.9%
Australia/Oceania	- 2.0%	+3.2%
total	+ 2.0%*	+2.0%

Market Analysis

In Europe as well as in the United States the quantity harvested was excellent. Since the demand for hops stagnated we did not have to wait long for the consequences in the price development for 1982 crops.

Prices on the US spot market had already reached a low during the 1981/82 season. Further deterioration of the situation took place with hops of the 1982 crop. Besides US-hops also European spot hops were thrown into a slump. Yet most hop producers avoided an emergency since advance contracting provided a satisfactory average price.

The international hop market is steering towards decisive structural changes in the near future: progress in the cultivation of virus free plant material as well as successful cultivation of high alpha varieties will bring about a marked increase in the efficiency of world hop production. Less acreage will be neces-

sary for supplying the world markets. Since voluntary grubbing of acreage cannot be expected, economic pressure will not only eliminate individual growers but also whole growing districts. Those who are not sufficiently

contracted forward and those, whose production costs cannot compete with the international market, will not be able to survive the pressure of the international competition.

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

Crop	1983	1984	1985	1986	1987	1988	1989	1990
USA	91	83	64	40	16	3	-	-
Fed. Rep. of Germ.	79	79	77	53	33	30	20	10
Belgium	30	17	15	4	0	-	-	-
CSSR	90	85	75	25	25	-	-	-
Yugoslavia (Slov.)	90	80	75	62	54	40	-	-

Alpha Acid Production

The alpha acid production of the world market is categorized as follows:

- 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, a. o.)

Thus a comparison of the alpha production of 1982 with that of the previous year resulted in the following bitter constituent grouping in the world hop crop:

group	1982				1981			
	share %	crop tons	α % ϕ	α tons	share %	crop tons	α % ϕ	α tons
A	12	16,610.0	3.53	586.0	12	16,113.6	3.6	580.1
B	28	41,400.0	4.34	1,795.0	25	32,783.3	4.5	1,475.2
C	19	27,480.0	6.17	1,695.0	20	25,916.9	6.2	1,606.8
D	41	60,630.0	7.25	4,395.0	43	56,244.0	7.8	4,387.0
Total	100	146,120.0	5.92	8,471.0	100	131,057.8	6.2	8,049.1

The effect of the low bitter values in European hops can be seen from the relatively low alpha production compared to the amount harvested.

Acreeage and Hop Production

area	1982			1981		
	acreeage in ha	tons per ha	crop in tons = 1000 kg	acreeage in ha	tons per ha	crop in tons = 1000 kg
Hallertau	17.019	2,17	37.012,0	16.288	1,78	29.005,7
Spalt	813	1,74	1.422,0	817	1,67	1.365,6
Hersbruck	175	1,86	326,0	174	1,67	290,0
Jura	729	2,35	1.714,0	684	1,68	1.146,6
Tettnang	1.228	1,61	1.976,0	1.205	1,55	1.862,5
others	21	1,82	38,0	21	1,59	33,3
Fed. Rep. of Germany	19.985	2,13	42.488,0	19.189	1,76	33.703,7
Kent	3.079	1,75	5.377,5	3.048	1,59	4.837,2
Hampshire	207	1,55	320,0	209	1,55	324,1
Sussex	240	1,60	385,0	238	1,45	344,9
Herefordshire	1.731	1,80	3.112,5	1.722	1,64	2.818,7
Worcestershire	614	1,65	1.015,0	591	1,72	1.014,5
England	5.871	1,74	10.210,0	5.808	1,61	9.339,4
Aalst	180	2,73	491,5	190	1,61	306,0
Poperinge	656	2,19	1.435,0	632	1,93	1.222,0
Vodelée	24	1,60	38,5	24	1,33	31,8
Belgium	860	2,29	1.965,0	846	1,84	1.559,8
Alsace	463	2,17	1.005,9	472	1,81	852,6
Burgundy	35	2,29	80,0	37	2,03	75,1
Nord	255	2,40	612,0	251	1,99	489,5
France	753	2,25	1.697,9	760	1,86	1.417,2
Ireland	75	1,00	75,0	72	1,07	76,9
Greece	25	1,60	40,0	25	1,60	40,0
EEC	27.569	2,05	56.475,9	26.700	1,73	46.137,0
Saaz	7.574	1,06	8.049,0	7.571	1,14	8.638,1
Auscha	1.707	1,31	2.235,0	1.728	1,21	2.084,6
Tirschtitz	683	1,33	908,0	691	1,20	829,2
Slovakia	1.323	1,02	1.356,0	1.267	1,05	1.333,6
new acreeage without yield	11.287	1,11	12.584,0	11.257	1,14	12.885,5
	472	—	—	570	—	—
Czechoslovakia	11.759	1,11	12.584,0	11.827	1,09	12.885,5
USSR*	17.000	0,59	10.000,0	16.500	0,61	10.000,0
Slovenia	2.386	1,72	4.115,8	2.259	1,73	3.903,0
Backa and Ilok	1.050	1,63	1.709,5	933	1,54	1.433,0
Yugoslavia	3.436	1,70	5.825,3	3.192	1,66	5.336,0
Germ. Dem. Rep.	2.212	1,51	3.344,1	2.083	1,29	2.689,8
Poland	2.502	1,08	2.714,0	2.630	0,89	2.350,0
Bulgaria*	1.200	0,76	915,0	1.700	0,68	1.150,0
Romania*	2.000	1,04	2.080,0	1.400	0,80	1.115,0
Hungary	560	1,33	750,0	562	1,34	754,0
Spain	2.003	1,18	2.374,8	2.003	1,26	2.523,0
Mühlviertel	73	1,62	118,0	65	1,42	92,5
Leutschach	66	1,43	94,5	71	1,21	85,9
Austria	139	1,53	212,5	136	1,31	178,4
Switzerland	11	1,77	19,5	12	1,61	19,3
Portugal	172	1,59	272,7	177	1,74	308,0
EUROPE	70.563	1,38	97.567,8	68.922	1,24	85.446,0
Washington	12.149	2,32	28.185,7	12.674	2,13	26.961,6
Oregon	3.007	2,02	6.074,1	2.839	1,94	5.625,9
Idaho	1.518	1,94	2.944,9	1.374	1,86	2.551,5
California	199	2,05	408,0	474	1,60	758,9
USA	16.873	2,23	37.612,7	17.361	2,07	35.897,9
Canada	300	1,61	482,5	326	1,07	350,6
Japan	1.108	1,26	1.400,8	1.112	1,13	1.257,0
Victoria	507	1,83	929,0	504	1,52	766,0
Tasmania	790	2,08	1.654,0	671	2,40	1.610,9
Australia	1.297	1,99	2.583,0	1.175	2,02	2.376,9
New Zealand	202	2,10	422,9	185	1,64	302,8
People's Rep. of China*	5.000	0,90	4.500,0	4.000	1,00	4.000,0
Dem. People's Rep. of Korea*	400	1,00	400,0	400	1,00	400,0
Korean. Republic*	53	1,55	82,0	53	1,55	82,0
South Africa	314	0,76	239,8	227	0,75	170,0
India	300	0,50	150,0	300	0,50	150,0
Colombia*	2	2,00	4,0	2	2,00	4,0
Turkey	850	0,59	500,0	476	0,90	430,0
Argentina*	200	0,85	170,0	200	0,75	150,0
WORLD	97.462	1,50	146.115,5	94.739	1,38	131.017,2

* estimate USSR: new sources report only 14,000 ha; People's Republic of China: other sources report 10,000 ha acreeage with a 5,000 tons harvest.

Alpha Acid Balance

The alpha acid balance can only be a point of reference for the supply and demand situation in the world. Certain uncertainties are inherent to the data which are statistically either not known or cannot be comprised completely, such as the alpha acid dosages per hl in breweries, the exact alpha acid value of hops from cultivation to consumption, and also stockpiling and, with that, the stock inventory policies of the brewing companies. Exact statements are therefore impossible to make.

A hopping rate of 7.4 gr alpha acids per hl was listed for 1982 as compared to 7.6 gr in our estimate (HOPS 1981/82) since the world average hopping rate tends towards the lower end of the scale:

demand 1980 (hopping rate 7.8 gr alpha/hl)	7,314.8 tons alpha
production 1979	7,141.7 tons alpha
deficit	173.1 tons alpha
demand 1981 (hopping rate 7.8 gr alpha/hl)	7,488.0 tons alpha
production 1980	7,268.5 tons alpha
deficit	219.5 tons alpha
demand 1982 (hopping rate 7.4 gr alpha/hl)	7,166.5 tons alpha
production 1981	8,049.1 tons alpha
surplus	882.6 tons alpha
demand 1983 (estimated hopping rate 7.3 gr alpha/hl)	7,300.0 tons alpha
production 1982	8,471.0 tons alpha
surplus	1,171.0 tons alpha

Taken into consideration the deficits of the 1979 and 1980 crops and the surpluses in 1981 and 1982 then the brewing industry today is provided with a higher inventory of 1,500 tons α , i.e. 20% of a one year supply. For the market evaluation the fact is essential that the demand of α has been stagnating despite the higher beer production.

European Economic Community

By decree (EEC) no. 1980/82 the Commission fixed the aid to hop growers for the 1981 harvest. Based on the exchange rate of 1 Acc. In. = DM 2.57524 (approx. same relationship as US \$ = 1,- DM) the following aid was granted:

variety	aid Acc. In./ha	= DM
aroma hops	200	515.04
bitter hops	180	463.54
other varieties	200	515.04

large harvest in some areas of the Community led to difficulties in sales. At the time of copy deadline no information was available on the aid for the 1982 harvest.

With the decree (EEC) no. 840/83 of 11 April 1983 the certification deadline for the 1982 harvest was extended by 4 months. This extension of the deadline had become necessary because the

Federal Republic of Germany

Growing Conditions, Estimated Harvest and Weighing

The conditions for plant growth during spring and summer were good. A mild spring followed after a long cold winter with plenty of snow. Spring work was able to proceed quickly and without delays. As early as the end of May the hops reached a height of approximately 2 to 3 m and at the end of June the top of the trellises.

The following summer months brought similarly good climatic conditions. The danger of excessive dryness was eliminated by precipitation at the end of August. Around June 30th the **early Northern Brewer** variety and the

mid-early Hallertau variety bloomed. Damage from a storm around August 15th did not significantly diminish the expected harvest. Loss was estimated at only about 1,000 tons. Harvesting began on August 23d with the early and mid-early varieties. The late varieties were harvested beginning with September 5th. The plants were healthy and there was hardly any disease or pest infestation. Official figures of the estimating commission led to great expectations. The **final weighing** compared to the estimate was:

area	estimate tons	weighing as per 31/3/1983/tons
Hallertau	30,250	37,012
Spalt	1,365	1,422
Hersbruck	315	326
Jura	1,450	1,714
Tettwang	1,850	1,976
others	32	38
total	35,262	42,488

However, the alpha values were disappointing. Because of the excellent growing conditions a good quality harvest had been expected. Bitter values however, on the average were below those of the previous year (see table page 1).

Varieties

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

area	variety	ha	Ø-yield/ton	amount harvested/ton
Hallertau	Hallertau	1613	1.58	2,545
	Hersbruck	4537	2.37	10,741
	Hüll	1335	1.81	2,413
	Perle	699	1.96	1,368
	Northern Brewer	5723	2.18	12,474
	Brewers Gold	2696	2.54	6,854
	others	416	1.48	617
Jura	Hallertau	146	2.44	356
	Hersbruck	311	2.28	710
	Hüll	31	2.26	70
	Perle	57	1.73	98
	Northern Brewer	48	2.07	99
	Brewers Gold	134	2.81	377
	others	2	2.00	4
Spalt	Hallertau	496	1.77	876
	Spalt	266	1.73	459
	Perle	10	1.20	12
	others	41	1.83	75
Hersbruck	Hallertau	89	1.81	161
	Hersbruck	63	1.87	118
	others	23	2.05	47
Tettnang	Hallertau	288	1.78	514
	Tettnang	933	1.55	1,448
	others	7	2.00	14
remainder	Hallertau	6	1.33	8
	Tettnang	7	2.00	14
	others	8	2.00	16

Acreeage

In the **Federal Republic of Germany** the increase of acreage from 1981 to 1982 amounted to 796 ha. The following areas gained as listed in the table below, only the Spalt area acreage decreased by 4 ha.

area	acreeage development			varieties-aroma						varieties-bitter and others		
	acreeage 1982 ha	new acreeage ha	acreeage 1981 ha	Hallertau ha	Spalt ha	Tettnang ha	Hersbruck ha	Hüll ha	Perle ha	Northern Brewer ha	Brewers Gold ha	others ha
Hallertau	17019	731	16288	1613	29	-	4537	1335	699	5723	2696	387
Jura	729	45	684	146	-	-	311	31	57	48	134	2
Spalt	813	(-4)	817	496	266	-	3	8	10	4	25	1
Hersbruck	175	1	174	89	-	-	63	1	4	12	6	-
Tettnang	1228	23	1205	288	-	933	7	-	-	-	-	-
other	21	-	21	6	-	7	-	4	1	1	2	-
total	19985	796	19189	2638	295	940	4921	1379	771	5788	2863	390

The acreage expansion in the **Hallertau** region increased the acreage of the **Hersbruck** variety by +331 ha, **Perle** by +266 ha, and **Brewers Gold** by +346 ha. There was a reduction of 252 ha in the **Hallertau** variety.

Despite this shifting among the varieties the ratio between **aroma** and **bitter varieties** in the **Federal Republic of Germany** remains unchanged.

	1982	1981
aroma varieties	55 %	55 %
bitter varieties	43 %	43 %
others	2 %	2 %

Developments in the Market

Once the size of the harvest became well-known a rapid **price drop** occurred. Neither the development of beer sales nor the inventory situation of the brewing industry could provide any new stimuli. The low price niveau and the poor alpha acid values eventually led to purchases and the market became more active after all. Thus particularly **Northern Brewer** was in demand; it

traded at a premium over the **Hallertau aroma** varieties in the direct **farmers market** as well as on the **Nuremberg spot market**.

The **quality control** of the hops was a significant problem because of the rapid weighing of the large harvest. **Short deliveries** which during the previous year had been 5%, were insignificant during the 1982 harvest.

Our market report listed the following spot prices:

area/variety	3/82	4/82	5/82	6/82	7/82	8/82	9/82	10/82	11/82	12/82	1/83	2/83
HALLERTAUI /Hallertau	510.-	510.-	440.-	420.-	420.-	430.-	380.-	250.-	210.-	210.-	210.-	210.-
/Northern Brewer	520.-	520.-	475.-	520.-	520.-	470.-	430.-	290.-	290.-	290.-	290.-	210.-
/Brewers Gold	410.-	410.-	380.-	330.-	330.-	300.-	280.-	190.-	210.-	210.-	210.-	210.-
SPALT	660.-	660.-	580.-	580.-	550.-	550.-	480.-	sold out	sold out	sold out	sold out	sold out
TETTNANG	620.-	620.-	580.-	580.-	550.-	550.-	480.-	sold out	sold out	sold out	sold out	sold out

The marketing experience of this crop verified once again the experience that a **large harvest is sold out quickly**. As early as the middle of December **farmers** sold out except for a few hold outs. **Spalt and Tett nang** even reported a

certain shortage as there were hardly any supplies left for late purchases from the brewing industry.

It was somewhat **difficult to sell out** some **aroma varieties** low in alpha acids, such as the **Hallertau Hersbruck**

variety. There may have been as much as 500 tons of unsold hops in farmers hands at the beginning of 1983. By February/March of 1983 the remainder of about 400 tons, was taken over by the **Producer Group HVG-Hallertau**.

ENGLAND

Growth

Growth and development was satisfactory despite the dry spring. The top of the trellises was reached 3 weeks prior to the usual date. There was hardly any pest infestation and an **average to good harvest** was anticipated. Harvesting commenced on August 23d on an acreage **63 ha larger** than that of the previous year.

Developments in the Market

Of the entire harvest of 10,210.0 tons 8,995 tons were sold in advance through the **Hops Marketing Board**. The harvest thus exceeded the domestic demand of the English brewing industry particularly the breweries had to deal with an additional loss in sales. At the end of the year about 500 tons of mostly low alpha hops were still unsold. A portion was sold at sharply reduced prices; approximately 250 tons were still unsold by the end of June 1983.

For the 1982 harvest the English breweries had to pay a **22.7%** price-index-adjustment on top of the "first base price" of their **contracts**.

The quality of the hops was **average to good**. In England, too, **alpha acids** were slightly below the 1981 levels:

variety	α acid/% 1982	α acid/% 1981
Wye Targets	11.0	11.5
Yeoman	8.6	9.8
Challenger	7.7	8.0
Goldings (Kent)	5.5	5.4
Bramling Cross	6.5	6.2
Bullion (Kent)	8.0	8.9

Alpha acid as is, evaluated conductometrically per September after harvest.

A slight shift occurred in the cultivation of varieties favoring the high alpha varieties such as **Northdown** (+ 16 ha), **Target** (+ 62 ha), and **Yeoman** (+ 200 ha).

variety/ha	total		WGV		Fuggles		Bramling Cross		Northern Brewer		Bullion		Wye Northdown	
	82	81	82	81	82	81	82	81	82	81	82	81	82	81
Kent	2746	2709	225	250	52	47	281	306	16	17	70	82	136	140
Sussex	242	237	2	1	26	29	17	17	1	2	12	18	8	8*
Hampshire	207	209	-	-	3	2	-	-	30	32	3	4	139	140*
Herefordshire	1540	1516	-	-	438	444	-	-	109	114	52	59	473	447
Worcestershire	531	510	-	-	71	65	-	-	42	46	27	36	179	161
brewery cultivation	605	627	18	21	-	-	23	33	53	60	92	96	66	89
total	5871	5808	245	272	590	587	321	356	251	271	256	295	1001	985

variety/ha	Wye Challenger		Wye Target		Wye Saxon		Yeoman*		Zenith*		Goldings		others*	
	82	81	82	81	82	81	82	81	82	81	82	81	82	81
Kent	256	261	1007	977	55	79	167	-	9	-	306	304	166	(246)
Sussex	25	30	96	94	-	1	21	-	-	-	6	6	28	(31)
Hampshire	25	29	-	-	-	-	-	-	7	-	-	-	-	(2)
Herefordshire	354	346	7	-	-	-	-	-	8	-	99	100	-	(6)
Worcestershire	112	106	-	-	-	-	-	-	6	-	94	91	-	(5)
brewery cultivation	83	86	136	113	3	4	12	-	18	-	28	33	73	(92)
total	855	858	1246	1184	58	84	200	-	48	-	533	534	267	(382)

* The **Yeoman** and **Zenith** varieties are here listed separately for the first time. In earlier reports they were always listed in the section titled "others".

FRANCE

Growth and Development

The extended winter of 1981/82 caused a delay in the cutting and training of the vines. Initially the hops were growing rather slowly until the weather improved at the end of May and the beginning of June. The top of the trellises was reached at the usual time. Picking began at the end of August for **Northern Brewer** and around the middle of September for **Brewers Gold**.

The yield per ha for **Northern Brewer** was low, for **Strisselspalt** medium; however, for **Brewers Gold** it was relatively high. However, the alpha acid content of the **Brewers Gold** variety in **Alsace** reached a new low ever since it had been grown in that region. Laboratory analyses in October showed an alpha value of 3.8%, as is. The **Alsatian Northern Brewer** was evaluated at 6.0% and the **Alsatian Spalt** at 3.5%.

Developments in the Market

On an acreage of 753 ha a harvest of about 1,488 tons was anticipated. Approximately 54%, i.e. 800 tons were under contract. For the **Alsatian Strisselspalter** the contract quota, however, at 90% was much higher.

As a consequence of the well supplied world market sales of French **Northern Brewer** and **Brewers Gold** spots were extremely slow. As of June 1983 an unsold quantity of 200 tons can be estimated, i. e. 20% of the total quantity available for the spot market.

Varieties

There was no significant shift in any of the varieties cultivated. The increase in acreage in the **Nord** was planted with **Brewers Gold**. The total acreage in **France** compared to that of the previous year was reduced by 7 ha.

variety/ha	total		Aroma hops		Brewers Gold		Northern Brewer + others	
	82	81	82	81	82	81	82	81
Alsace	463	472	182	187	233	233	48	52
Nord	255	245	1	1	191	181	63	63
Burgundy	35	43	5	6	29	35	1	2
total	753	760	188	194	453	449	112	117

BELGIUM

Growth and Development

A very cold winter, even for a maritime climate, with temperatures of up to -20°C and excessive snowfall was followed by favourable weather in spring and summer. The plants grew especially well and an average to good harvest was anticipated; the crop estimate was 1,600 tons on an acreage of 860 ha (+14 ha).

Developments in the Market

Only 40% of the crop of 1,965 tons were sold under contract. While the Belgian **Northern Brewer** variety sold quickly, the **Brewers Gold** was difficult to sell. An estimated 200 tons remained unsold as of June 1983.

The price index shows how the demand for **Northern Brewer** affected the market. **Brewers Gold** initially followed the trend, later on, however, because of the difficulty in selling, it remained on a merely nominal price level.

variety	Sept. 82	Oct. 82	Nov. 82	Dec. 82	Jan. 83
Northern Brewer	3.500	4.000	5.000	5.500	5.000
Brewers Gold	2.000	2.250	3.000	3.000	3.000

bfrs. per 50 kg, from cultivation area, ready packed.

The acreage cultivated per variety in contrast to 1981 had changed as follows:

variety/ha	variety/ha total		Brewers Gold		Northern Brewer		Hallertau		Record		others	
	82	81	82	81	82	81	82	81	82	81	82	81
Poperinge	656	632	321	314	259	261	45	43	6	6	25	8
Aalst	180	190	22	22	50	51	64	72	34	33	10	12
Vodelee	24	24	4	4	5	5	3	2	-	-	12	13
total	860	846	347	340	314	317	112	117	40	39	47	33

CZECHOSLOVAKIA

Growing Conditions

During the winter and spring months there was a surplus of precipitation. There was abnormal dryness during May. This, however, had no influence on the growth of the crop, which also did not show signs of disease. Picking started on August 20th.

Developments in the Market

On an acreage of 11,287 ha a harvest of 12,500 tons to 12,800 tons was expected. Of the anticipated harvest about 11,500 tons were sold under contract.

Varieties

According to Czechoslovakian Government sources only aroma hops of the **Saaz** variety were cultivated in all three growing regions.

GERMAN DEMOCRATIC REPUBLIC

Growth

Aside from **Northern Brewer**, hops which were somewhat weakened, the hops developed well and were free from pest infestation. Harvest was expected to be good to above average; in the irrigated gardens record yields were anticipated. On an acreage increased by **129 ha** approximately 3,100 tons were estimated.

Acreage

The acreage-changes were as follows:

	1982 acreage/ha	crop/tons	1981 acreage/ha	crop/tons
Halle/Magdeburg	940	1,481.3	894	1,155.3
Erfurt	560	860.6	554	679.6
Dresden/Leipzig	674	955.6	635	854.9
Gera/Karl-Marx-Stadt	38	46.6	—	—
	2,212	3,344.1	2,083	2,689.8

Developments in the Market

The entire harvest of 3,344 tons was taken over by the domestic brewing industry. More than 80% of the harvest were bitter hops of the **Northern Brewer** and **Bullion** variety. The aroma hops were mainly of the **Saaz** variety.

YUGOSLAVIA

Growing Conditions

There was a lack of precipitation in the **Backa** region during May and June while growing conditions in **Slovenia** were very favorable. Warm spring time temperatures helped an even distribution of the precipitation. Despite the below average amounts of precipitation the plants never suffered from dryness. Storms in **Slovenia** on July 31st, 1982 caused a loss of about 300 tons.

Picking began on August 20th. The entire **Yugoslavian** harvest was estimated at 5,100 tons.

Varieties

In **Slovenia** the acreage and harvest figures were:

	Super Styrian variety		Golding variety	
	absolute	%	absolute	%
acreage	1,398 ha	57.6	988 ha	42.4
yield	2,662 tons	64.4	1,454 tons	35.6

(The comparison with the variety data of the previous year is possible when using our report "HOPS 1981/82" on page 9).

POLAND

Growth

At the end of August the plants were doing well; there were no diseases and pest infestation. The cone development was satisfactory. On an acreage reduced by 128 ha harvest was expected to be between 2,200 and 2,350 tons; 2,000 tons were already earmarked for contract sale.

Developments in the Market

The economic problems in **Poland** manifested themselves in a reduced beer production. Thus hops were available for the world spot market although initially the harvest had been precontracted.

Acreage and Varieties

During 1982 the following quantities were harvested in **Poland**:

variety	ha	yield/tons
Lublin	2,282	2,482
Pulawy	150	150
Northern Brewer	50	70
Estera	20	12
total	2,502	2,714

USA

Growth

Growing conditions in all States were normal and resulted in a good size crop.

Yakima

A mild winter brought enough moisture into the ground, but the growth of the baby hops was retarded by a cool spring. In June and July temperatures were optimal, and hops recovered fully. The bloom set was good. From June onwards, aphid and spider had to be fought. The **Cascade** variety suffered in some areas from insects and resulting mold. Otherwise harvest proceeded without problems.

Oregon

A dry and cool spring was followed by a very hot, early summer with scattered rain showers. Hops responded with excessive growth and a very good cone set. The heavy foliage favored development of aphid and contributed to some mold in all varieties. Overall, however, there were few problems encountered during harvest.

Idaho

Growth and harvest succeeded without any problems under ideal climatic conditions. Baby hops had a particularly good year.

California

Winter rainfall was the best in four years. Temperatures were ideal and none of the usual strong north winds were encountered during the growing period. The three remaining growers produced a good crop.

Quality

Picking quality of the hops was better than in the previous years. **Average alpha content** rose from 7.2% to 7.9%. Continued expansion of high alpha varieties acreage and higher alpha acid content in the **Cluster** variety were the reasons for this increase.

Yield

For the first time since crop year 1977, **U.S.** acreage 1982 strung for harvest declined by 3% or 488 hectares compared to 1981. An additional 858 hectares were not picked because of low spot prices. Harvested **U.S.** acreage was therefore 8% below 1981. Because of the differential between acreage strung for harvest and actually harvested acreage, the August crop estimates do not carry much weight anymore. In August of 1982 the estimate was 79.3 mio. lbs (35,970 to), the final yield of 78.6 mio. lbs (35,652 to) would have been surpassed by 3.4 mio. lbs (1,542 to) had all the acreage been picked.

Spot Market

After the collapse of the 1981 spot market to **50 ¢ per lb**, hop markets did not recover. Spot prices for 1982 crops dropped quickly from **50 ¢ to 30 ¢ per lb** following harvest in lackluster trading. Apr. 1 mio. lbs (454 to) were traded on the spot market, a further 600,000 lbs (272 to) remained in growers' hands but were custom extracted. Large surpluses in brewery hands and financial problems in certain Latin American countries contributed to the depressed state of the market.

Contract Market

Nominal contract prices for **Washington** and **Idaho Clusters** were in the first 9 months of 1982:

1985	\$ 1.40
1986	\$ 1.50
1987	\$ 1.60

Prices for **Galena/Eroica** were 10 c above, for **Cascades** 10 c below these levels. 1983 and 1984 crops were not in demand.

In October 1982 scattered offers for **Clusters** were rumored to be:

1985	\$ 1.15
1986	\$ 1.25
1987	\$ 1.55
1988	\$ 1.75

Most contracting activities in late 1982 and early 1983 centered on switching contracts out of 1983 and 1984 to later years. In some cases the switches were connected with new contracts for later years, starting with the 1985 crop. Because of lack of significant turnover no real market price base can be indicated as of June 1983.

Varietal Structure

Changes in the demand structure enforced a new variety mix in the U.S. The share of high alpha varieties rose from 1% in 1980 to 10% in 1982. At the same time the acreage of the traditional U.S. **high alpha varieties Bullion** and **Brewers Gold** was reduced from 18% to 15% of the total growing area. The main variety **Cluster** declined from 57% to 50%.

The **Oregon** market, traditionally dependent on only three large brewers, will have to undergo radical changes to seedless varieties and replacing **Cascade**, **Bullion** and **Brewers Gold** by other more marketable varieties.

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

Acreage per variety/%

	Washington		Oregon		Idaho		California		Total	
	82	81	82	81	82	81	82	81	82	81
Clusters	63	66	-	-	37	49	98	93	50	54
Bullion	12	14	34	40	1	1	-	-	15	17
Cascades	14	14	20	20	13	14	-	-	15	15
Ero/Gal	8	2	-	-	42	28	-	-	10	4
Fuggles	-	-	42	39	-	-	-	-	8	6
Comets	1	2	-	-	-	-	2	7	1	2
others	1	1	3	-	7	8	-	-	2	2
total	99	99	99	99	100	100	100	100	100	100

Acreage per variety/ha

	Washington		Oregon		Idaho		California		Total	
	82	81	82	81	82	81	82	81	82	81
Clusters	7.655	8.342	-	-	569	677	196	442	8.420	9.461
Bullion	1.441	1.824	1.009	1.130	15	15	-	-	2.465	2.969
Cascades	1.655	1.794	620	578	198	198	-	-	2.473	2.570
Ero/Gal	1.011	336	16	-	633	379	-	-	1.660	715
Fuggles	28	-	1.275	1.100	-	-	-	-	1.303	1.100
Comets	161	223	-	2	-	-	3	32	164	257
others	198	155	87	29	103	105	-	-	388	289
total	12.149	12.674	3.007	2.839	1.518	1.374	199	474	16.873	17.361

Yield in to/ha

	Washington		Oregon		Idaho		California		Total	
	82	81	82	81	82	81	82	81	82	81
Clusters	2,3	2,1	-	-	2,3	2,2	2,1	1,7	2,3	2,1
Bullion	2,7	2,5	2,8	2,4	2,2	2,1	-	-	2,7	2,5
Cascades	2,3	2,1	2,2	1,9	1,6	1,9	-	-	2,2	2,1
Ero/Gal	1,8	1,5	2,2	-	1,8	1,3	-	-	1,8	1,4
Fuggles	-	-	1,4	1,5	-	-	-	-	1,3	1,5
Comets	-	-	-	-	-	-	-	-	-	-
others	1,9	1,7	2,1	2,5	1,5	1,3	2,1	0,9	1,9	1,6
total	2,3	2,1	2,0	1,9	1,9	1,9	2,1	1,6	2,2	2,1

Average Price Returned to Growers

The **Department of Agriculture** annually reports the season's average **grower price** per lb. It is calculated from a compulsory report filed by all growers showing the price received for all hops marketed per year. Prices for the last five years were:

1978	\$ 0.90 per lb incl premiums
1979	\$ 0.97 per lb incl premiums
1980	\$ 1.50 per lb incl premiums
1981	\$ 1.52 per lb incl premiums
1982	\$ 1.75 per lb incl premiums

High 1982 average price reflects contracts entered during the high price period of 1979 and 1980.

Hop Marketing Order (HMO)

The **HMO** was critically scrutinized by the **Reagan administration** for its compliance with free market principles. In spring 1983 the President instructed the **Secretary of Agriculture** that "within five years the **Secretary of Agriculture** will completely phase out restriction of entry." At the core of the restriction of entry is the ownership of **base allotment**. That is the right to market a given quantity of hops per crop year, as decided annually by the **Hop Administrative Committee** under the terms of salable

allotment. Interpretation of the President's directive has to be awaited before a final evaluation of its impact on the **Hop Marketing Order** and the hop market can be given.

The use of base allotments so far was the key instrument of the **Hop Marketing Order**. The allotments represent considerable monetary value to the growers, therefore, most growers were against a change of the status quo.

The release of 130 % of **salable quantity** of the base allotment for crop 1983 will exceed industry needs. The formation of prices is thus left to the forces of the free market.

Outlook for 1983

Net reduction of 1983 acreage was lower than anticipated. As a consequence there is potential for supply beyond demand. However, considerable acreage could remain unharvested depending on spot market development. In comparing 1983 acreage to 1982 one has to distinguish between:

- I) pre-harvest acreage II) actually harvested acreage.

	WA	OR	ID	CA	total
I) 1982 preharvest	12.149	3.007	1.518	199	16.873 ha
II) actually harvested	11.379	2.944	1.505	188	16.015 ha
1983 pre-harvest	10.903	2.564	1.461	205	15.132 ha
Change to I) 1982:	- 1.246	- 443	- 57	+ 6	- 1.741 ha
Change to II) 1982:	- 476	- 380	- 44	+ 17	- 883 ha

To bring market conditions back into balance further decreases in the acreage will be indispensable.

CANADA

Average spring and summer weather, with considerably less rain-fall than in 1981 resulted in the **Canadian** hop crop 41 % higher than in 1981. The only hop cultivation district is the **Fraser Valley** in **British Columbia**.

The 1982 crop was sold on forward contracts mostly to **Canadian** and **English** breweries. Future crops are mostly under contract. The following table shows acreage development and crop yields for the 1982 Canadian crop as compared to the previous year:

variety	1982		1981	
	acreage/ha	yields/tons	acreage/ha	yields/tons
B.C. Bramlings	155	252	175	182
Brewers Gold	28	60	49	57
B.C. Kents	56	92	40	61
B.C. Fuggles	61	78	62	51
total	300	482	326	351

Other Countries

SPAIN

Growing Conditions

Because of excessive dryness during the summer the harvest was disappointing. The bitter values were also 10 % to 15 % lower than the long-term average.

Developments in the Market

In **Galicia** and **Cantabria** hop growing was discontinued in all but a few small farms. In **Leon** a slight increase in acreage was noted, with an expected harvest of 2,750 tons. The actual harvest amounted to 2,375 tons, of which 1,563 tons were the **H3 = Brewers Gold** variety and 806 tons of the **H7 = Northern Brewer** variety. Of the harvest 97.4 % were classified as grade I.

The entire **Spanish** harvest was sold in advance by the **Fomento de Lúpulo** to the local brewing industry. The growers received a price of 375 Ptas. per kg for the **H3** variety.

SOVIET UNION

This important growing region does not make official data available at all or at best with delays. We estimate the acreage at 17,000 ha and the harvest at 10,000 tons.

AUSTRIA

Growth and Developments in the Market

As in the other **Central European growing regions** the growing conditions in the **Mühlviertel** and in the **Leutschach** were favorable. The average yield per ha increased; however, the bitter values decreased compared to those of 1982. The entire **Austrian** harvest was bought by the domestic brewing industry. In the **Mühlviertel** the price followed the trend of the import statistics. The minimum price for **grade I** hops was raised from öS 60.00 to öS 70.00 per kg. Nearly 100 % of the hops from the **Mühlviertel** were grade I. In addition the **Mühlviertel** hop growers receive an acreage premium of öS 4,000 per ha out of public funds.

Varieties

In the **Leutschach** region the **Golding** variety predominates over the **Atlas** and **Apollo** varieties. In the **Mühlviertel** the bitter variety **Malling** with about 51 ha and a 75 % share is the leader followed by the **Sannthal** variety with about 15 ha.

ROMANIA

Here we must again rely on estimates. We assume that the acreage was increased in the wake of efforts towards self-sufficiency. Nevertheless the harvest seems to have been below levels. Hops from other socialist countries were probably imported.

The varieties **Brewers Gold** (appr. 600 ha), **Northern Brewer** (appr. 600 ha), **Record** (appr. 400 ha), and **Hüll** (appr. 350 ha) are cultivated. The hop growing region is in the **Transylvanian Alps** where the climate is similar to that in the **Hallertau**.

HUNGARY

On an acreage of about 560 ha about 750 tons were harvested. Of those crops around 475 tons were bitter hops, presumably of the **Brewers Gold** variety. The **Saladin** variety, an aromatic hop variety, might be a mix from the **Saaz** variety.

BULGARIA

The harvest might be estimated at nearly 1,000 tons. This is not enough for the national demand. As a tourist country **Bulgaria** must furthermore meet an increased beer demand. Part of the hops probably correspond to the Yugoslavian **Backa** hops in quality.

PORTUGAL

An unusual cold spell during May and June delayed growth of the hops in the **Braga** region. There the hops reached an average alpha value of only 8 %. The hops from the **Braganca** region with their 9 % bitter constituent value were of average quality.

Of the total crop of 272.7 tons 119.4 tons came from the **Braga** region (93 ha) and 153.3 tons came from the **Braganca** region (79 ha).

SWITZERLAND

On a somewhat smaller acreage a slightly bigger crop was produced, although heavy thunderstorms on 6 July and 15 August with storm and hail damage assailed the crops and somewhat reduced the harvest. The hops were classified **grade I**. The producers received a price of SFR 620 per 50 kg. The varieties were almost exclusively **Tettnang** and **Hallertau**. Since 1980 the **Perle** variety has been grown there, also.

AUSTRALIA

The 1982 crop with an acreage increased by an additional 122 ha was 2,583 tons. The total harvest was sold on contract. The **Pride of Ringwood** variety which is rich in bitter constituents still appears to be the only variety grown.

PEOPLE'S REPUBLIC OF CHINA

The acreage most likely was increased. The harvest, according to several sources may have reached the 4,500 tons level. Demand in **China** is estimated at 1,500 tons. Beer output, according to Chinese sources, amounted to 9.1 mio. hl in 1981 and 12.3 mio hl in 1982.

JAPAN

The acreage compared to the previous year has decreased. A gain of 62 ha new acreage was balanced, however, by a 83 ha area destroyed by a tornado.

Growing conditions initially were not favorable. Towards the middle of May they improved. Then, however, **typhoon no. 10** on 2 August destroyed vast areas, and the damage to the harvest was estimated at 23 %, i.e. 423 tons.

The entire harvest was absorbed by the **Japanese** brewing industry; 81 % of the hops were grade I.

SOUTH AFRICA

The increase in acreage compared to the previous year was used for about 204 ha of the **Southern Brewer** variety and for 70 ha of the **Pride of Ringwood** variety. Other varieties were of no significance. **Southern Brewer** had an alpha value of about 9.3 % in 1982, the **Pride of Ringwood** 11.1 %. Of the harvest 80 % was grade I. The South African brewing industry absorbed the entire crop. The farmers received Rand 5.00 per kg of grade I hops.

TURKEY

The harvest consisted of 400 tons of the **Late Cluster** variety and 100 tons of **Brewers Gold**. The average alpha value was approximately 7 %. The harvest covered self-supply needs.

ARGENTINA

The acreage, which probably did not increase, was cultivated with the **Cluster**, **Cascade**, and **Spalt** varieties. The Argentinian crop was absorbed almost entirely by the brewing industry there; the price of hops is negotiated anew each year between the breweries and the farmers.

1983 Harvest and Outlook

From the Southern Hemisphere we had news of a crop failure in the **Australian** province of **Victoria**. An extended period of drought in the area followed by devastating storms caused a loss of **25 % of the crop**. Simultaneously the bitter constituent values were below average. The entire Australian crop amounts to **1,870 tons**.

In **South Africa**, on an acreage expanded by **47 ha**, a crop of **310 tons** was expected; alpha values were listed at 8 % to 9 %.

In the Northern Hemisphere as per copy date at the end of June, there have been encouraging news. Initially there was fear of insufficient moisture in the ground because **Central Europe** had little snow fall during the winter. However, precipitation in **February, March**, and **April** provided the necessary moisture. Warm weather during **May** and **June** was conducive to growth.

In the chapter on the "**USA**" we pointed out details about the development of acreage in the **U.S.** The acreage in the **Federal Republic of Germany** probably will be reduced by 200 ha. To achieve a worldwide balance of the market an acreage of **92,000 ha** should be sufficient. Presumably only a repeat of the spot market collapse during 1983 would lead to drastic grubbing and thus would match the supply of hops with world demand.

BEER

The impressive increase in sales of beer, as a **moderate alcoholic beverage**, has manifested itself in the more than doubled beer output worldwide over the past 20 years. Everywhere, be it in Samoa or the Seychelles, new breweries have been built. European breweries with their investment capital and know-how have accomplished important work in the developing countries. **Prohibitive tendencies** could only be observed in India and some strict Islamic countries. Quite on the contrary, the treasuries of all countries have found a welcome source of revenue in the **beer tax**, which enables them to partake of their citizens' drinking pleasure. The highest beer taxes are found in the Asian region.

The traditional evaluation of the figures on beer consumption varies according to the individual countries and the parts of the world. A division according to the large **economic regions** of the world and a comparison of the output figures viewed from this aspect gives the following impression:

	1962	1972	1982	% 62-82
Western Europe	197.311 hl	220.200 hl	282.465 hl	+ 43 %
USA and Canada	126.349 hl	148.964 hl	251.717 hl	+ 99 %
Eastern Block	55.968 hl	95.557 hl	169.447 hl	+ 303 %
Third World	75.641 hl	122.103 hl	264.819 hl	+ 350 %

In the **Western European industrialized countries** there is clear evidence that beer consumption is approaching the point of saturation. This is particularly true for the moderate climatic region of Central Europe. Only the Mediterranean countries, which until lately had preferred wine exclusively, have yet to catch up.

The brewing industry in the **U.S.** succeeded in raising the relatively low per capita consumption. Through aggressive marketing as well as new beer types it opened up new markets among different segments of the population.

In the **Eastern block countries** the centrally controlled economies now favor consumer-oriented policies which led to a significant expansion of brewing capacities and an increase in beer consumption. In the USSR (1962: 26.7 mio hl; 1982: 68 mio hl) this action led to a change in consumer habits, thus switching them from stronger to lighter alcoholic beverages.

The 350% increase in the beer output of the **Third World countries** indicates that the focus of beer consumption increase will be in these highly populated countries in the future. The achievement of a moderately higher standard of living and the building of breweries in all countries gave a significant impetus to beer consumption in those countries. Yet the most populous country of the world - **the People's Republic of China** - has only just begun to look at beer.